Androniki Kavoura
Efstathios Kefallonitis
Apostolos Giovanis *Editors*

Strategic Innovative Marketing and Tourism

7th ICSIMAT, Athenian Riviera, Greece, 2018

Springer

Springer Proceedings in Business and Economics

More information about this series at

Androniki Kavoura • Efstathios Kefallonitis •
Apostolos Giovanis
Editors

Strategic Innovative Marketing and Tourism

7th ICSIMAT, Athenian Riviera, Greece, 2018

Editors
Androniki Kavoura
Department of Business Administration
University of West Attica
Aigaleo, Greece

Efstathios Kefallonitis
Department of Business Administration
State University of New York at Oswego
Oswego, NY, USA

Apostolos Giovanis
Department of Business Administration
University of West Attica
Aigaleo, Greece

This volume is dedicated to Prof. Belch, Prof. Buhalis, Prof. Morgan, Prof. Gretzel, Stathis Kefallonitis, Niki, Diamantis Kitrides, Prof. Kitchen, Prof. Zotos, Prof. Avlonitis, all the ICSIMAT community, scientific and organizing committee, the journal editors who kindly offered space in the prestigious journals for special issues to take place, all you have contributed to our success. All for one, one for all!

Preface

Aims and Scope of the Conference

The International Conference on Strategic Innovative Marketing and Tourism (ICSIMAT) 2018 was held from October 17 to 22, 2018, at the Athenian Riviera while the conference included parallel sessions and workshops in three different Greek areas (Peloponnese mainland and two islands Kea and Aegina) from October 20 to 22, 2018.

ICSIMAT provided a timely and interactive international platform for academics, government, and industry practitioners in order to discuss and develop new perspectives in the field of marketing, innovative technologies, and tourism. They were able to discuss and debate issues that affect the future direction of marketing research and practice in a digital and innovation era. ICSIMAT community includes worldwide well-known scholars, faculty members, doctorate students, researchers, and business practitioners who network and exchange research work and inter-institutional co-operations.

More than 300 preregistered authors submitted their work in the conference. ICSIMAT finally accepted and hosted 180 original research papers, after a double-blinded peer-review process. From those papers 15 were part of 2 industry sessions that were organized during ICSIMAT. Twenty sessions in total were held in order to advance and contribute to specific research areas in the field of strategic innovative marketing and tourism.

The sessions that were created under ICSIMAT were the following:

Cultural Event Management, Space as an Active Agent

Chair

Dorothea Papathanasiou-Zuhrt, Artifactory, Holland, Italy, Greece, Estonia

The session's scientific interest and research focuses on issues like the advance of cultural policies, cultural heritage management, models of intercultural management, art-cultural management, and planning cultural policies especially in multicultural societies. In addition, it focuses on interdisciplinary and transdisciplinary methods to the study of regional man–heritage–landscape systems, national/local/identity—art-heritage—strategies and policies, intercultural networks, and strategies of intercultural management and relationships in the global world.

Transport Marketing and Management

Chair

Efstathios Kefallonitis, University of New York at Oswego, USA

The session on modes of transport, hospitality, and tourism marketing discusses and debates new trends in transport (air, rail, automotive, ship/cruise, etc.) marketing, the role of innovation and the use of new technologies in diversifying and enhancing transport marketing strategies, consumer trends, behavioral issues, and biometrics as a catalyst in designing new transport marketing campaigns (airlines, rail operators, cruise lines, etc.), the relationship between modes of transport, hospitality, and tourism.

Human Resource Management and Entrepreneurship in the Hospitality and Tourism Services and Management Challenges

Chairs

Stephen Havlovic, Laurentian University, Canada
Barry Friedman, State University of New York at Oswego, USA

Hospitality and tourism is a multibillion-dollar industry driven by market demand (e.g., individuals with available free time and disposable income), marketable attractions (e.g., natural wonders, unique cuisine, adventure), and human resources. The latter is the focus of this session: innovative human resource management (HRM) practices in the hospitality and tourism industry. We welcome conceptual or empirical papers that address innovative HRM practices for the attraction, motivation, and retention of employees that contribute to organizational effectiveness. These practices may include, but are not limited to, strategic HRM, big data analytics, staffing, reward systems, performance management, and talent management.

Mapping Innovation: Museums and Creative Industries

Chair

Stella Sylaiou, Hellenic Open University and Aristotle University of Thessaloniki, Greece

The session is about communication, marketing, and tourism for museums and creative industries. Museum communication, arts marketing, strategic marketing in museums, promotion of cultural and creative industries (CCI), CCI, their social and economic contribution, arts, culture and sustainable tourism, destination branding and cultural management, museums and branding, cultural diplomacy, culture, international relations and ICT, marketing, and cultural organizations.

Public–Private Synergies for Co-innovation and Co-creation

Chair

Sotiris Varelas, Neapolis University of Pafos, Cyprus

The session provides synergies with a comprehensive and integrated approach to the discipline of cooperation between the critical private and public sector of tourism. The session follows a modern approach to providing the necessary knowledge for the understanding of co-innovation as a marketing tool.

Emerging Technologies: Innovative Products and Services

Chairs

Dorin Coita, University of Oradea, Romania
Apostolos Giovanis, University of West Attica, Greece

This session examines how Internet of things, artificial intelligence, and blockchain impact the way people use to do business, management, marketing, tourism, and education. Papers that are associated with the themes covered under this session are welcome. The track is also associated with papers focusing on new and innovative marketing strategies in international markets using emerging technologies (i.e., digital marketing, social media). In addition, papers related to more traditional topics like standardization vs. adaptation of marketing mix elements, brand strategies, international advertising, and international consumer behavior are welcome, especially papers focusing on dynamics in the behavior/strategies, comparing, e.g., strategies between two areas/countries, and/or international marketing behavior/strategy–performance relationship focusing papers. Furthermore, papers related to the quantitative and qualitative as well as mixed methods are welcome.

Bridging the Gap Between Industry and Academia in Management-Educational Tourism Perspectives

Chairs

Patricia Orozco, Laurentian University, Canada
Sofia Asonitou, University of West Attica, Greece

Skills development increases the competitiveness of any country at the global level. This session will examine and discuss the different aspects, strategies, methodologies, and best practices of skills development for students in management, communications, and marketing with new technologies. The session will cover and discuss several aspects to bridge the gap between industry and academia.

Advertising/Communication/Branding in Business, Hospitality and Tourism, Culture, Education

Chairs

Teresa Borges-Tiago, University of Azores, Portugal
Sandra Dias Faria, University of Azores, Portugal

Digital-enabled business paradigms allow, among others, real-time end-to-end value chain visibility, enhanced customization, and quality delivery. This session welcomes papers examining the role of services marketing management in the digital era, new technologies in tourism services marketing and the role of social media, e-services and services marketing, knowledge of key service marketing issues, trends, and current and emerging debates.

Medical Tourism and Healthcare Management

Chairs

George Pierrakos, University of West Attica, Greece
Michele Thornton, State University of New York at Oswego, USA

The healthcare economy is historically seen as a locally driven market, with high costs, access challenges, and competition in quality. It has often led patients to seek care outside of their home countries. This session explores the emerging global market for the provision of health care. As destinations around the world compete to attract patients, the medical tourism industry has evolved to market and support the various locales in an attempt to instigate demand. Health management session addresses topics such as patient satisfaction issues, management systems in specialized health and long-term care services, health professionals' relationships, and organizational culture as well as issues related to the sustainability and performance

of the system. Submitted work (a) explores patterns in patient travel and expanding markets, (b) health marketing and communication campaigns, (c) alternative strategies in the finance of care outside the home country, and (d) methodologies that explore patient–provider–funder decision making to support the expansion of this trend.

Innovation and Tradition: Opportunities and Challenges

Chair

Olga Tsakirides, National Centre for Social Research, Greece

This session highlights and promotes innovative actions and products based in traditional resources coming from the first steps of civilization. How do these innovative goods could "connect" with cultural tourism? Are there any other "secret corners" in tradition that could inspire young entrepreneurs and new start-ups? How to implement creative ideas? What specific actions must be undertaken (and by whom) in order to establish innovation through tradition in cultural roots of the next generation? Can we create and establish innovation embracing tradition? Best practices, original case studies, research findings, and high innovative combinations of new technologies with tradition for tourists (such as robotics and matrix apps) are presented.

Consumer Markets

Chairs

Prokopis K. Theodoridis, University of Patras, Greece
Antigone G. Kyrousi, Deree—The American College of Greece

This session is associated with papers examining the role of technological improvements in marketing. Internet has developed from read-only concepts to the current open linked, ultra-intelligent, symbiotic web of 4.0. Therefore, this track will cover scientific papers related to the web 4.0 technologies (IoT—smart wearable devices, electronics, internet connectivity, etc., crowdsourcing, virtual worlds) and their applications mainly for consumer markets. The connection between human and machine creates interactive relations for both sides, and its effect on consumer decisions in today's environment is also an issue to be examined and debated under this session. The luxury industry represents a dynamic sector of global business. Luxury brands are marketed by a wide array of organizations, from global brand powerhouses to local boutique firms offering products and services of value to customers. This session invites conceptual or empirical papers that focus on luxury brands and corresponding marketing practices, as well as consumer attitudes and behaviors toward the former. We are looking forward to contributions that could stimulate discussion on topics including but not limited to conceptualizations of luxury, luxury branding, marketing strategies in the luxury sector, personal and

social influences on luxury consumption, ethical issues regarding luxury, luxury brand experiences, and luxury brand–consumer relationships.

Information and Internet of Things to Marketing, Management and Tourism: Cyber Security of Critical Infrastructures and Data Protection

Chairs

Leandros A. Maglaras, Ministry of Digital Policy, Telecommunications and Media, Greece and De Montfort University of Leicester, UK
Charalampos Z. Patrikakis, University of West Attica, Greece

The Directive on security of network and information systems (NIS Directive) is the first piece of EU-wide legislation on cybersecurity. It provides legal measures to boost the overall level of cybersecurity in the EU. The purpose of this session is threefold: (a) to increase our understanding with regard to business-related barriers and challenges stemming from the NIS directive, (b) to strengthen the capacity of both public and private sectors on protection of critical infrastructure, including Internet, cyber, and tourism security, in order to prevent and react in an efficient manner to potential risks and threats to related facilities, and (c) to promote awareness and understanding of the necessary balance between economic and security issues. Cultural heritage and cultural information globalization has become a phenomenon of expanding socioeconomic dimensions. The aim of this session is to highlight how cultural information and communication strategies may promote marketing and assist destination selection decisions and visitors' behaviors and experiences. This may include cultural information management, communication strategies based on the use of new media and innovative information technologies, cultural information promotion and marketing, marketing of cultural organizations for the tourism industry, cultural information services management (archives, libraries, etc.), understanding visitors' cultural information seeking behavior, intangible regional and national cultural resources promotion, design, development, and promotion of creative tourism services, development of online cultural communities at a local, regional, national, and international level, etc. This session invites researchers and practitioners to submit their work presenting new research, case studies, surveys, theories, position papers, and standardization efforts within the context of cultural information and communication strategies for marketing and tourism.

Distribution Channels, Economic Perspectives

Chairs

Alexios-Patapios Kontis, University of the Aegean, Greece
Leszek Koziol, Malopolska School of Economics, Poland

The rapid development of tourism and the intensive international competition of tourism enterprises have brought forward the essential role of the classic and new forms of tourism marketing channels. Without neglecting the fact that the main components of each product or service play significant role in regard to their success in the market, it is obvious that the way products or services are distributed is of equal importance. This session aims to explore and highlight international trends and practices in the digital era, related to new business models and innovative distribution channels in the tourism industry and their impacts on the supply side on tourism destinations.

Mobile Applications and Location-Based Marketing: Usage, Barriers and Measurement of Social Media Marketing in Various Business Sectors

Chairs

Maro Vlachopoulou, University of Macedonia, Laboratory of Information Systems and e-Business—ISeBlab, Greece

Kostas Fouskas, University of Macedonia, Laboratory of Information Systems and e-Business—ISeBlab, Greece

This session focuses on innovative research regarding the role of social media on marketing and business transformation, highlighting the growing importance of SM in a C2C, B2C, and B2B context and examining social networking practices in particular industry sectors. Increasing numbers of businesses in various industries have already integrated or plan to integrate social media applications into their marketing programs, as social media are fundamentally changing the way we communicate, collaborate, consume, and create. Thus, social media platforms can be used by the enterprises as another means to deliver e-business applications, engage their customers, and gain business value. This session welcomes papers and research examining the SM usage (what, how, why, how often), the metrics/analytics and KPIs of SM use, and the role of social media in different aspects of marketing regarding various business sectors. This session focuses on innovative research regarding the role of mobile applications and mobile location-based marketing on business transformation, highlighting the growing importance of mobile devices in the context of customer reach, customer experience, and utilization of real-time location context in marketing and strategic decisions. People and organizations are utilizing mobile devices that produce a plethora of data every moment. The utilization of this data along with the opportunity to connect this data with time and location data to create valuable "geospatial information" provides unique opportunities in terms of marketing and strategic decisions. This session welcomes papers related to research examining mobile applications and real-time location data usage (where, what, how, why, how often) by private and public organizations and

expects contribution in terms of frameworks and metrics/analytics revealing their impact on various business sectors.

Collaborative Consumption in Digital Domain: Sharing Economy, Consumer/Visitor Behaviour

Chair

Jashim Khan and Meng Tao, Dongbei University of Economics and Finance, Dalian, China

The session brings together Chinese scholars working on and leading collaborative consumption in digital domain. The session focuses on sharing concept and produces insight into sharing economy: bike, carpooling, clothing, and mobile phones. The emphasis remains on automated a-commerce, branding, and cross-cultural and critical analysis.

Culture, Architecture, Tourism and Social Media

Chairs

Charalambia Agaliotou, University of West Attica, Greece
Loukia Martha, University of West Attica, Greece
Maria Vrasida, University of West Attica, Greece

The urban, built, or natural environment is the host of all human activities including tourism. This session presents issues and current debates on urban planning and how the design and strategic place branding can transform the tourism experience and increase the responsiveness of the environment promoting it from a scenic background to the new informed active player in the tourism process.

Success Stories

Marketing, Tourism, Strategy and Entrepreneurship Implementation Paradigms: Multinational Industry Perspectives

Chair

Diamantis Kitrides, CEO of Citrine Digital Marketing Agency, Greece

Marketing managers and advertising and PR practitioners join under this session and provide up-to-date trends, developments, and advancements in the field of media, communication, marketing, management, and tourism.

Ethics in Business/Tourism/Marketing/Politics

Chair

Anthony Gortzis, European Business Ethics Network (EBEN) President

Synergy in action: physical and virtual presentations merge

Chairs

Alexandros Sahinidis, University of West Attica, Greece
Dimitrios Stavroulakis, University of West Attica, Greece

The session focuses on the role of human factor in business by means of the ways through which individuals and organizations utilize assets and exploit business opportunities. Topics of the session welcome papers on entrepreneurial intentions, opportunity recognition, social capital, gender issues in business, ethnic entrepreneurship, financing new ventures, innovation and entrepreneurship, family business, intrapreneurship, motivation, personnel recruitment and selection, career development, reward systems, and performance management.

Wine and Culinary Skills in the Digital Economy by Means of Social Media and Collaborative Consumption

Chairs

Andreas Masouras, Neapolis University Pafos, Cyprus
Magda Peistikou, Independent Researcher, Greece

In order for professionals of food and beverages to reach a world-class standard in distribution, it is necessary to implement the industry's best practices and continuously adapt their distribution processes. This session is associated with submissions on both conceptual and empirical contributions that include culinary tourism, culinary blogs, wine tourism, and destination marketing.

Aigaleo, Greece	Androniki Kavoura
Oswego, NY	Efstathios Kefallonitis
Aigaleo, Greece	Apostolos Giovanis

Acknowledgments

We would like to thank all the members who participated in any way in the ICSIMAT 2018 and especially:

- The famous publication house SPRINGER for their communication sponsorship
- The co-organizing universities and institutes for their support and development of a high-quality conference at scientific level and profile
- The members of the scientific committee that honored the conference with their presence and provided a significant contribution to the review of papers as well as for their indications for the improvement of the conference
- All members of the organizing committee for their help, support, and spirited participation before, during, and after the conference
- The session organizers for their willingness to organize sessions of high importance and for their editorial work, contributing in the development of valued services to the conference

Topics

Marketing, Social Media Marketing, e-Branding and Brand Experience Management, Digital marketing, Marketing Analytics, Marketing Research, Services Marketing, Integrated Marketing Communications, Consumer Behavior, New Product Design and Development, Sports Marketing, B2B and B2C Marketing, Pricing Strategies, Art and Cultural Marketing, Mobile Services, Gaming, Gamification and Augmented Reality, Location-based Services, Internet of Things, Heritage and Museum Management in the Digital Era, Cross-cultural Marketing, Tourism and Destination Marketing, Enogastronomic Tourism, Event Tourism, Health Tourism, Transport Industry Marketing, Social Media, Experiential and Sensory Marketing, Customer Relationship Management and Social CRM, Collaborative Marketing, Safety Marketing, Economics of Business Strategy, Accounting Marketing, Global Business, Marketing Finance, Healthcare Management, Accounting Education, Skills and Competences, Higher Education, Retail Marketing, Sales Management, Public Relations and Crisis Management, E-commerce, Marketing Strategy, Sectoral Marketing, Safety Management and Marketing, and Entrepreneurship.

Conference Details

Chairs

Androniki Kavoura, University of West Attica, Greece
Stathis Kefallonitis, University of New York at Oswego, USA
Apostolos Giovanis, University of West Attica, Greece

International Advisory Board

Prof. Buhalis, D., Bournemouth University, UK
Prof. Belch M., San Diego State University, USA
Prof. Belch G., San Diego State University, USA
Prof. Kitchen, P., ESC Rennes School of Business, France
Prof. Zotos, G., Cyprus University of Technology, Cyprus
Prof. Dibb, S., The Open University, UK
Prof. Bhattacharya, C.B., University of Pittsburgh, USA

Scientific Committee

George J. Avlonitis, Athens University of Economics and Business, Greece
Russell Belk, York University, Canada
Chris Cooper, Oxford Brookes University, UK
Annette Pritchard, Cardiff Metropolitan University, UK
Giacomo Del Chiappa, University of Sassari, Italy
Nigel Morgan, Cardiff Metropolitan University, UK
Teresa Borges-Tiago, Universidade dos Açores, Portugal

Stylianos Papathanassopoulos, National and Kapodistrian University of Athens, Greece

Goetz Greve, Hamburg School of Business Administration, Germany

Peter Yannopoulos, Brock University, Canada

Sharyn Rundle Thiele, Griffith University, Australia

Nick Marinescu, Transilvania University of Brasov, Romania

Monika Jedynak, Jagiellonian University Krakow, Poland

Efthymios Constantinides, University of Twente, The Netherlands

Christos Sarmaniotis, Alexander Technological Educational Institute of Thessaloniki, Greece

Efstathios Kefallonitis, State University of New York at Oswego, USA

Aspasia Vlachvei, Technological Educational Institute of West Macedonia, Greece

Stephen Havlovic, Laurentian University, Canada

Stanislav Ivanov, Varna University, Bulgaria

Ourania Notta, Technological Educational Institute of Thessaloniki, Greece

Leszek Koziol, Malopolska School of Economics, Tarnow, Poland

Charalambos Yakinthos, Merchant Marine Academy of Macedonia, Greece

Marianna Sigala, University of South Australia, Australia

Panagiotis Trivellas, Technological Educational Institute of Central Greece, Greece

Yiorgos A. Bakamitsos, Stetson University, USA

Can Seng Ooi, University of Tasmania, Australia

Alzbeta Kiralova, University of Business in Prague, Czech Republic

Axel Schlich, University of Applied Sciences, Fachhochschule Koblenz, Germany

Renata Tomljenović, Institute for Tourism, Croatia

Diren Bulut, Istanbul University, Turkey

Tijana Rakić,University of Brighton, UK

Vanessa Ratten, LaTrode University, Australia

Maro Vlachopoulou, University of Macedonia, Greece

Christos Vassiliadis, University of Macedonia, Greece

Ana Pereira-Roders, Eindhoven University, Netherlands

Ram Herstein, Jerusalem Academic Center, Israel

Kir Kuščer, University of Ljubljana, Slovenia

Perry Hobson, Taylor's University, Malaysia

Petros Kostagiolas, Ionian University, Greece

Marina-Selini Katsaiti, United Arab Emirates University, United Arab Emirates

Klimis Ntalianis, University of West Attica, Greece

Emel Yarimoglu, Yasar University Izmir, Turkey

Eda Yasa Ozelturkay, Cag University, Turkey

Dorin Coita, University of Oradea, Romania

Andreas Masouras, University of Neapolis, Cyprus

Evgenia Bitsani, Technological Educational Institute of Peloponnese, Greece

Petros Kostagiolas, Ionian University, Greece

Charilaos Lavranos, Ionian University, Greece

George Pierrakos, University of West Attica, Greece

Panagiota Argyri, Ambassador Scientix3, Community of Science Education in Europe

Apostolos Giovanis, University of West Attica, Greece
Jean-Éric Pelet, ESCE Business School, Paris, France
Stella Sylaiou, Hellenic Open University
Lee Li, York University, Canada
Sotiriadis Marios, University of South Africa, South Africa
Ulrike Gretzel, University of Southern California, USA
Irine (Eirini) Kamenidou, Technological Educational Institute of Kavala, Greece
Evangelos Christou, Alexander Technological Educational Institute of Thessaloniki, Greece
Panagiotis Kaldis, University of West Attica, Greece
Sandra Faria Dias, Universidade dos Açores, Portugal
Maya Ivanova, Varna University, Bulgaria
Flavio Tiago, Universidade dos Açores, Portugal
John Tsalikis, Florida International University, USA
Irene Tilikidou, Alexander Technological Educational Institute of Thessaloniki, Greece
Iordanis Kotzaivazoglou, TEI of Central Macedonia, Greece
Paraskevas Argouslidis, Athens University of Economics and Business, Greece
Natalya Totskaya, Laurentian University, Canada
Rana Haq, Laurentian University, Canada
Jorge Virchez, Laurentian University, Canada
Patricia Orozco, Laurentian University, Canada
Moustapha Soumahoro, Laurentian University, Canada
Dionysis Skarmeas, Athens University of Economics and Business, Greece
Carlos Costa, University of Aveiro, Portugal
Michele Thornton, State University of New York at Oswego, USA
Gokce Ozdemir, Yarar University, Turkey
Dimitrios Belias, Technological Educational Institute of Thessaly, Greece
Anastasios E. Politis, University of West Attica, Greece
Andreas Chatzidakis, Royal Holloway, University of London, UK
Ashraf Darwish, Helwan University, Egypt, Scientific Research Group in Egypt (SRGE)
Abo Ella Hassanien, Cairo University, Egypt, Scientific Research Group in Egypt (SRGE)
Charalampos A. Tziogas, Aristotle University of Thessaloniki, Greece
Naoum K. Tsolakis, Centre for International Manufacturing, University of Cambridge, UK
Andreas Papatheodorou, University of the Aegean, Greece
Sotirios Varelas, University of Peloponnese, Greece
Prodromos Yannnas, University of West Attica, Greece
Eirini Samanta, University of West Attica, Greece
Prokopis K. Theodoridis, University of Patras, Greece
Antigone G. Kyrousi, Deree—The American College of Greece
Jashim Khan, University of Surrey, UK
Konstantinos Fouskas, University of Macedonia, Greece
Maro Vlachopoulou, University of Macedonia, Greece

Manuela Guerreiro, University of Algarve, Portugal

Meng Tao, Dongbei University of Economics and Finance, Dalian China on the scientific committee

Athanasios Koustelios, University of Thessaly, Greece

Labros Sdrolias, Technological Institute of Thessaly, Greece

Manthos Delis, Montpellier Research in Management, France

Olga Tsakirides, National Center for Social Research, Greece

Vasiliki Vrana, Technological Education Institute of Western Macedonia, Greece

Dr Jose G. Vargas Hernandez, Universidad de Guadalajara

Sofia Asonitou, University of West Attica, Greece

Victor-Alexandru Briciu, Transilvania University of Brasov, Romania

Dimitrios Stavroulakis, University of West Attica, Greece

Florin Nechita, Transilvania University of Brasov, Romania

Felicia Constantin, University of Oradea, Romania

Alexandros Sahinidis, University of West Attica, Greece

Ioannis Paliokas, Centre for Research and Technology Hellas, Greece

Anestis Fotiadis, College of Communication and Media Sciences, ZAYED University, United Arab Emirates

John Filos, Professor, Panteion University, Greece

Nancy Papalexandris, Athens University of Economics and Business Greece

Organizing Committee

Scientific Research Committee, University of West Attica, Greece

Diamantis Kitridis, Citrine Marketing Communications, Greece

Richard Rutter, University of East Anglia, UK

Radoslaw Pyrek, Malopolska School of Economics, Tarnow, Poland

Ioannis Drivas, Independent Researcher, Greece

Sotiris Varelas, Neapolis University of Pafos, Greece

Konstantinos Hatsidis, Citrine

Eleni Makarona, Institute of Nanoscience & Nanotechnology, NCSR "Demokritos," Greece

Thanos Atheras, University of West Attica, Greece

Michalis Lekos, University of West Attica, Greece

Georgia Paparoidami, Independent Researcher, Greece

Constantinos Chytas, University of West Attica, Greece

Keynote Speaker

Prof. Buhalis, D., Bournemouth University, UK

Invited Speakers

Prof. Belch M., San Diego State University, USA

Prof. Ulrike Gretzel, California University, USA

Emeritus Prof. George Avlonitis, Athens University of Economics and Business, GREECE

Diamantis Kitrides, CEO of Citrine Digital Marketing Agency, Greece

Contents

Volume 2

A Network Analysis of Museums on Instagram

Vasiliki Vrana, Dimitrios Kydros, Evangelos Kehris, Anastasios-Ioannis Theocharidis, and George Karavasilis

Abstract Instagram, the photo and video sharing social network platform, has enjoyed exponential growth since its launch. As Instagram's popularity is growing fast, museums are moving quickly to integrate it into their marketing strategies, provide information about exhibitions and objects, engage with audience and connect to other museums Instagram accounts. This paper aims at investing the interconnections among the Instagram accounts of the most visited museums worldwide. The analysis uses techniques from Social Network Analysis, including visualization algorithms and calculations of well-established metrics. The research shows that the network formed by the museum Instagram accounts is a scale-free small world network and reveals the most important nodes of the network. Depending or their marketing policies, other museums may follow the most important in the network, be aware of the information that flows in the network and also to be motivated and inspired by them.

Keywords Instagram · Museums · Social Network Analysis · Communities

1 Introduction

Instagram, the social photo and video sharing mobile application was launched in October 2010 [1] and since then, it has enjoyed impressive growth; Nowadays Instagram community counts more than 800 million monthly active users, 500 million of daily active users and 300 million of Instagram Stories Daily Active Users [2]. As social media platforms are growing in popularity, organizations and corporations are moving quickly to integrate them into their marketing strategies [3]. Instagram and the other social media platforms offer museums and galleries opportunities to share their unique offerings with people around the world, to offer

V. Vrana (✉) · D. Kydros · E. Kehris · A.-I. Theocharidis · G. Karavasilis
Technological Education Institute of Central Macedonia, Serres, Greece
e-mail: vrana@teicm.gr

1

access to their collections, to demonstrate their core values, to directly reach people [4], to connect with other museums thus establishing networks and build relationships [5].

Museums are increasingly investing human resources, money and time to create and maintain a high profile social media presence [6]. However, up to now, little research efforts has been devoted to investigate how museums are exploiting Instagram features and possibilities. Studies mainly focus on visitors [1, 7–10] and museum performance [5]. What has not been investigated yet, are networks created between museum Instagram accounts and its properties. The study of those networks will, for example, identify the central accounts that may have important implications as they act as leaders where probably the most interesting conversation and exchange of information occurs. This work attempts to address this issue by identifying communities of museums and studying their properties.

2   Museums and Instagram Studies

Social media have enhanced the capability of museums to increase public engagement, build communities of interest around them, reach communities and individuals, perform marketing activities, [11–17]. One of the first studies at the field is that of Weilenmann et al. [1] who investigated how Instagram is used to communicate visitors' experiences while visiting a museum of natural history. Suess [7] explored the motivations of people using Instagram while visiting art galleries. He found that when art exhibition visitors "use Instagram in complex and meaningful ways" [p. 62]. Later on, Suess [8] investigated the use of Instagram by visitors and found that the use of Instagram engaged visitors in a manner that transcended the physical space and extended their aesthetic experience.

Studies have also focused on visitors and their connection to exhibition content through Instagram. Budge [9] suggests that museum's visitors record details of their experience and draw attention to exhibition content and especially objects. Budge and Burness [10] recorded the visitors' desire to communicate and share their perspective and experience through photography. Arias [18] identified graphic trends in the visiting narrative, situating the visiting experience not only within the museum's collection, but also within the social and cultural fabric of the country. At a different approach Lazaridou et al. [5] investigated the activity and the performance of the most visited museum Instagram accounts and recorded performance differentiations among the museums Instagram accounts. Instagram users form social networks since an Instagram account (user) can follow the activity of other Instagram accounts (users). An Instagram social network is asymmetric (directed) i.e. if an Instagram user *A* follows *B*, *B* need not follow *A* back [19]. To our knowledge, no research on the study of the social networks formed by museum Instagram accounts has been reported. This paper attempts to fill this gap by investigating the network of the Instagram accounts of the most visited museums.

3 Social Network Analysis

Social networks can be defined as "*a collectivity of individuals among whom exchanges take place*" [20]. In social media applications like Instagram new online social networks emerge linking people, organizations and companies [21]. Social networks can be represented by graphs. A graph G consists of a set nodes (or vertices) connected by edges (or arcs). A graph depicts useful relationships [22] and Social Network Analysis is used to identify patterns of interaction of nodes and knowledge flows within a social network, boundary spanners, gate-keepers, knowledge bottlenecks, under- and over-utilized nodes [23], along with central nodes that can act as hubs, leaders, or bridging different communities [24]. Moreover, the discovery of inherent community structures can help understand networks deeply and reveal interesting properties shared by the nodes [25].

4 Methodology

The ranked list of the top most visited museums was searched. Data about 69 top museums according to the annually number of visitors were recorded between the 1st and the 3rd of July 2018. For each museum of the ranked list its Instagram account was located and visited and the number of followers and followings (i.e. the number of accounts it followed) were recorded. A java program was developed that found for each Instagram museum account its Instagram followings that were included in the top museum list while the open source software Gephi [26] was used for displaying the directed graphs and NodeXL was used for calculating the community structures.

5 Macroscopic Views and Analysis

Eighteen out of the 69 most visited museums worldwide (26%) do not have an Instagram account. Skewness is recorded both for the numbers of followers (3.64) and following (2.76) implying that there is a tendency for some museums to have high values of the indexes while most museums have low values. The number of followers range from 0 to 3,700,000, with the Museum of Modern Art New York having the maximum number of followers, with its network continuously expanding from 1,200,000 in 2014 [5] to 3,700,000 in 2018. The mean number of followers is 315,538.41 and its Std. Deviation is 650,833.01, showing great dispersion of this particular index among the museum accounts. The number of following range from 0 to 2658 with an average of 157 showing that museums accounts follow only few other museum Instagram accounts. Turning our attention to the investigation of the network formed between the museum Instagram accounts we may see that some
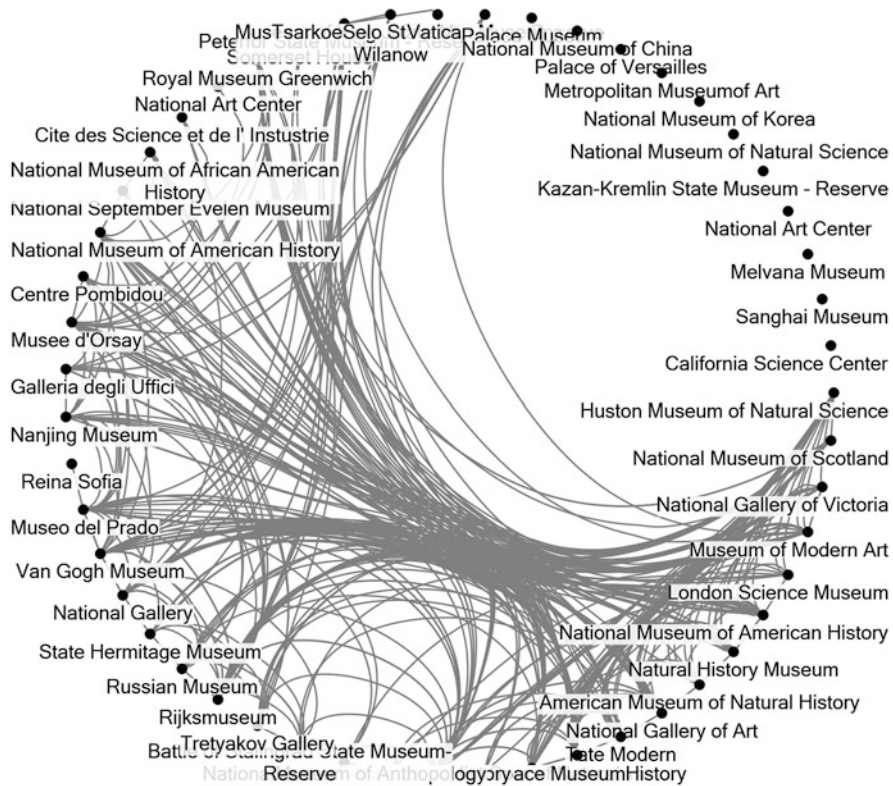
Fig. 1 The network in circular format; isolates are located at the upper right

museums do not follow and are not followed by any other museum. These nodes are isolates and create "*a kind of noise in computations*" [27]. Figure 1 presents the network in a circular format. The nodes at the upper right of the figure are isolates while the vertices in the bottom area are more connected.

The Diameter of the network (i.e. the longest distance over all pairs of nodes) is 4, the Average Geodesic Distance is 1.69, which is relatively small due to the fact that the network is small, while the coexistence of an Average Clustering Coefficient less than 1 (0.339) is an indication that the network is a small world.

The Reciprocated Vertex Pair Ratio is 0.215 and it is "*the number of vertex pairs that have edges in both directions divided by the number of vertex pairs that are connected by any edge*" [28] As the relationship "following" in Instagram is not mutual an "asymmetric" model relationships exist [29] and only 21.5% of the relations in the network are mutual.
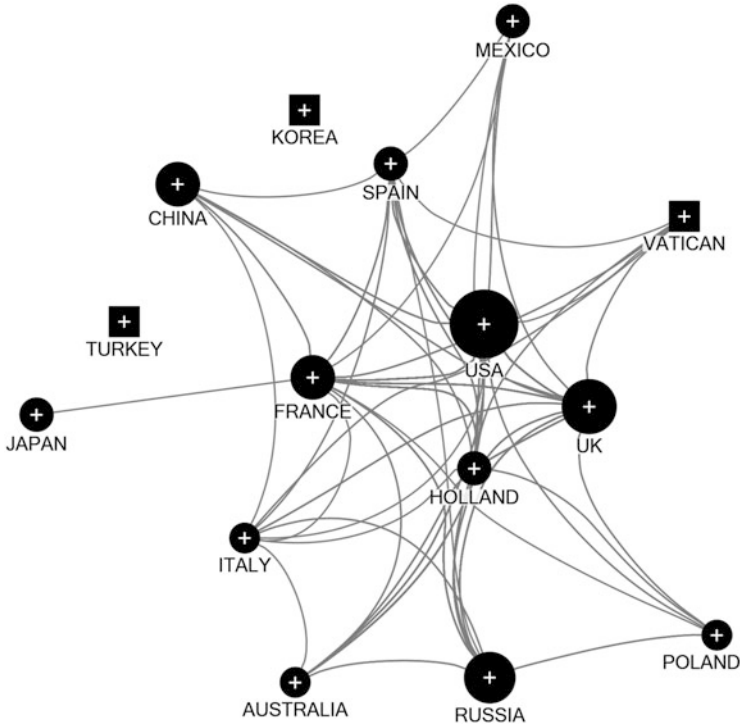
Fig. 2 Country Groups collapsed; vertex size proportional to the number of museums

5.1 Grouping by Country

In Fig. 2 shows the network formed when the museums that belong to the same country are shown as a single vertex. Based on this network we notice that:

- Some edges between countries do not exist; e.g. China only points out but is not pointed by anyone while France is pointed by many but only points to Japan.
- U.S.A. museums are the most connected followed by U.K. museums. These museums tend to follow each other but they are also following others.
- Museums in the UK follow museums in France and USA and USA museums follow museums in France.

5.2 Communities

In Social Network Analysis, different groupings of nodes have been extensively used [30] in order to investigate the "sub-structures" that may be present in a network. These grouping usually follow quite strict rules and are rather hard to calculate [31]. Girvan and Newman [32] proposed the idea of communities of nodes

and the metric of modularity has been introduced as a measurement that corresponds to the quality of grouping [33]. The value of the modularity for the network of museum Instagram accounts is $0.14 > 0$, showing that the number of edges within groups exceeds the number expected on the basis of chance [34]. Five communities (termed Group 1 to Group 5) are identified in the network:

- Group 1 contains all isolates
- Group 2 is the most interconnected group, with a density of 0.394 [35]. This group is consisted of History and Natural History Museums. Thus a tendency is recorded that this type of museums tries to connect each other.
- Group 3 contains the Top Art Museums such as Louvre, Vatican Museums, Gelleria degli Uffici and Russian museums
- Group 4 contains Museums in the U.K., Paris, Japan and Holland.
- Group 5 contains museums from Mexico and Spain.

5.3   Scale-Free and Small World Testing

Watts and Strogatz [36] and Barabási and Albert [37] proposed 'small-world networks' and 'scale-free networks' respectively in an effort to define models of network organizations differing from regular and random networks. Clustering coefficient should be between 0 and 1. For the museum network the clustering coefficient is 0.339. Next, the degree distribution must be checked if it follows the power-law distribution. Parameter x-min is set to 2. Alpha coefficient is computed to exactly 2. This is on the upper limit value. Thus the network is very close to a scale free network and when isolates are removed the resulting network is a small world.

6   Microscopic (Node Level) Views and Analysis

In directed networks, like the one under investigation, it is important to rank vertices. Centrality measures capture a node's position in the network. Well-established centrality metrics are: In-degree, Out-degree, Betweenness centrality and Pagerank.

The British museum, Museum of Modern art and Louvre are the three most prominent museums (24, 24 and 23 museums respectively seek to direct ties to them). These "Elite" accounts act as "focal points" encouraging other influential museums to congregate around them and thus attract audience to their account.

Natural History Museum, National Museum of Scotland and Rijksmuseum are the top three museums with the higher out-degree following 21, 19 and 19 museums respectively. These museums serve as nodes of useful information in the network as they may be relatively able to exchange with others, or disperse information quickly to many others, and are often characterized as influential.
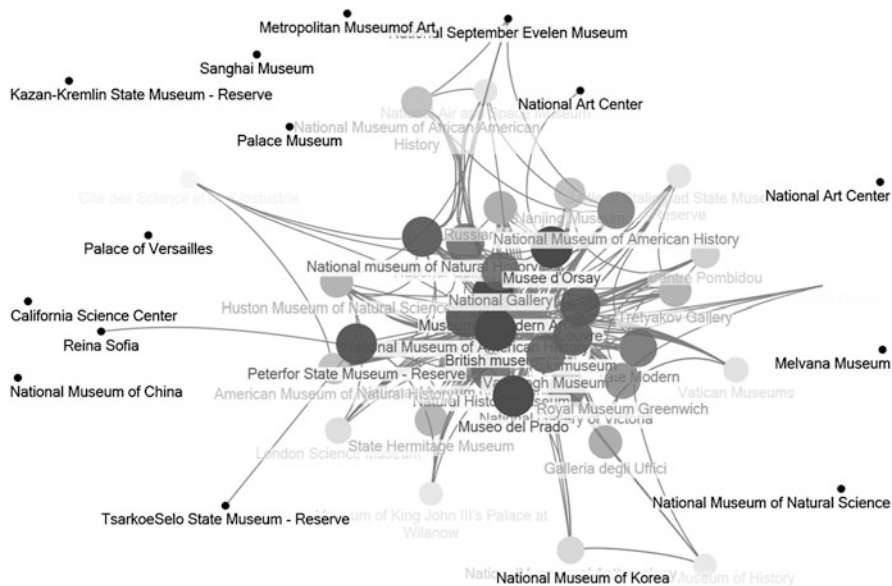
Fig. 3 Betweenness centrality

A number of museums accounts such as the Rijksmuseum, Louvre, National Museum of American History, National museum of Natural History, National Gallery of Art, National Museum of American History and National Gallery serve both as good hubs and good authority accounts. A good hub account is one that points to many good authorities; a good authority account is one that is pointed to by many good hub accounts.

Musee d'Orsay, British museum, Museum of Modern Art, Museo del Prado and Peterfor State Museum—Reserve having betweenness centrality 116.922, 113.470 and 112.819 respectively, have more control over the network, because more information pass through that nodes. Figure 3 is the visualization of the network according to betweenness centrality measure. Larger betweenness centrality is shown by larger, darker vertices.

According to Pagerank, the British museum, Museum of Modern Art, Rijksmuseum and Louvre are the most important nodes in the museums network having a pagerank 1.889, 1.839 and 1.722 respectively. These nodes are the community leaders and have huge influence on museums' Instagram community.

7   Conclusions

The paper aims at investing the interconnections of the Instagram accounts of the 69 most visited museums worldwide. The analysis uses techniques from Social Network Analysis, including visualization algorithms and the calculation of well-established metrics.

From the 69 most visited museums that were examined, 51 have an Instagram account. Few museums follow a relatively large number of museums while most museums follow very few. The network is very close to a scale free network. Communities are formed in the network showing a tendency of museums to connect with each other according to their type (History and Natural History Museums) or to their location. The most important nodes in the network were revealed by calculating the centrality metrics. Thus, the British museum, Museum of Modern art and Louvre are the most prominent museums. If other museums Instagram accounts congregate around them, they may attract audience to their own account. Natural History Museum, National Museum of Scotland and Rijksmuseum are the museums that serve as nodes of useful information in the network and may be characterized as influential. Musee d'Orsay, British museum, and Museum of Modern Art, have more control over the network as more information pass through them. Finally, according to Pagerank, the most important nodes in the museums network are the British museum, Museum of Modern Art, Rijksmuseum and the Louvre. Other museums should follow them in order to be aware of the information that flows in the network and also to be motivated and inspired by them.

The limitations of the study are associated to the sample as the paper only investigates the list of the most visited museums. Further research is needed taking in to consideration all the museums that have an Instagram account.

References

1. Weilenmann A, Hilliman T, Jungselius B (2013) Instagram at the museum: communicating the museum experience through social photo sharing. CHI 2013: Changing perspectives, Paris, France
2. Aslam S (2018) Instagram by the numbers: stats, demographics & fun facts. https://www.omnicoreagency.com/instagram-statistics/. Accessed 29 June 2018
3. Constantinides E, Romero CL, Gómez Boria M (2008) Social media: a new frontier for retailers? Eur Retail Res 22:1–28. https://doi.org/10.1007/978-3-8349-8099-1_1
4. Gonzalez R (2017) Keep the conversation going: how museums use social media to engage the public. Mus Sch 1(1). http://articles.themuseumscholar.org/vol1no1gonzalez. Accessed 29 June 2018
5. Lazaridou K, Vrana V, Paschaloudis D (2015) Museums + Instagram. In: Katsoni V, Upadhya A, Stratigea A (eds) Tourism, culture and heritage in a smart economy, Springer proceedings in business and economics. Springer, Cham, pp 73–84. https://doi.org/10.1007/978-3-319-47732-9_5

6. Adamovic M (2013) Social media and art museums: measuring success. Terminal Research Project. University of Oregon, Arts Administration Master's Media Management Concentration. https://core.ac.uk/download/pdf/36687473.pdf. Accessed 2 Mar 2016
7. Suess A (2014) Art gallery visitors and instagram. Masters thesis, University of Arts London. https://www.academia.edu/12086365/Art_Gallery_Visitors_and_Instagram. Accessed 3 Apr 2018
8. Suess A (2018) Instagram and art gallery visitors: aesthetic experience, space, sharing and implications for educators. Aust Art Educ 39(1):107–122
9. Budge K (2017) Objects in focus: museum visitors and instagram. Curator Mus J 60(1):67–85. https://doi.org/10.1111/cura.12183
10. Budge K, Burness A (2018) Museum objects and Instagram: agency and communication in digital engagement. Continuum 32(2):137–150. https://doi.org/10.1080/10304312.2017.1337079
11. Angus J (2012) Innovations in practice: an examination of technological impacts in the field. J Mus Educ 37(2):37–46. https://doi.org/10.1080/10598650.2012.11510729
12. Fletcher A, Lee MJ (2012) Current social media uses and evaluations in American museums. Mus Manag Curatorship 27(5):505–521. https://doi.org/10.1080/09647775.2012.738136
13. Kidd J (2011) Enacting engagement online: framing social media use for the museum. Inf Technol People 24:64–77. https://doi.org/10.1108/09593841111109422
14. Langa L (2014) Does Twitter help museums engage with visitors? In: iConference 2014 proceedings, Berlin, Germany, 4–7 March, pp 484–495
15. Osterman M, Thirunarayanan MO, Ferris EC, Pabon LC, Paul N (2012) Museum and Twitter: an exploratory qualitative study of how museums use Twitter for audience development and engagement. J Educ Multimed Hypermedia 21(3):241–255
16. Spiliopoulou AY, Mahony S, Routsis V, Kamposiori C (2014) Cultural institutions in the digital age: British Museum's use of Facebook insights. Participations. J Audience Recept Stud 11 (1):286–303
17. Tuğbay S (2012) Museums and visitors on the web. A comparative study of visitor engagement on social media in Dutch and Turkish museums. M.A. Thesis in Cultural Economics and Cultural Entrepreneurship—Erasmus University, Rotterdam
18. Arias MP (2018) Instagram trends: visual narratives of embodied experiences at the museum of Islamic. Art MW18: Museums and the Web 2018 Vancouver, Canada, 18–21 April
19. Hu Y, Manikonda L, Kambhampati S (2014) What we instagram: a first analysis of instagram photo content and user types. In: Proceedings of ICWSM. AAAI
20. Liebeskind P, Oliver AL, Zucker L, Brewer M (1996) Social networks, learning and flexibility: sourcing scientific knowledge in new biotechnology firms. Organ Sci 7(4):428–443
21. Wellman B (2001) Computer networks as social networks. Science 293(5537):2031–2034. https://doi.org/10.1126/science.1065547
22. Kydros D, Oumbalis V (2015) A network analysis of the Greek Stock Market. Procedia Econ Finance 33:340–349. https://doi.org/10.1016/S2212-5671(15)01718-9
23. Ryan C (2007) Performance of public-private collaborations in advanced technology research networks: network analyses of genome Canada projects. Ph.D. Dissertation, University of Saskatchewan, Saskatchewan
24. Albert R, Jeong H, Barabási AH (2000) Error and attack tolerance of complex networks. Nature 406:378–382. https://doi.org/10.1038/35054111
25. Zhao ZY, Feng SH, Wang Q, Huan JZ, Williams G, Fan JP (2012) Topic oriented community detection through social objects and link analysis in social networks. Knowl Based Syst 26:164–173. https://doi.org/10.1016/j.knosys.2011.07.017
26. Bastian M, Heymann S, Jacomy M (2009) Gephi: an open source software for exploring and manipulating networks. In: International AAAI conference on weblogs and social media
27. Kydros D (2017) Twitting bad rumours – the grexit case. Int J Web Based Communities 14 (1):4–20. https://doi.org/10.1504/IJWBC.2018.090933

28. Ranjan S, Sood S (2016) Exploring Twitter for large data analysis. Int J Adv Res Comput Sci Softw Eng 6(7):325–330
29. Zafiropoulos K, Antoniadis K, Vrana V (2014) Sharing followers in e-government twitter accounts: the case of Greece. Future Internet 6:337–358. https://doi.org/10.3390/fi6020337
30. Kydros D, Anastasiadis A (2017) Greek political language during the economic crisis – a network analytic approach. Soc Netw 6:164–180. https://doi.org/10.4236/sn.2017.62010
31. Wasserman S, Faust K (1994) Social network analysis: methods and applications. Cambridge University Press, Cambridge
32. Girvan M, Newman MEJ (2002) Community structure in social and biological networks. Proc Natl Acad Sci U S A 99:7821–7826
33. Blondel VD, Guillaume JL, Lambiotte R, Lefebvre E (2008) Fast unfolding of communities in large networks. J Stat Mech. https://doi.org/10.1088/1742-5468/2008/10/P10008
34. Li W, Schuurmans D (2011) Modular community detection in networks. In: IJCAI Proceedings—International joint conference on artificial intelligence 22(1). https://doi.org/10.5591/978-1-57735-516-8/IJCAI11-231
35. Faust K (2006) Comparing social networks: size, density, and local structure. Metodološki zvezki 3(2):185–216. https://doi.org/10.1.1.103.8247
36. Watts DG, Strogatz S (1998) Collective dynamics of 'small-world' networks. Nature 393:440–442
37. Barabási AL, Albert R (1998) Emergence of scaling in random networks. Science 286 (5439):509–512. https://doi.org/10.1126/science.286.5439.509

Towards a Hybrid Minimax Recommender for Free-Roaming Museum Visits

George Pavlidis

Abstract This paper presents a novel minimax hybrid recommender for free-roaming museum visits that is based on a new museum visit concept that was developed to capture the spatial, temporal and content-based dynamics during free-roaming museum visits. The complex hybrid recommender applies a minimax approach as it estimates an overall visitor dissatisfaction and aims its minimisation. As a result, it is able to develop optimal routes, as sequences of points of interest for each individual visitor. This hybrid recommender, still at its fine-tuning phase, has been tested in large scale simulations, using realistic data for visitors and exhibitions and has already shown to outperform the naive baseline recommender that relies on popularity.

Keywords Recommender · Recommendation · Cultural heritage · Museum guide · Machine learning · Artificial intelligence

1 Introduction

Over the recent decades a number of recommendation technologies have been researched and widely applied in various domains. These technologies, which are classical applications of artificial intelligence and are currently a very active machine learning field, basically aim at the minimisation of information overload and the personalisation of content provided to individual users. To this end, they exploit any available knowledge about users and their preferences on any type of items of interest, so that recommendations can be presented to users for unknown items. Apparently, these recommendations must definitely be context-dependant and mean-ingful to the users, otherwise they not only fail in their main task but they even increase the overload they claim to tackle, not to mention the negative experience

G. Pavlidis (✉)
Athena Research Centre, University Campus at Kimmeria, Xanthi, Greece
e-mail: gpavlid@ceti.athena-innovation.gr

they trigger. Usually these technologies are referenced as *recommender systems* or simply *recommenders* [1–5].

The most obvious and usually highly successful approach of producing recommendations is to rely on item *popularity*, and consists in providing ranked lists of the available items in a decreasing order of popularity. Although simplistic and in a way naive, this approach is very successful and is usually considered the *baseline method*. Any new method, approach and system that claims to create recommendations should at least be compared with this baseline method and prove to win.

Recommenders have already made their appearance in cultural heritage since 1999, in various forms and approaches, aiming mainly museum and cultural tourism applications [6–19]. In this context it is of significant importance any adopted visitor modelling concepts. There have been a number of museum visitor models proposed in the past and a comprehensive presentation can be found in [20]. Recently, J. Falk presented a novel visitor modelling based on the visit motivation [21] that influenced the work presented in this paper. In this view, visitors are distinguished into (a) *explorers*, curiosity-driven visitors seeking for knowledge, (b) *facilitators*, socially motivated visitors that focus on the learning of others they accompany, (c) *professionals/hobbyists*, content-related visitors, (d) *experience seekers*, visitors who visit due to a perceived importance of the museum, and (e) *rechargers*, visitors who see the museum as a spiritual, contemplative and restorative refuge.

This paper presents a novel minimax hybrid recommender for free-roaming museum visits. The recommender is a typical case of a hybrid system as it uses a combination of a new *concept/heuristics*, classical *collaborative filtering* and *content-based approaches* to quantify the probability of a visitor becoming dissatisfied during a free-roaming visit, adopting the visitor model proposed by Falk. The recommender has been tested in large-scale simulations using realistic data for exhibits and visitors and has shown promising results in decreasing the probability of visitor dissatisfaction. In the following sections the recommender is described and experimentations are being detailed and discussed.

2   The Complex Minimax Hybrid Recommender

The proposed complex minimax hybrid recommender is based on two main pillars,

– a new *concept of a free-roaming museum visit*, which is expressed in a way that make quantification of probabilistic factors possible, and
– a new *visitor dissatisfaction modelling*, which defines how spatial, temporal, and content-based dynamics may influence a visitors experience within the adopted visit concept

In addition, the recommender is largely influenced by the *visitor modelling* proposed by Falk, as the motivation of visit plays here a central role in determining the way recommendations are generated. Last but not least, as in nearly any recommender, there is a prerequisite for a *ratings matrix*, a matrix of scores provided

by visitors to the exhibits. This matrix is typically expected to be largely sparse but is still valuable for the generation of recommendations. A direct result of this matrix is an estimate of the popularity of the exhibits, which is also accompanied by an importance score given to each exhibit by the museum curators or the stakeholders in general. In the following paragraphs these fundamental concepts are being outlined to make clear how the proposed recommender exploits them to generate recommendations that minimise the visitor dissatisfaction and then the overall recommender pipeline is unfolded.

2.1 The New Museum Visit Concept

The new concept of a free-roaming museum visit is graphically represented in Fig. 1. Any visit is represented as a sequence of points of interest along with the corresponding spatial and content-based distances and the possible local obstacles or obtrusions. Circles represent the exhibits. The size of those circles corresponds to the exhibits' average popularity, whereas the shading of the circles represents how significant the exhibits are considered to be by the museum curators. Straight arrowhead lines denote the visit path. The length of those lines corresponds to
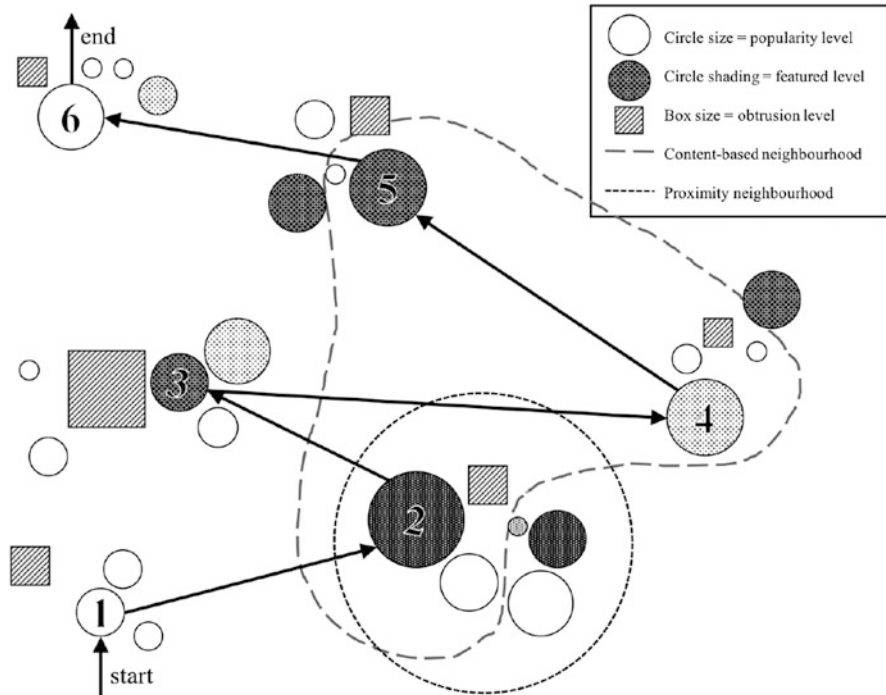
Fig. 1 The museum visit abstract concept in the proposed recommender

physical distances in the museum. Exhibits that are nearby in the museum are also placed in physical neighbourhoods in this graph. In addition, possible obstacles or obtrusions are being represented by shaded squares, in which the size denotes the level of local obtrusion. Physical neighbourhoods are depicted as dotted-line ellipsoidal regions, whereas semantic neighbourhoods (content-based similar exhibits) are depicted as arbitrary dashed-line regions.

2.2   The New Visitor Dissatisfaction Quantification

As outlined in the previous paragraphs, the proposed recommender aims at minimising a visitor's dissatisfaction by adopting an abstract conceptual visit model and spatial, temporal and content-based dynamics.

Within the proposed scheme, *spatial dynamics* is modelled as a function of the distances, the popularity and importance of exhibits, which results in an estimate of the probability of visitor dissatisfaction due to spatial influences. This is expressed as a weighted sum of lateral features that correspond to the weighted sum of the average popularity and importance of an examined exhibit and the relative popularity and importance of the examined exhibit in relation to the spatial neighbourhood. Furthermore, *temporal dynamics* in visitor behaviour is modelled by a piece-wise continuous function consisting of an exponential and a quadratic function, which results in an estimate of the probability of visitor dissatisfaction due to temporal influences that is based on the ratio of a prescribed time needed to appreciate an exhibit and the actual time spent by the visitor. In addition, *content-based dynamics* is represented by a complex combination of both content similarity and physical distance, as well as popularity, as there is a strong influence by those popular exhibits in a close proximity, which results in an estimate of the probability of visitor dissatisfaction due to content-based influences. At a final stage, these probabilistic features, along with another feature relating to the probability of dissatisfaction based on obtrusions, are being weighted and summed to create an overall composite visitor dissatisfaction probability at any point during a museum visit.

2.3   The Recommender Engine

One of the first steps in the recommender is to determine the type of visitor and the degree of divergence or differentiation of the particular visitor in relation to the average visitor or the average visitor of the same type. This is being estimated by clustering the visitor (k-means was initially used) according to demographics (visitor data available to the system) and by examining the ratings provided by visitors in the same cluster with the active visitor. A 'surprise' factor (initially set to 2 rating values in a 1–5 scale) is also being used as a threshold to identify a significantly diverging visitor, if the visitor has already provided ratings. Then the visitor is classified in a

population percentile denoting any personal biases towards or against popular or important exhibits. Up to this point the recommender engine operates as a typical content-based recommender. Either way, the active visitor is clustered in a population percentile for which existing ratings can be used to create a first round of recommendations using the collaborative filtering approach (the model has already been learned by exploiting existing ratings and the matrix factorisation approach), which results in a full vector of predicted ratings for the active visitor. The predicted ratings are sorted in decreasing order and become the first set of recommendations. Following the knowledge about the visitors degree of divergence from the average, along with knowledge about the visitors motivation (Falk's modelling) this list of recommendations is being re-sorted using the following prioritisation

– by importance, neighbourhood ratings, predicted list
– by popularity, neighbourhood ratings, predicted list
– by importance, predicted list
– by popularity, predicted list
– by neighbourhood ratings, predicted list

and this results in an ordered list, denoted as $\mathbb{L}$.

Before providing this list to the visitor, the recommender simulates a complete tour, in which it uses the visitor dissatisfaction modelling presented above to assess the probable visitor disengagement in the concept of the museum visit adopted. Beginning with the first exhibit in the list $\mathbb{L}$ the system virtually moves on to predict the next exhibit that is highly likely to minimise any possible visitor dissatisfaction. To do so, it estimates the visitor dissatisfaction factors for the next exhibit in the list $\mathbb{L}$ and, in addition, it examines two more alternative cases by estimating the dissatisfaction for any of the nearby exhibits and for any of the similar exhibits in the museum. Here is the point in which the minimax character of the system is illustrated, as the system proceeds to select the option which is expected to minimise the visitor dissatisfaction. This continues on iteratively until the available time denoted by the visitor is consumed, resulting in another ordered list or exhibits $\mathbb{L}_{\mathbb{R}}(\neq \mathbb{L})$.

Overall, the recommender pipeline can be simplified to the following steps:

1. Visitor clustering and estimation of the visitor divergence (profiling)
2. Generation of ratings for the visitor and ordering of exhibits
3. Re-ordering of the exhibits according to the ratings and the visitor profile
4. Simulation of a complete tour for the visitor and selection of the exhibits that minimise dissatisfaction according to the visit concept and the dissatisfaction model

The final list of exhibits can be provided to the visitor in any electronic form, like through an electronic guide, or through a website even prior to the visit, either one-by-one or as a list. Apparently, the final list delivery approach or medium is not in the scope of this paper, although an online one-by-one delivery was in mind to tackle the free-roaming visit.

3   Experimentation and Results

Overall, in order to test the proposed minimax hybrid recommender in realistic simulations it is imperative to have

– a dataset of museum exhibits (including descriptive, ontological and location data)
– a dataset of visitors (that includes basic demographics)
– a set of ratings on exhibits by the visitors that have already visited at least once, and provided their input by means of 1–5 ratings for exhibits
– a ratings model based on collaborative filtering using the existing ratings; this ratings model is expressed as a typical couple of optimised latent factor matrices for visitors and exhibits that resulted from a matrix factorisation approach
– the ratings provided by the visitors reflect the popularity of the exhibits, whereas the ratings provided by the stakeholder or museum curators reflect the importance of the exhibits in the dataset
– a set of heuristics, including a typical average walking speed (0.5 m/s), an average talking speed (150 words/min), a ratings surprise threshold (2 rating values), population thresholds ([0.005, 0.025, 0.1, 0.2, 0.5, 0.8, 0.9, 0.975, 0.995]), a number for the visitor clusters (10)[1]

In order to be able to create realistic simulations, an exhibits dataset was created based on actual excavation data with geolocation information and descriptive metadata, including a total of 1000 exhibits. The visitors dataset was created as a realistic population sample based on global statistical demographical data for the age, genre, occupation, education, and also some museum-related metadata including the frequency and duration of visits, the motivation and the available time. In addition, the ratings dataset was created by using a balanced random sample from the visitors population. Ratings were typical real values in [1, 5] and covered around 1% of the total possible ratings.

Two simulated recommended visits are shown in Fig. 2. The graphs show the response of the system to two different visitors side by side with the baseline popularity-based approach. The top pair of figures correspond to a visitor with little available time, whereas the bottom pair corresponds to a visitor with more available time. In these graphs, the line corresponds to the dissatisfaction probability estimate and the bars correspond to the popularity and importance of the corresponding exhibits.

In these examples, the first visitor (top pair of graphs) 'gains' a dissatisfaction reduction of around 14% on the average or 16.5% on the median and a final 17.5% at the end of the visit, whereas for the second visitor (bottom pair of graphs) the corresponding 'gains' are 13, 17.5 and 30%. The same comparison has been applied

---

[1]These heuristics have been used to estimate (a) required times from exhibit to exhibit, (b) for the description of an exhibit, (c) for the characterisation of visitors in respect to the provided ratings, and (d) the characterisation of visitors in population clusters in respect to the provided ratings.
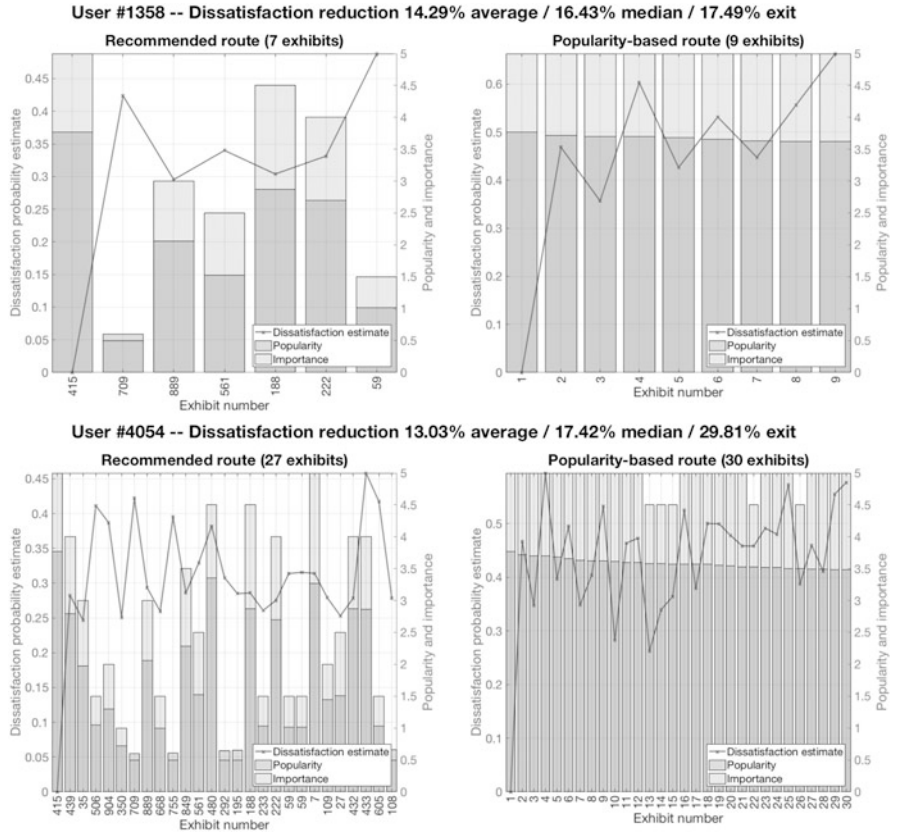
Fig. 2 Evolution of simulated tours for two random visitors with different characteristics

to all the simulated data, for all 10,000 different visitors and the overall average results indicated a reduction in the probability of dissatisfaction on the order of 13% on the average, or 16% on the median and a 21% at the end (exit) of each visit in relation to a naive popularity-based recommender.

4 Conclusion

This paper introduced an approach towards a hybrid recommender for free-roaming museum visits based on a new museum visit concept and a new visitor satisfaction modelling that integrates spatial, temporal, and content-based dynamics. The recommender begins by clustering the visitors and estimating of active visitor divergence, which results in the prediction of ratings for the visitor and ordering of the exhibits according to the ratings and the visitor motivation. At a final stage the system simulates a complete tour for the active visitor and selects the exhibits that

minimise dissatisfaction according to the visit concept and the dissatisfaction model. A large-scale simulation has been conducted and results showed that the recommender can generate personalised recommendations that reduce the visitor dissatisfaction in comparison to a popularity-based recommender.

To the knowledge of the author this is the first time a museum recommender is designed this way and the minimax approach taking into account Falk's modelling (visit motivation) seems rather promising in mathematically modelling the dynamics that influence a visit, towards more personalised museum recommenders.

Last but not least, the approach may have a significant impact in museum/ exhibition management, as visitors dissatisfaction statistics may be used to identify issues in specific exhibits, or to associate time limitations and possible influences with the formation of an exhibition.

References

1. Adomavicius G, Tuzhilin A (2005) Toward the next generation of recommender systems: a survey of the state-of-the-art and possible extensions. IEEE Trans Knowl Data Eng 17 (6):734–749
2. Asanov D et al (2011) Algorithms and methods in recommender systems. Berlin Institute of Technology, Berlin
3. Melville P, Sindhwani V (2011) Recommender systems. In: Sammut C, Webb G (eds) Encyclopedia of machine learning. Springer, Berlin, pp 829–838
4. Aggarwal CC (2016) An introduction to recommender systems. In: Recommender systems. Springer, Berlin, pp 1–28
5. Goodfellow I, Bengio Y, Courville A, Bengio Y (2016) Deep learning, vol 1. MIT Press, Cambridge
6. Oppermann R, Specht M (1999) A nomadic information system for adaptive exhibition guidance. Arch Mus Inf 13(2):127–138
7. Aoki PM, Grinter RE, Hurst A, Szymanski MH, Thornton JD, Woodruff A (2002) Sotto voce: exploring the interplay of conversation and mobile audio spaces. In: Proceedings of the SIGCHI conference on human factors in computing systems. ACM, pp 431–438
8. Rocchi C, Stock O, Zancanaro M, Kruppa M, Krüger A (2004) The museum visit: generating seamless personalized presentations on multiple devices. In: Proceedings of the 9th international conference on intelligent user interfaces. ACM, pp 316–318
9. Chou SC, Hsieh WT, Gandon FL, Sadeh NM (2005) Semantic web technologies for context-aware museum tour guide applications. In: 19th international conference on Advanced information networking and applications, 2005. AINA 2005, vol 2. IEEE, pp 709–714
10. Luyten K, Van Loon H, Teunkens D, Gabriëls K, Coninx K, Manshoven E (2006) Archie: disclosing a museum by a socially-aware mobile guide. In: 7th international symposium on virtual reality, archaeology and cultural heritage
11. Grieser K, Baldwin T, Bird S (2007) Dynamic path prediction and recommendation in a museum environment. In: Proceedings of the workshop on language technology for cultural heritage data (LaTeCH 2007), pp 49–56

12. Roes I, Stash N, Wang Y, Aroyo L (2009) A personalized walk through the museum: the chip interactive tour guide. In: CHI'09 extended abstracts on human factors in computing systems. ACM, pp 3317–3322
13. Van Hage WR, Stash N, Wang Y, Aroyo L (2010) Finding your way through the Rijksmuseum with an adaptive mobile museum guide. In: Extended semantic web conference. Springer, Berlin, pp 46–59
14. Huang YM, Liu CH, Lee CY, Huang YM (2012) Designing a personalized guide recommendation system to mitigate information overload in museum learning. J Educ Technol Soc 15 (4):150–166
15. Maehara C, Yatsugi K, Kim D, Ushiama T (2012) An exhibit recommendation system based on semantic networks for museum. In: Watanabe T, Jain LC (eds) Innovations in intelligent machines–2. Springer, Berlin, pp 131–141
16. Keller I, Viennet E (2015) Recommender systems for museums: evaluation on a real dataset. In: 5th international conference on advances in information mining and management
17. Rossi S, Cervone F (2016) Social utilities and personality traits for group recommendation: a pilot user study. In: Proceedings of the 8th international conference on agents and artificial intelligence. SCITEPRESS-Science and Technology Publications, Lda, pp 38–46
18. Tavcar A, Antonya C, Butila EV (2016) Recommender system for virtual assistant supported museum tours. Informatica 40(3):279
19. Cardoso PJ, Rodrigues JM, Pereira JA, Sardo JD (2017) An object visit recommender supported in multiple visitors and museums. In: International conference on universal access in human-computer interaction. Springer, Berlin, pp 301–312
20. Najbrt L, Kapounová J (2014) Categorization of museum visitors as part of system for personalized museum tour. Int J Inf Commun Technol Educ 3(1):17–27
21. Falk JH (2013) Understanding museum visitors' motivations and learning. A museum for the and the professor (lk 119-122). Kasutatud 13:2015

Developing a Multi-channel Customer Relationship Management Strategy for Hotel Operation

Soteris Kefalas

Abstract Travellers are becoming more price sensitive, less brand loyal and more sophisticated in their hotel choices. The use of a Customer Relationship Management (CRM) system, has becomes a strategic necessity for attracting and increasing guest patronage. For this case-study, a multi-channel CRM system was used to examine its effectiveness on guests' relations of "X" Hotel in Cyprus. Data was collected from various resources in order to: (1) profile the existing customer and clarify which market segment should be targeted, (2) proceed with an environmental and competitor analysis, (3) process collected data to identify significant patterns of data as they pertain to particular customers or customer groups, (4) understand unique value propositions of the company in relation to guests' expectations, (5) develop creative marketing communications and assess their return on investment, (6) determine organizational effectiveness to adapt and innovate according to guests' preference. It was found that an effective CRM strategy incorporates sharing the vision with staff and giving staff more decision-making power. The critical success factor, however, is the optimally use of data to enhance return on investment (ROI), as knowing the customers' needs can help pinpoint communications more accurately, improving the marketing effectiveness of ROI.

Keywords Hotel market segment · CRM strategy · Creative marketing · Return on investment · Competitor analysis · Innovation

1   Introduction: Company Overview

Every destination, every region and beyond, every country has its own tourism potential which can be offered to visitors depending on their attractiveness and appeal [1]. However, as travellers are becoming more price sensitive, less brand loyal and more sophisticated, Customer Relationship Management (CRM) becomes

S. Kefalas (✉)
InterNapa College, Famagusta, Cyprus

a strategic necessity for attracting and increasing guests' patronage. Customer Relationship Management is a key competitive strategy that can keep businesses focused on the needs of the customers and which can integrate a customer-facing approach throughout the organization [2]. In our study, we applied Multi-channel Customer Relationship Management (CRM) toward the hotel industry in Cyprus. Multi-channel CRM is the business concept of directly communicating and interacting with micro markets and stakeholders via integrated marketing channel alternatives to secure a meaningful response.

For the purposes of this study, we applied the Multi-Channel CRM Model used by the Taylor Institute to "X" Hotel, which is owned by "Y" Company which operates, owns, acquires and develops hotels in Protaras, Cyprus. The company is well positioned in the luxury segment, which is regarded as the fastest growing segment within the hotel industry. The company's operations are carried out in the destination resort segment, including lodging and food and beverage operations [3].

2 Customer Analysis: Research Methodology

Every time a guest registers, he or she provides several pieces of information that if captured and analysed properly, may be used to minimize the guesswork that plagues most marketing decisions and maximizes the effectiveness of the total marketing plan. Thus, the most lucrative place to begin a prospect analysis is with the records of previous guests [4], though, as Rahimi et al. [5] warn, the issue of loyalty is much broader than merely accepting repeat purchase as a proxy for consumer satisfaction. For this qualitative exploratory case-study an archival research method strategy was used to collect needed data. Archival research strategy is effective in the case where reports are used to examine and understand different issues other than the original reason for creating such reports [6]. Permission was requested and granted, ensuring confidentiality and customer personal information simultaneously.

The findings from the current study were used to create the profile of "X" Hotel's customers, including the guests' individual characteristics. The information was used to specify the type of guests that patronize each revenue-producing area of the property. All data was entered into a computerized guest database that is used to personalize services at "X" Hotel. Frequent guests were rewarded for their participation.

Consequently, the corporate management of "X" Hotel crafted and implemented a Customer Relationship Management strategy by utilizing an informative profile of the customer, thus anticipating with accuracy a customer's past communication with the hotel, complaints, orders and preferences. The aim was to improve the hotel's long-term ROI by increasing the hotel's best customer loyalty.

3 Environmental Analysis

The most important feature from this approach was the ability gained by the corporate management to proceed with a multi-facet and advanced environmental analysis, including product and property analysis. The product included a detailed listing of all the specific features and benefits physically contained within the property and its surroundings. An analysis of the operational environment, property and the product itself helped in the development of an effective marketing plan. Consequently, an in-depth analysis of both tangible and intangible features and the owners' versus the customers' perceptions contributed to a more objective and realistic approach to the decision-making process compared to the past. For the current study, the concept of tangible and intangible features was used based on Gronroos' model of service quality. Tangible features, such as beds, facilities, etc. are measured by customers objectively [7]. Intangible features reflect how customers react subjectively to an aspect of service quality including interaction with hotel staff and other customers [8]. The "X" Hotel has the following tangibles and intangibles characteristics: (a) Accommodation, (b) Restaurants & Bars, (c) Leisure & Facilities, (d) Atlas Health Centre, (e) Other Facilities, (f) Entertainment & Animation and (g) Conference Facilities.

In respect to Customer Relationship Management, the "X" Hotel not only tries to fulfil the needs of the guests but also their dreams and expectations. Its focus is on service and service quality, including how the staff interacts with customers and how the customers' expectations are met. These qualities are especially important, as in staying in such an establishment, tourists expect that they will "replenish and restore their sense of wellbeing, as well as explore new ways to enrich, regenerate and recharge their lives" [9].

4 Data Mining and Profiling

In the hospitality industry, according to Morrit [10], data mining is a data analysis procedure known primarily for the recognition of significant patterns of data as they pertain to customers or customer groups. Data-mining techniques help to reveal data patterns and relationships that can be used to develop strong models for predicting the potential value of each customer. Given that retaining a customer is less costly than attracting a new one, building strong relationships with valued existing customers can boost profits. Data mining has the advantage of high gains in performance, speed of use, user friendliness and the ability to handle large and complex databases. Data-mining helps managers spot trends quickly [10]). In relation to Customer Relationship Management, a manager can gather the right information not only for its business but also for its customers. Based on information derived from data mining, the "X" Hotel can make well-informed marketing decisions,

including who should be contacted, to whom incentives should be offered and what type of relationship to establish.

5   Target Marketing

According to Kotler, Bowen and Makens [11], once the market is segmented hoteliers will generally target certain markets, creating the resort's market niche (market segmentation). Then, the hotelier has to evaluate each segment's attractiveness and select one or more of the market segments (target marketing).

5.1   "X" Hotel's Market Structure

According to "X" Hotel's Financial Controller, tourists who stay in the hotel come from the following countries [3]. The United Kingdom with a share of 70%, the Cypriot market with 20%, 10% from other European countries, such as Germany, Russia, Sweden, Greece, etc. Tourists coming to "X" Hotel are fall into two major market segments: package tourists and individual tourists. In the case of package tourists, the packages are arranged by European travel agents and include air travel, accommodations and meals, while individual tourists are individuals who reserve their accommodations themselves.

5.2   New Market Segments

Tourists who come to the "X" Hotel are typically attracted to the Island of Cyprus' beaches and weather. However, the "X" Hotel has decided to move from this market segment into the following market segments to attract visitors with various interests and ensure the continuous improvement of the quality of life of the locals: (a) culture tourism, (b) health tourism and (c) ecotourism. These special forms of tourism will bring about double benefits since, on the one hand, high income tourists and tourists wanting a historical and cultural experience will come to Cyprus and, on the other, they will ameliorate the problem of seasonality.

5.3   Target Marketing: Domestic Tourism

Most tourists who come to the "X" Hotel are from the European Market. However, the "X" Hotel is also focus on targeting domestic tourism to improve hotel occupancy rates and strengthen local economies and enable the locals to become

acquainted with their culture and civilisation and strengthen their ties to the island. To do this, the "X" Hotel must increase and intensify its efforts towards the promotion of domestic tourism through advertising and promotional activities not only during the summer holiday season but the rest of the year. The targeting is 30% increase of domestic tourism and 70% for the European market.

6 Differentiating and Positioning

6.1 Positioning

According to Morrit [11], "positioning is a strategic marketing process that has as its objective the establishment of the perception of a highly valued, distinctive, and/or superior product in the minds of target customers. It is also about how the firm's products are perceived by these target customers relative to competitive products."

Positioning one's hotel operation defines how a property will differentiate itself from its competition. It is a composite of the hospitality offered by the hotel and the ability of management and marketers to create unique selling points based on the hotel's location, internal and external features and personnel. The "X" Hotel's positioning strategy should be targeted to a market segment of sufficient size to warrant the expenditures required to attract additional business from the segment and the property must have the ability to meet that market segment's demands.

6.2 Differentiation

According to Thomas et al. [12], "differentiation is the approach of developing a set of unique and meaningful "points" that are capable of distinguishing your offer from that of your competitors and that give it differential advantage. In simple terms, why would a customer buy from you instead of your competitor?" In this endeavour, it is important to realize that it is not necessary for there to be a difference if the guest perceives a difference [13].

7 Unique Value Proposition

In the hospitality industry, an educated, sophisticated customer base places increasing emphasis on the value of goods or services received in relation to price paid in the marketplace, according to Powers and Barrows [14]. With an intensely competitive industry vying to serve them, customers can demand good value for their money. However, in the highly fragmented marketplace today, customer expectations are more demanding, while their patronage is less loyal. Due to fact that guests

staying in a hotel have different characteristics and therefore demand different outcomes from their stay, the "X" Hotel management has to offer a unique value proposition to compete with other hotels within the area and in turn to attract more customers and increase its profitability in the long-run.

8 Creative Marketing Communications

According to Thomas et al. [12], creative marketing is getting the right message to the right customer at a time and in a way that the individual wants to receive it. Kotler, Bowen and Makens [11] state that the messages are characterized by three factors: Firstly, they should be meaningful and point out benefits that make the product more desirable or interesting to consumers. Secondly, they should mention how the product is better than competing brands. Finally, messages must be believable. This is difficult because many customers doubt the truth of advertising. One study found that on average, consumers rate advertising messages as "somewhat unbelievable". Having that in mind, the "X" Hotel uses the following creative message to attract local families from Cyprus: "Relax at "X" Hotel and let your kids be supervised by well-trained personnel". The Marketing Department uses the following media types to deliver this message to its prospective customers: (a) newspapers, (b) radio and magazines.

9 Direct Marketing Channels: Selecting and Employing

For the "X" Hotel management to get the right message to its prospective guests, it has to use advertising, which is the most effective means of communicating and consists of the following direct marketing channels [4]: (a) Internal Selling—when the effort is directed at guests already at the property, and (b) External Selling—encompasses all those efforts aimed at reaching prospective guests.

9.1 Internal Selling

Internal selling at "X" Hotel is concerned with taking the most advantage by selling products and services to guests or, at the very least, making them aware of the many services and facilities available. The volume of business in the hotel's restaurant, pool and lounge reflects not only the percentage of occupancy, but also the success of the internal sales effort. For "X" Hotel to successfully implement internal selling, the management must use employees who are trained in sales as they understand selling techniques, both within their own department and without.

10 Fulfilment and Service

To meet and exceed the customer's expectations, Thomas et al. [12] state that an organization must establish a fulfilment and service strategy which is based on understanding customer needs and expectations and delivering products and services to meet or exceed these needs and expectations. Although a company can provide a high-quality product, it needs to understand customer expectations and what drives customer satisfaction.

10.1 Service Culture

According to Powers and Barrows [14], "A company's culture can be defined as a system of shared meaning held by members that distinguishes the organization from other organization. The system is, on closer examination, a set of key characteristics that the organization values." To establish a strong service culture in hotel management, a commitment to top management in word, policy and action is required.

11 Measurement and Assessment

Fleming and Foley [12] see measurement and assessment strategy as an essential tool that provides a company with valuable information for decision making. With this knowledge, direct marketers can better design and launch more effective direct marketing programs and yield a higher Return on Investment (ROI). The "X" Hotel management measures its potential in terms of two dimensions: (1) market growth versus (2) the resort's relative market growth [15] (Table 1).

If the potential for market growth is high and a hotel has relatively high market share, the hotel is classified as a "star". Hotels that find themselves in a low market growth situation but enjoy a relatively high market share are "cash cows." Both types of hotels may have positive cash flows, but stars are usually the market leaders in

Table 1 Measuring the hotel's potential for success

	High relative market share	Low relative market share
High market growth	*Stars* – good profit margin but high investment cash	*Question marks* – need cash to aggressively go for market share or differential advantage. Otherwise, should get out of market.
Low market growth	*Cash cows* – good profit margins due to experience and low capital investment	*Dogs* – low market share in a low market growth industry equals divestiture

setting rates, while cash cows tend to follow markets trends. On the other hand, hotels with high low market shares in a high growth marketplace are classified as "question marks." These hotels might require aggressive promotional programs, stronger positioning, new investment facilities, or other possible solutions. According to Yee [15], question-mark hotels are not easy problems to resolve, since ownership understandably may be reluctant to invest in a property that is not successful during a tourist boom. Lastly, when a hotel has a low market share in a low growth market, they are characterized as "dogs", which is self-explanatory. Usually, if a hotel faces this problem, the owners think about selling the property. Based on the above measurements, the "X" Hotel's success is marked as Cash Cow.

12   Adaptation and Innovation

According to Foley [12], the Innovation and Adaptation process can be described as a set of processes that can be enacted to produce greater creativity and, most important, the willingness and ability to change-on a daily basis. The ability to be innovative must become a solid and consistent part of a firm's strategy and its overall culture.

13   Conclusion and Recommendations

This paper developed a Multi-Channel CRM Strategy for the hotel operation of "X" Hotel, operating in Cyprus, and focused on managing the relationship between a business and its current and prospective customer base. To be effective, a Multi-Channel CRM strategy must encompass and integrate all customer-facing activities. It should ensure that no matter where, when, or how a customer interacts with the company, the contact is personalized, consistent and demonstrates that the company knows and values that customer. To implement the Multi-Channel CRM Strategy in a hotel organization, the following are needed [16]:

Share the vision and train with rigor to ensure data integrity
    Key leaders need to unfailingly convey the overall corporate vision of how they expect CRM to help achieve goals: CRM should ultimately give staff more decision-making power, help them to anticipate customer needs more quickly and accurately; feed accurate information to the CRM.
Plan on all levels to foster buy-in and get perspective
    Get feedback from all parts of the organization on how they interact with guests now and how they could see themselves delivering better service in the future. Map out all guest touch-points and re-evaluate key processes considering improving the guest experience. Prepare a complete business case including solid ROI estimates when deciding on the tools used to collect data. Ensure that there is ample budget for

training and change management to ensure that technology and processes are adopted successfully.

Optimally use data to enhance Return on Investment (ROI)

This can be done through customer segmentation, marketing, advertising and media analysis. Knowing who the customers are can help pinpoint communications more accurately, improving the marketing ROI.

Constantly measure and fine-tune strategies

Track results consistently and use the information to facilitate better business decisions; keep a thorough contact history for each customer by tracking when, how and what their response was for each communication.

References

1. Nakovski D, Milenkovski A, Gjorgievski M (2018) Indicators for defining the emitting areas in tourism. UTMS J Econ Skopje 9:39–48
2. Sigala M (2007) Integrating customer relationship management in hotel operations: managerial and operational implications. University of the Aegean, Chios
3. (2006–2007). Statistical management reports. Tasos L. Kefalas & Sons
4. Vallen JJ, Abbey JR (1987) The art and science of hospitality management. Educational Institute of the American Hotel & Motel Association, East Lansing
5. Rahimi R, Köseoglu MA, Ersoy AB, Okumus F (2017) Customer relationship management research in tourism and hospitality: a state-of-the-art. Tour Rev 72:209–220
6. Lewis-Beck M, Bryman A, Liao T (2004) The SAGE encyclopaedia of social science research methods. Sage, New York
7. Williams C et al (2003) Service quality in leisure and tourism. CABI, Wallingford
8. Gronroos C (1982) Strategic management and marketing in the service sector. In: Cooper et al (eds) Tourism principles and practices. Longman, New York
9. Yousaf A, Amin I, Santos JAC (2018) Tourism and hospitality management. Opatija 24:197–211
10. Morrit R (2007) Segmentation strategies for hospitality managers: target marketing for competitive advantage. Haworth Press, New York
11. Kotler P, Bowen J, Makens J (2006) Marketing for hospitality and tourism, 4th edn. Prentice Hall, New York
12. Thomas AR, Lewison DM, Hauser WJ, Foley LM (2007) Direct marketing in action: cutting-edge strategies for finding and keeping the best customers. Pranger Publishers, New York
13. Lockyer TLG (2007) The international hotel industry: sustainable management. The Haworth Hospitality & Tourism Press, New York
14. Powers T, Barrows CW (2006) Management in the hospitality industry. Wiley, New York
15. Yee CY (1988) Resort development and management. Educational Institute of the American Hotel & Motel Association, East Lansing
16. Holm N (2003) Understanding the power of CRM. Hotel Online Special Report

The Importance Attached to Culinary Blogs in the Promotion of Food Products with Health and Nutrition Claims: A Perspective of Polish Processors and Distributors

Paweł Bryła

Abstract The article aims to examine the importance attached to culinary blogs in the promotion of food products with health and nutrition claims from the perspective of food processors and distributors in Poland. With the use of the CAWI methodology, 78 completed questionnaires were obtained. We used correlations, t-statistics, ANOVAs, and simple and multiple regressions. A series of predictors of the importance attached to culinary blogs now and in the future were tested. As far as the current importance is concerned, we arrived at a model with three statistically significant independent variables: the importance of recommendations of scientific institutes on the food packaging, self-reported healthiness of one's nutrition and the tenure of respondents in the examined companies. The importance is positively associated with the recommendations and healthiness, and negatively with tenure. Regarding the future forecasts, the expected importance of culinary blogs depends on the importance attached to health claims, expiry date, and price information on the label as well as on the role of the care for the environment in the marketing communication of the companies under study. All of these independent variables are positively associated with the predicted importance of culinary blogs. The increasing role of culinary blogs in the communication mix should trigger more investment of food processors and distributors in the commercial cooperation with bloggers.

Keywords Culinary blogs · Food marketing · Health and nutrition claims · Marketing communication mix · Social media marketing

P. Bryła (✉)
University of Lodz, Lodz, Poland
e-mail: pbryla@uni.lodz.pl

1   Introduction

The role of marketing communications in modern economies can hardly be underestimated. The concept or theory of Integrated Marketing Communication (IMC) emerged in the late twentieth century and its importance has been growing ever since. IMC can help in creating consistent messages across various channels of communication. It has been impacted by the multiplication of media, demassification of consumer markets, and the value of the Internet in today's society [1]. The role of media in marketing communications practices shifts from the execution of message strategies into an extension of consumer understanding [2].

There is a growing importance of online social media in the marketing communication mix. The digital marketing is expanding the strategies available to promote products, brands and consumer behaviour. It facilitates relational marketing; the collection of personal data for marketing; integration of the marketing mix, and provides a platform for consumers to engage in the co-creation of marketing communications [3]. Social media is a hybrid element of the promotion mix because in a traditional sense it enables companies to talk to their customers, while in a non-traditional sense it enables customers to talk directly to one another [4]. The use of sophisticated integrated branding strategies in immersive online media creates the potential for marketers to build relationships between consumers and brands at an interactive, direct and social level not seen in traditional media [5].

One of the most dynamic types of online social media are blogs (web logs) and vlogs (video blogs). The bloggers who influence other users in a blogging community (blogosphere) are known as influencers. Identification of such influential bloggers has vast applications in advertising, online marketing and e-commerce [6]. Influencer marketing is an approach that identifies and targets influencers in a market. Influencers make up communities called decision-maker ecosystems, which revolve around a decision-maker [7]. Blogging has emerged as a robust online content marketing and branding tool. Blogs have been rated as the 5th most trusted source for accurate online information. Seventy-seven percent of Internet users read blogs, and 92% of consumers trust recommendations from others [How are food bloggers turning into influencers and changing the foodscape? (2017) Indus Net Technologies. https://www.indusnet.co.in/food-bloggers-turning-influencers-changing-foodscape].

In order to nuance and extend existing conceptualisations of curation in food marketing, a wider and more dynamic range of actors (food apps), spaces (blogs) and values such as inspiration, convenience and sense of community need to be considered [8]. Blog trustworthiness is closely related to the purchase intention behaviour [9]. Female bloggers use a variety of business tactics to ensure that their personas are credible, professional, trustworthy, and fully intermingled in the lifestyles and beliefs of their target consumers [10]. Cooperation with culinary bloggers may be an important element of the marketing communication of food retailers [11], especially in the context of the increasing importance of food online shopping [12, 13]. The success of cooperation of food companies with culinary bloggers depends on a mutually advantageous exchange—the social energy of the blogger

in exchange for providing new contexts to communicate about a commercial product [14].

This article aims to examine the importance attached to culinary blogs in the promotion of food products with health and nutrition claims from the perspective of food processors and distributors in Poland. Predictors of this importance will be identified for the evaluation of the current situation and respondents' expectations what will happen in the marketing communication landscape in 3 years.

2 Material and Methods

A survey was addressed to Polish food processors and distributors. The sample consisted of 78 companies. The predominant field of activity of 50 respondents was food processing and production and for 26 respondents, it was food distribution, in particular wholesaling; 2 respondents indicated another focus of their activities. The survey was carried out with the use of the CAWI (Computer Assisted Web Interview) methodology. It is an Internet surveying technique in which the interviewee follows a script provided in a website. The contact data of respondents were obtained from several databases, in particular the Polish Telephone Directories (www.pkt.pl; categories "Food articles—production, wholesaling" and "Food articles—retailing", a Webazy database of Polish economic entities (categories related to processing and trade in food products), a database of Polish exporters (www.poland-export.pl; category: "Food articles and beverages"), a database of participants of fairs: Polagra Food 2017 and Natura Food 2017, and databases of organic processors and traditional food producers registered by the Polish Ministry of Agriculture and Rural Development. A single survey questionnaire was developed both for processing and distribution companies in order to increase the possibilities of comparing results and due to the joint treatment of these categories of respondents in certain databases. The survey was prepared in a professional Internet service profitest.pl, and its link was distributed by emails. The study was conducted in Poland in the first half of 2018 with the aim of identifying the role of health-related information in the marketing and consumption of food products. It is one of the first studies in this thematic area in Poland, and one of the first studies globally taking into consideration the perspective of processors and distributors. For the analysis of our results, we apply correlations, t-statistics, ANOVAs, and simple and multiple regressions. Our analyses are conducted in MS Excel 2013 and Statistica 12.0.

3 Results

In a catalogue of 16 marketing communication instruments, culinary blogs had the 12th rank at the time of the study, but were expected to significantly grow in importance and reach the 8th position in 3 years' time. Three-year predictions

Table 1 A comparison of the evaluation of importance of selected instruments in the promotion of food products with health and nutrition claims now and in 3 years

| Instrument type | Importance of the instruments (1–5) | | | | |
| | Now | In 3 years | Change | Comparison | |
				t	p
TV commercials	3.372	3.141	−0.231	**2.312**	**0.023**
Producer website	3.179	3.436	0.257	**−2.733**	**0.008**
Retailer website	3.269	3.487	0.218	**−2.406**	**0.019**
Producer social media profile	3.231	3.692	0.461	**−4.423**	**<0.001**
Retailer social media profile	3.051	3.654	0.603	**−5.136**	**<0.001**
Consumer opinions in social media	3.462	3.872	0.410	**−4.075**	**<0.001**
Mobile applications	2.962	3.731	0.769	**−6.589**	**<0.001**
Recommendations of family or friends	4.064	4.103	0.039	−0.520	0.605
Recommendations of a dietician	3.744	3.936	0.192	**−2.149**	**0.035**
Outdoor advertising (e.g. billboards)	2.731	2.718	−0.013	0.127	0.899
Advertising newsletters of retailers	2.756	2.641	−0.115	1.265	0.210
Articles in press and magazines	2.949	2.885	−0.064	0.660	0.511
TV culinary programmes	3.167	3.359	0.192	−1.780	0.079
Culinary blogs	3.026	3.564	0.538	**−5.084**	**<0.001**
Product packages	3.679	3.846	0.167	−1.974	0.052
Shop assistant	3.462	3.487	0.025	−0.281	0.779
Mean	3.256	3.472	0.216	**−4.175**	**<0.001**

The bold values concern differences, correlations or predictors which are statistically significant at $p < 0.05$

were also examined in previous studies in the area of food marketing (e.g. [15, p. 74, 16, p. 109]. The expected change in importance was highest for mobile apps, followed by the retailer social media profile and culinary blogs. This growth in importance of culinary blogs in the marketing communication for food products with health and nutrition claims is highly significant statistically (Table 1).

In order to identify possible predictors of the importance attached to culinary blogs by food processors and retailers, a series of analyses were conducted testing correlations (with the use of r), variance (ANOVAs) and comparisons (t). For the reasons of space, we report only a selection of these calculations. Table 2 shows that the importance of culinary blogs is associated in a statistically significant way with the importance attached to certain types of information put on food labels. They include organic certificates and recommendations of scientific institutes currently. In 3 years, there will be much more correlations according to the respondents, as the importance of culinary blogs will be associated with the importance of health claims, nutrition claims, expiry date, quality signs, recommendations of scientific institutes, and even price.

As far as the marketing communications are concerned, the importance attached to culinary blogs is associated with communicating one's care for the natural environment, utility of the product in a certain diet and its above average quality. Interestingly, the same elements of the marketing communication correlate with the importance of culinary blogs now and in the future (Table 3).

Table 2 Correlations of the evaluation importance of culinary blogs with the evaluation of importance of selected information types on the label (now and in 3 years)

Information type	Now		In 3 years	
	r	p	r	p
Health claims	0.207	0.069	**0.274**	**0.015**
Nutrition claims	0.042	0.718	**0.232**	**0.041**
List of ingredients	0.072	0.529	0.137	0.233
Expiry date	0.126	0.270	**0.335**	**0.003**
Country of origin	0.191	0.095	0.125	0.277
Cooking recipes	0.200	0.079	0.152	0.184
Brand	0.154	0.178	0.156	0.173
Organic certificate	**0.243**	**0.032**	0.177	0.121
Quality signs	0.174	0.129	**0.255**	**0.024**
Recommendations of scientific institutes	**0.327**	**0.004**	**0.295**	**0.009**
Price	0.102	0.373	**0.252**	**0.026**

The bold values concern differences, correlations or predictors which are statistically significant at $p < 0.05$

Table 3 Correlations of the evaluation importance of culinary blogs with the evaluation of importance of selected information types in the marketing communication of the companies under study (now and in 3 years)

Information type	Now		In 3 years	
	r	p	r	p
Health effects of consuming a given product	0.107	0.352	0.082	0.476
Care for the natural environment	**0.270**	**0.017**	**0.264**	**0.019**
Supporting producers (e.g. farmers)	0.188	0.099	0.181	0.114
Low price	0.067	0.563	−0.055	0.633
Polish origin of the product	−0.102	0.377	−0.015	0.897
Utility of the product in a certain diet	**0.231**	**0.042**	**0.227**	**0.046**
Above average quality of the product	**0.285**	**0.011**	**0.331**	**0.003**
Traditional method of production	0.147	0.198	0.178	0.120

The bold values concern differences, correlations or predictors which are statistically significant at $p < 0.05$

Additional analyses revealed that the current importance of culinary blogs is negatively associated with the tenure of the respondent in the company under study ($r = -0.262$, $p = 0.021$) and positively with self-reported healthiness of one's nutrition ($r = 0.305$, $p = 0.007$) and the opinion that the use of health logos (symbols) is far more effective in attracting consumers' attention than using the basic version of the label which includes only text and numerical information ($r = 0.232$, $p = 0.041$). It is also related to conducting sales online ($t = 2.177$, $p = 0.033$) and being a woman ($t = 2.599$, $p = 0.011$). In 3 years, the importance attached to culinary blogs is negatively associated with one's tenure in the company under study ($r = -0.259$, $p = 0.022$) and positively with the opinion that health-related information which contain a point of reference (e.g. % of the guideline daily amount) are more effective than those without it regarding the attention and

Table 4 Selected predictors of the evaluation of importance of culinary blogs now and in 3 years (multiple regression models)

Independent variables	β	SE	t	p
Now ($R^2 = 0.235$, $p < 0.00017$)				
Intercept	x	x	1.159	0.250
Tenure	**−0.228**	**0.102**	**−2.235**	**0.028**
Healthiness	**0.277**	**0.102**	**2.711**	**0.008**
Recommendations	**0.279**	**0.103**	**2.722**	**0.008**
In 3 years ($R^2 = 0.306$, $p < 0.00002$)				
Intercept	x	x	−1.663	0.101
Health claims	**0.238**	**0.100**	**2.370**	**0.020**
Expiry date	**0.319**	**0.098**	**3.245**	**0.002**
Price	**0.265**	**0.099**	**2.669**	**0.009**
Environment	**0.255**	**0.101**	**2.514**	**0.014**

The bold values concern differences, correlations or predictors which are statistically significant at $p < 0.05$

preference of consumers (**r = 0.244, p = 0.031**). It is positively associated with conducting sales online (**t = 2.314, p = 0.023**) and being a woman (**t = 1.994, p < 0.050**).

In multiple regression models, a series of predictors of the importance attached to culinary blogs now and in the future were tested. As far as the current importance is concerned, we arrived at a model with three statistically significant independent variables: the importance of recommendations of scientific institutes on the food packaging, self-reported healthiness of one's nutrition and the tenure of respondents in the examined companies. The importance is positively associated with the recommendations and healthiness, and negatively with tenure. Regarding the future forecasts, the expected importance of culinary blogs depends on the importance attached to health claims, expiry date, and price information on the label as well as on the role of the care for the environment in the marketing communication of the companies under study. All of these independent variables are positively associated with the predicted importance of culinary blogs. The former model explains 23.5% of the variance of the dependent variable and is significant at **p < 0.00017**, whereas the latter model explains 30.6% of the variance and is significant at **p < 0.00002** (Table 4).

4   Conclusion

We can observe a growing importance of culinary blogs in the marketing communications for food with nutrition and health claims. Food processors and distributors believe this marketing communication instrument will increase its importance considerably over the next 3 years. This finding is in line with the extant literature on the increasing importance of online social media in the integrated marketing communications. In multiple regression models, we have identified some predictors of this perceived importance now and in the future. Currently, the importance increases

with the self-reported healthiness of one's nutrition and importance attached to the recommendations of scientific institutes on the food packaging, while it decreases with the tenure of the respondents in the companies under study. As far as the future importance of culinary blogs is concerned, it grows with the importance attached to health claims, expiry date, and price information on the label as well as with emphasising the care for the environment in the marketing communication.

Our findings contribute to the development of the marketing communication theory by identifying certain predictors of the communication mix developments in the food industry. Our results are relevant for managerial practice, because the increasing role of culinary blogs in the communication mix confirmed in our study should trigger more investment of food processors and distributors in the commercial cooperation with bloggers.

References

1. Kitchen P, Burgmann I (2011) Integrated marketing communication. In: Sheth J, Malhotra N (eds) Wiley international encyclopedia of marketing. Wiley, Hoboken. https://doi.org/10.1002/9781444316568.wiem04001
2. Mulhern F (2009) Integrated marketing communications: from media channels to digital connectivity. J Mark Com 15(2–3):85–101. https://doi.org/10.1080/13527260902757506
3. Cairns G (2013) Evolutions in food marketing, quantifying the impact, and policy implications. Appetite 62:194–197. https://doi.org/10.1016/j.appet.2012.07.016
4. Mangold W, Faulds D (2009) Social media: the new hybrid element of the promotion mix. Bus Horiz 52(4):357–365. https://doi.org/10.1016/j.bushor.2009.03.002
5. Confos N, Davis T (2016) Young consumer-brand relationship building potential using digital marketing. Eur J Mark 50(11):1993–2017. https://doi.org/10.1108/EJM-07-2015-0430
6. Ishfaq U, Khan H, Iqbal K (2017) Identifying the influential bloggers: a modular approach based on sentiment analysis. J Web Eng 16(5-6):505–523
7. Brown D, Hayes N (2008) Influencer marketing. Who really influences your customers. Elsevier, Oxford
8. Joosse S, Hracs BJ (2015) Curating the quest for 'good food': the practices, spatial dynamics and influence of food-related curation in Sweden. Geoforum 64:205–216. https://doi.org/10.1016/j.geoforum.2015.06.024
9. Wan-Ruzanna W, Zaileen-Elina A, Roslina A, Wan-Mahirah W (2015) Food blog: examining the blog trustworthiness and purchase intention behaviour. Theory and practice in hospitality and tourism research – proceeding of the 2nd international hospitality and tourism conference 2014, pp 161–164
10. Lepkowska-White E, Kortright E (2018) The business of blogging: effective approaches of women food bloggers. J Foodservice Bus Res 21(3):257–279. https://doi.org/10.1080/15378020.2017.1399046
11. Bryła P (2015) Marketing regionalnych i ekologicznych produktów żywnościowych. Perspektywa sprzedawcy i konsumenta. Lodz University Press, Lodz
12. Bryła P (2018) Organic food online shopping in Poland. Br Food J 120(5):1015–1027. https://doi.org/10.1108/BFJ-09-2017-0517

13. Bryła P (2017) Creating and delivering value for consumers of healthy food – a case study of Organic Farma Zdrowia S.A. J Manag Bus Adm 25(4):55–74. https://doi.org/10.7206/jmba.ce.2450-7814.207

14. Sońta M (2014) Marki spożywcze w nowych mediach. Przegląd form współpracy biznesowej producentów żywności z autorami blogów kulinarnych. Nowe Media 4:89–114. https://doi.org/10.12775/NM.2014.004

15. Domański T, Bryła P (2013) Marketing produktów regionalnych na europejskim rynku żywności. Lodz University Press, Lodz

16. Domański T, Bryła P (2010) Marketing produktów żywnościowych. PWE, Warsaw

Quality Service in the Hospitality Industry: Achieving Effective Service Processes and Designs

Soteris Kefalas

Abstract In today's hotel industry, customer service quality is an important determinant of a successful business. Identifying the specific expectations of customers, the dimensions of service quality and its relative importance for customers in each segment of hotel industry can help hotel managers meet the challenge of improving quality of service. One major barrier to standardizing services in the hospitality industry is that quality of service is always directly proportional to the level of experience and skills of the server. Moreover, as experiences are always subjective and differ from one person to other, it is not possible to authentically standardize them. This paper examines the most common factors needed to achieve effective service processes and designs, including types of service transactions such as electronic-mechanical transactions, indirect personal transactions and face-to-face transactions. It identifies intangible aspects of service quality and examines the importance of inseparability, variability and perishability, as well as the time gap between demand and supply of service. To further aid in attaining effective customer service, important service processes and their strengths and weaknesses can be identified and designed using Service blueprints. Finally, Total Quality Management (TQM) is discussed as another structured approach for managing organizational services and improving the quality of services or products.

Keywords Quality service · Customer satisfaction · Service transactions · Inseparability · Variability · Perishability · Service blueprints · Total Quality Management

S. Kefalas (✉)
InterNapa College, Famagusta, Cyprus

1   Service

1.1   Definition of Service

The concept of service can be defined as "all the reactions and actions that guests perceive they have purchased" according Barrows et al. [1]. In the hospitality industry, most services are performed by people. From the customer's perspective, service accounts for the total experience in a hotel and the performance of the organization through its staff. In the hospitality scenario, the host and the customer are directly or personally involved in the service transaction.

1.2   Types of Service Transactions

According to Barrows et al. [1] there exist three types of service transactions in the hospitality industry. These are Electronic–mechanical transactions, Indirect Personal Transactions and Face-to-Face Transactions. Electronic-mechanical transactions include vending machines, automated check-in, checkout, and other such technology-dependent transactions. Most times, the customers tend to prefer electronic-mechanical transactions, as they make the overall hotel experience less cumbersome and hassle free. However, electronic-mechanical transactions are open to serious flaws in the sense that being technology dependent, they are always vulnerable to defects and failures. It is, therefore, important that the technology is consistently maintained, programed and stocked [1]. So long as the electronic-mechanical transactions are managed well, customers tend to be satisfied with them and have few negative experiences or frustrations.

Indirect personal transactions include services like telephonic reservations, room service and the like. Because most indirect personal transactions are repetitive, they can easily be standardized. As such services usually follow a repetitive pattern; employees can easily be trained to act effectively and appropriately in a real-life scenario. The thing to keep in mind is that indirect personal transactions usually constitute a significant proportion of any hospitality experience. Hence, organizations can readily bolster their service quality by improving the training of their personnel.

Face-to-face transactions carry the ultimate ability to make or break business situations in the hospitality industry [1]. Customers involved in such transactions develop independent opinions regarding servers and the organizations they represent, as they engage in direct and spontaneous interactions with the servers. Thus, hospitality organizations need to make it a point to render appropriate training and facilities to their employees to help them become valuable representatives of the organizations they serve.

Going by the fact that hospitality services are being increasingly digitized and automated, it is imperative that face-to-face interactions involving personal contact

with guests are effective and cordial [1]. As employees bear the onus of interacting directly with customers, they need to be appropriately trained to assure satisfaction and quality. Besides, as electronic-mechanical services are prone to breakdowns and defects, customers appreciate efficient and sympathetic service interactions.

In the sphere of human resources and customer satisfaction, services may be defined as "helpful, beneficial, or friendly action or conduct" [1]. Therefore, human interactions tend to be the most challenging aspect of the hospitality business. Personal service can be classified into two sections: tasks that require technical expertise and tasks that necessitate one-to-one interactions with the guests [1]). Hence, technical and human skills are two essential constituents of employee training. These can ensure that the overall customer experience in a hospitality facility is pleasant and satisfactory.

2 Characteristics of Services in Hospitality Industry

Characteristics of services in the hospitality industry need to be of high quality to maintain competitive advantage and positioning. Moreover, it is necessary to update and create sustainable competitive advantage that is not easily imitated by competitors [2]. With the sudden increase in global tourism, service quality issues have become central concerns to service driven sectors like the tourism and hospitality industry. A majority of the management literature existing today is unanimous about the fact that generating customer satisfaction is the central parameter that governs the scope and interpretation of service quality in the hospitality industry around the world. Most define service quality as the extent of positive harmony existing between guest perceptions and their expectations [3, 4].

Some researchers like Smith and Houston [5] seem to have a cynical view towards the possibility of quantifying service quality. Smith and Houston [5] consider service quality to be a vague and amorphous entity that is next to impossible to measure and gauge. Voss [6] corroborates this perception by forwarding the premise that service quality is mostly the sum of several intangible dimensions that are usually impossible to quantify, citing it as one major reason why the concept of service quality is ignored in realistic and practical scenarios. Johnston and Morris [4] believes that service driven organizations and institutions mostly limit their attempts towards service quality appraisals to tangible and concrete facets, while completely bypassing the amorphous and vague areas. Kaplan [7], in fact, endorses this view by arguing that though the intangible aspects of service are crucial to the objective of achieving optimum efficiency, it more pragmatic to focus appraisal efforts on tangible and measurable aspects.

However, what needs to be kept in mind is that most of these conclusions are oriented around manufacturing ventures. In that context, the hospitality industry seems to be an anomaly in the sense that it is fundamentally associated with the issues that are either not quantifiable or relatively less accommodating to conventional approaches to quantification. Hence, these experts, while unsuccessfully

grappling with the vagueness or intangibility of the concept of service quality, in fact, are advancing towards an apt and realistic perception of service quality. The only problem is that they are shaping their confabulations in an economic landscape dominated by industrialization and manufacturing. A more up-to-date perspective on service quality agrees that service quality is a concept comprising of both tangible and intangible aspects, thus the measures of service quality can be either hard or soft. Hard measures of service quality are such that they tend to be objective or explicitly quantifiable. Soft measures, on the contrary, deal with the qualitative aspects of service quality and are hence subjective or perspective in their approach.

Levitt [8] states that the most recent approach towards service quality recognizes the fact that services by their very nature are intangible, unlike goods. Bateson [9] further elaborates on the intangibility of services by qualifying it as 'palpable' intangibility and 'mental' intangibility. Palpable intangibility refers to services that cannot be touched or grasped. Mental intangibility, on the contrary, connotes that it is difficult if not impossible to predict the eventual outcome of any service. Bateson [9] affirms that intangibility is the fundamental criteria, which conclusively sets apart services from goods. Goods are concrete entities that have an existence in time and space, whereas services are governed by a strong interactive and social aspect that merely exists in time. Therefore, in the arena of services, production and consumption are inseparable [10, 11]. In the context of the hospitality industry, the primary thing that needs to be understood is that the goods are first produced, and it is usually at a later stage that they are sold and consumed. On the other hand, services are produced and consumed at one and the same time, as they cannot be packed, preserved or stocked, says Maister [12]. Hence, services are more prone to alterations in service expectations, especially those services in the hospitality industry that have a more than average human or labor content [3]. The essential characteristics and substance of services tend to be more volatile on the variation grid at all levels, be they producers, consumers or the actual time of production and consumption [13]. In such a scenario, the fact that deserves the attention of all concerned institutions and organizations is that services are always affiliated with a strong human factor to the extent that they can truly be regarded as valid social events. Therefore, services essentially being social events, their administration and management require the requisite skills and expertise states Stebbing [14].

One essential aspect that is common to all services and especially services rendered by the hospitality industry is that the individuals or the teams offering the services are often face-to-face or in direct contact with the consumers. In such a scenario, the feedback is usually immediate. Hence, producers need to be sensitive to the fact that they must respond in a timely manner to the needs, expectations and perceptions of the consumers. From the perspective of the customer, contact employees are significant sources of information about service performance [15]. The main challenge is that experiences are always subjective and differ from one person to other. One customer may find a hotel with room pleasant and soothing, while the other may find it unsuitable or perhaps unsatisfactory. The other major barrier to standardizing services in the hospitality industry is that being delivered by people, the cost of a service is always directly proportional to the level of experience

and skills of the server. The more astute or experienced a server is, the greater tends to be the cost of the service provided by one.

2.1 Intangibility

Services are essentially intangible by their very nature as their final output is more in the nature of a social activity instead of being a palpable or tangible object. The components of a service interaction influence all the five senses, that is, the sense of sight, taste, touch, hearing and smell. However, they cannot be seen, smelt, heard, felt or tasted in the exact sense of the word. As a result, a customer may feel helpless or unable to access or predict the service outcome in advance.

2.2 Inseparability

In the hospitality industry, the effective rendering of a service transaction necessitates the presence of a customer and the server at the same place at the same time. Thus, in the context of hospitality services, the server and the consumer are inseparable from each other.

2.3 Variability

Services offered by a hospitality facility are unlike services offered by other facilities. Even within the same organization, services rendered by one employee differ from that of the others. Services also tend to vary from one place to other. Timing also plays a central role in extending a tinge of variability to services. Communication skills, staff training, infrastructure and a plethora of other factors can render services extended by the hospitality industry varied and disparate.

2.4 Perishability

The eventual output of the services provided by the hospitality organizations is amorphous and intangible, unlike commodities and goods. Though customers do accrue a range of benefits from services sold by hospitality facilities, customers must consume those benefits at the very time that they are sold. The customer does not have the option to preserve or sell those benefits. Nailon [16] outlined some physiological and psychological characteristics by which, though not specific to

hospitality services, hospitality organizations must operate. These characteristics include:

Satisfying basic psychological needs; satisfying identity, status, security; customer satisfaction is individual; satisfaction is transient; customer need is immediate; customers influence other guests; a customer is part of a product and therefore the product is uncontrollable; customer interaction is of short duration; and staff-customer relations are personal.

Thus, the baseline is that the hospitality industry is a sector that is essentially dependent on human inputs and reactions and it is almost impossible to quantify or appraise these aspects of service quality. Customers in their quest for richer service experiences keep looking for hospitality facilities that have something different or unique about them. Therefore, hospitality organizations are increasingly under pressure to resort to innovative and creative strategies to differentiate their services from those of other competitors.

Customers' awareness of an organization's commitment to service quality, moreover, helps them harbor a sense of loyalty towards it. Not only do these satisfied customers remain loyal to the organizations, but they also initiate other customers within the ambit of the services provided by such organizations. The best service organizations prefer to adhere to high service standards. An affiliation to such standards not only makes employees aware of what is expected of them, but also continually stimulates the organizations to keep on improving the quality of their service infrastructure and human resources to exceed customer expectations. High expectations materialize into better services, healthy profits and immense cost savings. High performance organizations make also a point of keeping an eye on the service performance of their competitors.

3 The Service Processes

A key issue in the hospitality business is the need for effective management to deliver consistent service quality. This is especially important as providing quality of service can help an organization remain competitive in global competition since technology has commodified products and services [17]. In a service-oriented company, the typical processes can be classified as vertical processes—processes within a specific department; horizontal processes—cross functional in nature and are related to many departments; primary processes—of major concern in terms of cost and revenue; secondary processes—the cost and revenue implications of these processes are low; front office processes—processes that directly encounter the customer; back office processes—not directly encountered by the guest but are hidden services.

4 Service Blueprint

To deliver the desired performance, the important service processes need to be identified and designed. Service blueprints help to analyze service performance more effectively. The service blueprint structure can be used by management to understand the reason for the failure or the bottleneck of a service and to edit or redesign a service design. The steps include mapping of the existing service process; defining the desired performance; and comparing the existing service and the desired service. According to Gummesson and Kingman-Brundage [18], the benefits of blueprints include identifying weaknesses of the service processes and forming the focus for improvement, the linkages between the various departments are made transparent, the method enables internal marketing and the role of every employee can be identified and understood.

5 Managing Diverse and Complex Hospitality Services

The level of complexity and diversity also determines the service process, say Zeithaml and Bitner [19]. Thus, the steps and sequences to complete a process must be kept to a minimum. This can be done by specializing in specific segments and narrowing the marketing. This strategy of reduction in complexity must lead to improved cost and consistency control. However, this strategy of reducing complexity bears the risk of some customers changing their patronage and loyalty to other organizations. To increasing complexity can mean adding some more activities to the already existing activities. This strategy provides more facilities for customers and the company is forced to generate more revenue. However, a disadvantage of this strategy is that service quality problems may arise. Diversity too can be minimized so that the service process is highly standardized, and productivity is at a more reduced cost. The characteristics of this type of service are mass production and mass marketing that concentrate on economies of scale. The advantages of this strategy to the customer are high reliability and good consistency. With increased diversity there is flexibility and customization of individual services.

6 Total Quality Management

Total Quality Management (TQM) is a structured approach for managing organizational services and improving the quality of services or products. The logic behind TQM is that the entire organization must provide service delivery at a competitive price and continuously adopt ways that exceed the requirements of the customer. The concepts of TQM encompass the aspects of customer focus, team work and continuous improvement in standards and quality issues.

One of the key elements in the implementation of TQM is leadership. The expected leadership for perfect service management is the participative style, where staff and managers are involved in the design and implementation of a service element. A successful management environment demands trained and committed service personnel where everyone is fully participative in reaching the goal of improved quality of service. Such participation is encouraged through proper recognition and excellent rewards. The participating attitude can be inculcated by continuous training of all employees so that the required quality levels are attained. Moreover, the reward system acts as a metric to measure and remunerate the employees. Thus, an efficient Total Quality Management procedure encourages commitment and involvement of the employee towards innovation and improvement.

Another major aspect in improving the service process is to take precautionary measures such as preventing the occurrence of mistakes at the initial stage itself, detecting mistakes the earlier stage, when the mistakes occur, stopping services temporarily to correct the mistake.

7 Causes of Service Failure

Failure of service occurs when the service delivered does not match what was promised to the guest during the marketing phase. In the hospitality sector, these may be due to the declared services or facilities not be available, a disappointing environment like lack of cleanliness or damaged furniture, very slow service, poor standards of cooking, employees who are not trained to be polite and well dressed. A failure in service can be identified only at a later stage, when it is too late to respond.

8 Conclusion

With the increase of global tourism, the issue of service quality within service driven sectors has become a primary concern. Several nations throughout the world have begun to acknowledge the importance of tourism as a vital source of revenue and employment. To encourage new and returning customers, organizations should differentiate themselves from others by offering better service quality. To deliver desired performance, important service processes need to be identified and designed. This can be done by using and implementing such models as service blueprints and TQM. Service quality is assured when vital activities like meeting the requirements of the customer, reducing service costs, reducing cycle times and improved service process are satisfactorily carried out.

References

1. Barrows C, Powers T (2006) Management in the hospitality industry, 8th edn. Wiley, Hoboken, NJ
2. Emeagwal L, Ogbonmwan KO (2018) Mapping the perceived role of strategic human resource management practices in sustainable competitive advantage. Acad Strateg Manag J 17:1–19
3. Parasuraman A, Zeithaml VA, Berry LL (1985) A conceptual model of service quality and its implications for future research. J Mark 49:41–50
4. Johnston B, Morris B (1985) Monitoring and control in service operations. Int J Oper Prod Manag 5:32–38
5. Smith RA, Houston MJ (1982) Script-based evaluations of satisfaction with services. In: Berry L, Shostack G, Upah G (eds) Emerging perspectives on services marketing. American Marketing, Chicago
6. Voss C (1985) Field service management. In: Voss C, Armistead C, Johnston B, Morris B (eds) Operations management in service industries and the public sector. Wiley, New York
7. Kaplan S (1983) A model of person-environment compatibility. Environ Behav 15:311–332
8. Levitt T (1981) Marketing intangible products and product intangibles. Harv Bus Rev:41–52
9. Bateson JEG (1977) Do we need service marketing? In: Marketing consumer services: new insights. Marketing Sciences Institute, Report #77-115
10. Carman JM (1990) Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions. J Retail 66(1):33–55
11. Gronroos C (1984) Service management and marketing. Lexington Books, Lexington, MA
12. Maister DH (1982) Balancing the professional service firm. Sloan Manag Rev 24(1):15–29
13. Zeithaml VA, Berry LL, Parasuraman A (1996) The behavioral consequences of service quality. J Mark 60(2):31–47
14. Stebbing L (1993) Quality management in the service industry. Ellis Horwood, Chichester
15. Martínez-Tur V, Estreder Y, Moliner C, García-Buades E, Ramos J et al (2017) Linking employees' extra-role efforts to customer satisfaction: presence versus absence of complaints. Soc Psychol 48:104–112
16. Nailon P (1982) Theory in hospitality management. Int J Hosp Manag 7(3):139–140
17. Nadiri H, Gunay N (2013) An empirical study to diagnose the outcomes of customers' experiences in trendy coffee shops. J Bus Econ Manag 14:22–53
18. Gummesson E, Kingman-Brundage J (1991) Service design and quality: applying service blueprinting and service mapping to railroad services. In: Kunst P, Lemmink J (eds) Quality management in services. Van Gorcum, Maastricht
19. Zeithaml VA, Bitner MLJ (2003) Services marketing. McGraw-Hill, New York

Hospitality, Tourism, and Events Industry Competency Model: Human Resource Management Implications

Barry A. Friedman

Abstract This paper addresses the implications of hospitality, tourism and events industry competency modeling on human resource management for organizations and employees. While past research focused on organizational prescriptive action only, this paper addresses prescriptive actions and the potential benefits for both organizations *and* employees that result when competency modeling is employed throughout the employee life cycle (e.g., pre-employment to retirement). Competency models explicitly define the knowledge skills and abilities required for exceptional work performance in key jobs, link to overall organizational strategy, align human resource management initiatives, and have a prominent role in enhancing organizational effectiveness. The most comprehensive competency model for the hospitality, tourism and event industry was developed by the Employment and Training Administration under the sponsorship of the United States Department of Labor. This model provides a framework that aligns recruitment, selection, onboarding training and development, performance management, total rewards, human resource planning, and even employees' retirement in the hospitality, tourism and events industry. Competency model limitations are discussed and future research is proposed.

Keywords Competency · Hospitality · Human resource management

1 Introduction

This paper addresses the implications of hospitality, tourism and events industry competency modeling on human resource management for organizations and employees. High performance organizations employ competency models that explicitly define the knowledge skills and abilities (KSAs) required for exceptional

B. A. Friedman (✉)
State University of New York, Oswego, NY, USA
e-mail: barry.friedman@oswego.edu

work performance in key jobs (e.g., airline reservations agent, hotel manager). These models help align human resource management initiatives with business objectives [1–3]. In fact, many academic accrediting bodies require that programs adopt a competency approach [4].

Industry-wide competency models identify KSAs that transcend specific jobs and organizations and generalize across a given industrial sector. The most comprehensive model to date was developed by the United States Employment and Training Administration: The Hospitality, Tourism and Events Industry Model [5]. HTEIC model competencies have important implications for human resource management initiatives, including pre-employment, staffing, onboarding, performance management, total rewards, training, HR planning, and retirement. The model incorporates a common core of competencies throughout the employee "life cycle".

This paper examines competency modeling in the hospitality, tourism and events industry. Implications for organizations and employees are followed by a discussion of model limitations and future research.

2   Literature Review

Recent research identified competencies for specific hospitality, tourism and events industry jobs, including managers [6, 7], chefs [8], and tour guides [9]. However, comprehensive industry-wide competency models have several advantages over single job competency models because they better align human resource initiatives with business objectives. Improved aligned between competencies and business strategy is accomplished because employees are selected, developed, promoted, and rewarded based on a common core of valued competencies.

Among the most comprehensive competency models is the Tourism, Events Industry Competency (HTEIC) model developed by the United States Educational and Training Administration (ETA). The model has five tiers of increasing competency levels. The first three tiers generalize across jobs: personal effectiveness (Tier 1), academic (Tier 2), and workplace (Tier 3). But tiers 4 and 5 are hospitality, tourism and events industry specific: industry wide technical KSAs (Tier 4) and industry-sector technical competencies (Tier 5) The latter refers to competencies specific to "five key hospitality sub-sectors: Lodging; Destination Marketing and Management, Tourism and Travel Arrangement; Recreation, Amusements, and Attractions; and Meetings, Events, and Exhibitions Management" [5, p. 4]. Tier 1 consists of personal effectiveness attributes such as integrity, initiative and flexibility. Tier 2 academic competencies start in elementary education (e.g., reading) and continue through higher education and continuous learning. Tier 3 is developed mostly in the workplace through ongoing job duties and mentoring. Tier 4 includes practices such as safety and security that cut across the entire hospitality, tourism and events industry. Tier 5 competencies are specific to a particular sector within the industry (e.g., lodging). A detailed description of the model may be found on the careeronestep website [5].

3 Methodology

Peer reviewed literature was surveyed using thirteen library search engines at a northeastern United States university, including ABI/INFORM Global, Psychology and Social Science databases. Key search terms included "competency", "hospitality", "tourism" "events" and "human resource management".

This paper employed an employee "life cycle" analogy. Biological life cycles consist of changes in the life of an organism, from birth to death. Similarly, employees' life cycles begin with education and socialization before employment (e.g., school, family, peer groups), and transitions through staffing, onboarding, performance management, total rewards, human resource planning and retirement. The life cycle analogy is also useful at the organizational and employee level of analysis.

4 HRM Implications

The implications among the life cycle, organizational HR initiatives, employee implications, and the HTEIC are discussed below and presented in Table 1.

4.1 Pre-employment

To attract qualified employees, organizations select corporate social responsibility (CSR) initiatives that link to their mission and increase their attractiveness to applicants. The mission of Marriott International, a global lodging company with more than 6500 properties across 127 countries, is to "delight and surprise our guests at every encounter". Marriott programs develop hospitality skills among youth and diverse populations [10]. Prospective employees can clarify opportunities by exploring Marriott careers, brief job and competency descriptions.

4.2 Recruitment

To increase recruitment effectiveness and reduce costs, organizations should establish strong liaisons with individuals in strategic labor markets. Colleges, technical schools, unions, and professional organizations are excellent sources that contribute to diverse applicant pools with required competencies. Applicants can research organizational career paths and jobs, paying particular attention to the competencies the organization values. Applicants can then judge the extent that these

Table 1 Hospitality, tourism and event competency model: human resource implications for organizations and employees

Life cycle	Organization	Employee
Pre-employment	• Engage in CSR initiatives that align with mission, increase corporate reputation, are attractive to applicants, and build relevant future workforce competencies (e.g., reading and computer literacy)	• Assess basic tier 1 and 2 competencies, seek tutoring to eliminate deficiencies • Research organization with respect to CSR efforts and career opportunities, especially with respect to marketable competencies
Recruitment	• Define applicant labor market that process required tier 1–3 competencies • Establish and maintain linkages with key recruiting sources	• Identify selection competencies • Increase visibility to organizations • Develop customized resumes that include competencies where warranted
Selection	• Increase quality of hire: validate employment tests that measure tier 1–5 competencies and predict performance in a wide range of jobs	• Identify selection competencies: research company and openings • Practice interview responses to likely behavioral event interview questions based on valued competencies • Ask for feedback even if not selected
Onboarding	• Emphasize tier 1–5 competencies • Reinforce new employees' job responsibilities competencies	• Communicate closely with direct supervisor regarding performance feedback based on competencies
Training and development	• Conduct needs assessment to identify workforce competency gaps • Design training and development experiences that build competencies	• Work closely with direct supervisor and human resources to participate in training and development activities that help develop competencies for higher jobs
Performance management	• Imbed competencies into performance appraisals • Include developmental action planning in performance management • Appraise managers' contingent on subordinate competences development	• Ask for specific feedback on performance related to competencies valued for present and future jobs • Obtain agreement regarding competency developmental action plans • Follow up with supervisor on progress
Total rewards	• Incorporate key competencies into job evaluations • Adopt a pay for performance compensation practice, make pay contingent on developing competencies	• Review job evaluation reports that identify competencies and their monetary worth • Aspire to jobs that require additional or higher levels of competencies
Human resource management planning	• Include competencies on job descriptions and succession planning • Require employees to develop career development plans • Train and reward supervisors that increase subordinate competencies	• Establish a short and long term plans to develop competencies • Conduct competency self-assessments • Clearly communicate to direct supervisor specific career aspirations, including timetables

(continued)

Table 1 (continued)

Life cycle	Organization	Employee
Retirement	• Provide transitional tools and mentoring for employees near retirement • Link competencies to retirement	• Establish and implement retirement transition plans that capitalizes on competencies

competencies and their own align, and customize their resumes to fit organizational requirements.

4.3 Selection

"Tests" are almost always used to select employees; that is, anything used to make an employment decision (e.g., written tests and interviews). Tests should be validated whereby test scores that measure required competencies are related to future job performance.

Applicants should research companies and determine which competencies are likely to be assessed during selection. For example, a tier 3 workplace competency "teamwork" might be measured with an interview question such as "tell me about a time where you achieved results on a team". Applicants should then reflect on past experiences where they demonstrated relevant competencies.

4.4 Onboarding

New employee orientation and training is a major opportunity to communicate important competencies. Competencies relevant both to initial responsibilities and for a sustainable career can be emphasized. With that knowledge, new employees should work closely with their supervisors to develop initial developmental action plans to improve competencies.

4.5 Training and Development

Most organizations hold employees accountable for their own careers. But gaps between competency requirements and employee competencies must be addressed with training and development programs. Employees must first achieve excellence in their current jobs, actively pursue careers, and participate in developmental opportunities. The HTEIC model provides a road map of progressively more valuable competencies to master as one progresses. Canon Italia implemented a competence-based system that

aligned business objectives with personnel management policies and hence to the human resource development system [11].

4.6   Performance Management

Competency improvement is especially suited for performance feedback and developmental action planning. Employees have a vital interest in their performance evaluations as compensation and promotions are often contingent on performance reviews. Competencies play a key role, especially with respect to continued upward mobility. Employees should therefore work closely with their supervisors for competency growth.

4.7   Total Rewards

Job evaluation is the "systematic means to identify the relative worth of jobs within the organization" [12, p. 389]. The most frequent job evaluation method is the point factor method whereby important KSAs, known as compensable factors, are rated across jobs. Compensable factors are often competencies. The "higher" the competencies, the greater the pay. For example, Marriott Assistant Banquet Managers that supervise banquet staff (tier 3 teamwork) and enforce safety procedures (tier 4 safety), are paid more than lobby hosts that perform mostly basic tier 1, 2 and 3 tasks such as assisting guests entering and leaving the property [10]. Employees should therefore work closely with their supervisors to develop competencies.

4.8   Human Resource Planning (HRP)

Based on employee supply and demand forecasts, organizations implement succession plans to achieve adequate staffing levels. Forecasts, workforce assessments and creating career paths all involve developing HTEIC model competencies. Employees must "identify personal competencies and interests, plan life and career goals, and assess alternative career paths inside and outside the organization" [12, p. 306]. Xerox Europe and Costco have developed career paths based on competencies [13].

4.9 Retirement

Pension and health care benefits receive most of the attention, but organizations should also provide transitional tools that address financial, social, and psychological retirement challenges. Employees can use tier 3 workplace competencies to plan retirement, generate new social networks and establish new ways to make retirement meaningful. Retirees can build on tier 4 and 5 industry and sector wide competencies by consulting and serving on company boards.

5 HTEIC Model Limitations/Future Research

The HTEIC model must be *updated* to reflect marketplace changes. For example, revenue management competencies are required for hotels to remain competitive [14]. Tier 4 and 5 industry and sector competencies include marketing and sales, but financial competencies are not adequately addressed. Other needed updates include e-service, e-commerce and corporate social responsibility leadership [15–17]. The generalizability of the HTECI model beyond the United States where it was developed must also be assessed. Finally, the cross cultural generalizability of competencies is not known [18].

Future research should determine the relationship among competency model deployment, and employee satisfaction, motivation, and retention. The utility of organization wide competency models needs to be examined more thoroughly [19]. Although extensive literature attests to the increased productivity and reduced turnover associated with properly implemented employment selection and placement competency tests [20]. A comprehensive cost-benefit analysis of the HTECI model has not been conducted. On a macro level, relationships among competency model alignment with business objectives, organization reputation, and organizational performance needs exploration. Finally, the methods and techniques used to identify competencies critical for job and organizational success are many. The relative effectiveness of different methods can be investigated, paying particular attention to issues of validity and reliability.

6 Conclusions

Organizations should consider comprehensive competency models such as the HTEIC model to orchestrate competency building from both organizational and employee perspectives. Organizations are unique in their history, marketplace, culture and methods, and as such should adapt the HTEIC model to their unique circumstances. Aligning competency models with business objectives by weaving competencies throughout the employee life cycle appears to benefit both the

organization and its employees; however, more research is needed to determine who benefits the most and which parts of the model are most beneficial.

References

1. De Vos A, De Hauw S, Willemse I (2015) An integrative model for competency development in organizations: the Flemish case. Int J Hum Resour Manag 26(20):2543. https://doi.org/10.1080/09585192.2014.1003078
2. Campion MA, Fink AA, Ruggeberg BJ, Carr PGM, Odman RB (2011) Doing competencies well: best practices in competency modeling. Pers Psychol 64:225–262. https://doi.org/10.1111/j.1744-6570.2010.01207
3. Vakola M, Soderquist KE, Prastacos GP (2007) Competency management in support of organisational change. Int J Manpow 28:260–275. https://doi.org/10.1108/01437720710755245
4. Abby SK, Schumacher EJ, Dellifraine J, Clement D, Hall R, O'Connor S, Qu H, Shewchuk R, Stefl M (2016) Competency development and validation: an update of the collaborative leadership model. J Health Adm Educ 33(1):73–93
5. Careeronestep. Hospitality, tourism, and events industry model. https://www.careeronestop.org/CompetencyModel/competency-models/hospitality.aspx. Last accessed 16 May 2018
6. Wessels W, Engelina DP, Slabbert E (2017) Key competencies and characteristics of accommodation managers. SA J Hum Resour Manag 15:1–11. https://doi.org/10.4102/sajhrm.v15i0.887
7. Bharwani S, Talib P (2017) Competencies of hotel general managers: a conceptual framework. Int J Contemp Hosp Manag 29(1):393–418. https://doi.org/10.1108/IJCHM-09-2015-0448
8. Wan T, Hsu Y, Wong J, Liu S (2017) Sustainable international tourist hotels: the role of the executive chef. Int J Contemp Hosp Manag 29(7):1873–1891. https://doi.org/10.1108/IJCHM-08-2015-0406
9. Al Jahwari DS, Sirakaya-Turk E, Altintas V (2016) Evaluating communication competency of tour guides using a modified importance-performance analysis (MIPA). Int J Contemp Hosp Manag 28(1):195–218. https://doi.org/10.1108/IJCHM-02-2014-0064
10. Marriott International About Marriott International-Find Your World. https://www.marriott.com/marriott/aboutmarriott.mi. Last accessed 18 May 2018
11. Canon Italia (B): The Competency Model. Case 405-045-1, https://www.thecasecentre.org/educators/products/view?id=64138. Last accessed 27 June 2018
12. Mathis RL, Jackson JH, Valentine SR (2014) Human resource management, 14th edn. Cengage Learning, Stamford
13. Overman S (2011) On the right track. HR Mag 73–75, April
14. Demirciftci T, Cetin G, Bilgihan A (2017) Coping with RM challenges in hospitality education. J Revenue Pricing Manag 16(5):499–512. https://doi.org/10.1057/s41272-017-0086-0
15. Knight B, Paterson F (2018) Behavioural competencies of sustainability leaders: an empirical investigation. J Org Change Manag 31(3):557–580. https://doi.org/10.1108/JOCM-02-2017-0035
16. Tsou H, Chen J, Liao S (2016) Enhancing intellectual capital for e-service innovation. Innov Manag Policy Pract 18(1):30–53. https://doi.org/10.1080/14479338.2016.1181527
17. Chuang S, Lin H (2015) Co-creating e-service innovations: theory, practice, and impact on firm performance. Int J Inf Manag 35(3):277. https://doi.org/10.1016/j.ijinfomgt.2015.01.002
18. Vickers D (2013) A comparative study of UK and Taiwanese chemical plant managers: cross cultural management. Int J 20(3):386–401. https://doi.org/10.1108/CCM-02-2012-0016
19. Sutton A, Watson S (2013) Can competencies at selection predict performance and development needs? J Manag Dev 32(9):1023–1035. https://doi.org/10.1108/JMD-02-2012-0032
20. Boyatzis RE (2009) Competencies as a behavioral approach to emotional intelligence. J Manag Dev 28:749–770. https://doi.org/10.1108/02621710910987647

Temporary Museum Exhibitions as Tools for Cultural Innovation

Kali Tzortzi and Katerina Koukouvaou

Abstract In the current communication era where priority is given to the temporary over the permanent, museums are increasingly developing temporary exhibitions and through them the museum is being transformed. These are used as strategic devices offering diverse opportunities: from acting as powerful marketing tools, triggering visits, and generating income, to experimenting with new display approaches and creating prestige for the museum. At the same time, they raise challenges, including in keeping balance with other key museum functions. Against the background of a critical overview of their significance in museum literature, and of a set of themes characterizing the phenomenon in Greek archaeological museums over the last decade, the paper focuses on a temporary exhibition realized though a partnership between a public national museum and a private cultural foundation. Its analysis, based mainly on interviews with curators and organizers, will suggest that this unique initiative between two Greek partners has a much broader relevance. Examining it in the context of national exhibition policies, European initiatives and guidelines and international experience, allows it to be argued, in the last part of the paper, that the joining in partnership of private and public bodies in the context of temporary museum exhibitions can emerge as a tool for cultural innovation and contribute to new and imaginative ways of using museum collections. At the same time, it can extend business support for museums well beyond the traditional forms of funding and sponsorship.

Keywords Temporary museum exhibitions · Cultural innovation · Public-private partnership

---

K. Tzortzi (✉)
University of Patras, Patras, Greece
e-mail: ktzortzi@upatras.gr

K. Koukouvaou
Ministry of Culture and Sports, Athens, Greece

1 Introduction

In the current communication era where priority is given to the temporary over the permanent, museums are increasingly developing temporary exhibitions and through them the museum is being transformed. Museums are 'living cultural institutions' and their temporary exhibitions are strategic devices that offer diverse opportunities: from acting as powerful marketing tools, triggering visits, and generating income, on the one hand, to experimenting with new display approaches and creating prestige for the museum, on the other. At the same time, they raise challenges, including in keeping balance with other key museum functions. Against the background of a critical overview of the significance of temporary exhibitions in museum literature, and in the framework of a set of themes that characterize the phenomenon of temporary exhibitions in Greek archaeological museums in the last decade, the paper focuses on a current temporary exhibition, 'The countless aspects of Beauty' (2018), which is of particular interest for two key reasons. First, it is the product of a partnership between a public national museum, the National Archaeological Museum, Athens, and a private cultural foundation, the Piraeus Bank Group Cultural Foundation, and as such an exceptional case where an external party is involved in a public museum's exhibition policy. Second, as its analysis, based on press releases, media commentaries and, most importantly, interviews with the people involved in its conception and realization, suggests, it has a much broader value. Examining it in the context of national exhibition policies, European initiatives and guidelines and international experience, allows it to be argued, in the last part of the paper, that the joining in partnership of private and public bodies in the context of temporary exhibitions can emerge as a tool for cultural innovation and contribute to new and imaginative ways of using museum collections.

2 Temporary Exhibitions in the Museum Literature

The concept 'temporary exhibition' tends to take its meaning, as a short-term exhibition, in relation to the opposite concept of 'permanent collections', the core collections of the museum. However, the differences between the two are not always clear [1]. Some museum curators even dislike the contrasting of permanent and temporary projects [2], and there seems to be no generally accepted definition, given the complexity of the phenomenon. According to Belcher [3], they are meant to last for years, while for Herreman [4] they 'offer visitors the chance to see something new within a specific time span'. As museum practice suggests, 'most temporary exhibitions run for less than a year, while permanent exhibitions are expected to last for five, ten or more years' [4]. Recently, the term pop-up exhibitions has been introduced to describe a new form of temporary exhibitions that 'might last only a few days or a couple of weeks' [5]. Historically temporary exhibitions have always been particularly important to art museums as a primary generator of audiences,

publicity and finance [6], as well as opportunities to address new themes and carry out extensive research in a specific area [2]. Closely related to this concept is that of the 'traveling exhibition' which, though it shares common features with the 'temporary exhibition', its fundamental distinctive characteristic is its presentation in a series of museums, within the same country or abroad, which means being visited by a more diverse audience [4].

More importantly, from the point of view of this paper, it is notable that, though the practice of temporary exhibitions has been significantly growing over the last decades, there has not been in parallel an equivalent discussion in the literature. There are numerous publications about particular cases, but few deal with temporary exhibitions as a particular exhibition type [5] or as a theoretical phenomenon, either in the context of a single institution (as for example about the National Gallery London in Hersov's PhD, 2017 [7]) or in the broader context of the contemporary museum landscape (as in the case of the panel discussion of seven experts organized by the UK Museums Association about the future of temporary exhibitions and published in the form of a series of articles in 'Museums Journal' in 2009). In the past, particular emphasis was given to practical issues of design in temporary exhibitions [8, 9]. Recently, authors like Tobelem [10] and Jacobi [11] emphasize the marketing dimension of temporary exhibitions in terms of creating income and improving a museum's public image. But more recently, others like Bradburne [12] and Schneider [13] take a more critical view, arguing that temporary exhibitions that become 'blockbuster shows' might increase visitor numbers but, in the long run, put at risk museum viability by de-emphasizing permanent collections. It is said that 'in certain cases the collection has receded spatially and programmatically, while the temporary exhibition takes the limelight' [6]. It is explicitly outlined in the recent literature that there is a need for new temporary exhibition models [14]. Kelly [15], for example, argues that collaboration is 'the way forward for museums looking to develop temporary exhibitions', and Tinley [14] more explicitly points out that 'the ability to network into others that are not just the usual group of people is very important', such as for example the current trend for museum-academic collaborations in UK. In general, it is hoped that 'people will start to think of a slightly different model of exhibition and re-embrace the virtues of a smaller exhibition that [. . .] offers viewers a more detailed experience of fewer works of art', as well as of exhibitions that draw on permanent collections [16]. In response to this need, emphasis has lately been given to the co-production of temporary exhibitions as an operational model that brings together museum experts and external parties not just during the process of production but also in decision-making and other management aspects [17].

Comparatively less attention is given to the challenges of temporary exhibitions in the Greek museum literature. Within this, among the milestones in the theoretical and practical development of the phenomenon, we can distinguish three publications: the study of the evolution and integration of temporary and traveling exhibitions in the Greek archaeological museums, from the 1970s to mid-1990s, by Mouliou [18] as part of her doctoral thesis; the publication of the second (2008) issue of 'Illisia', the journal of the Byzantine and Christian Museum, dedicated to the

'Mobility of Museum Collections', which drew attention to institutional and practical issues deriving from the collaboration between European museums in the context of temporary exhibitions; and the recent (October 2017) international 2-day conference on 'Archaeological Temporary Exhibitions: their role, best practices, and their unseen aspects', where the organization of temporary exhibitions was for the first time dealt with as a complex phenomenon, with institutional, cultural and scientific dimensions.

3 A New Form of Collaboration Through Temporary Exhibitions

Shifting attention from theory to practice, in Greek archaeological museums in particular, the organization of temporary exhibitions constitutes a contemporary, interdisciplinary and widespread museum practice. Since the 1990s, the phenomenon has been integrated in public and non-public museums both in urban and peripheral areas. Their advantages are said [19] to include exhibition design experimentation, the upgrading of the public image of the museum, increase in attendance figures and opening of the museum to a wider audience, creation of additional income, knowledge exchange and promotion of research. In parallel, it is argued [18, 20], temporary exhibitions work as communication tools through which national policy and public diplomacy are conducted, since they can constitute ideological statements transmitting discursive and non-discursive meanings.

Looking comparatively at temporary exhibitions organized by Greek archaeological museums in the last decade, they appear to share a series of key themes: (1) the ephemeral character, with the average duration of an exhibition being between 3 and 6 months (exceptions include both exhibitions lasting less than 3 months as well as more than a year); (2) the relation of meanings to those of the permanent collection which forms the point of reference of each museum; (3) museum renewal, which can result either from the application of new interpretative techniques, or the recontextualization of the collections through loans that enrich exhibition material; (4) the development of an extrovert character, both through collaborations with similar institutions and through the approach of new audiences; (5) the promotion of scientific knowledge through the publication of exhibition catalogues and the organization of complementary events, ranging from those of a more scientific character, such as conferences, to ones addressed to a wider public, as mainly educational activities; (6) the generation of additional income resources, often through retail; and (7) the improvement of the public image of the museum and of Greece.

These themes might be thought of as representing the conventional wisdom and can be contrasted to the constant evolution of the phenomenon globally [10]. The current exhibition 'The countless aspects of Beauty', however, while sharing most of the main themes identified above, appears to add new and distinctive features that

point to potential future developments. One distinctive feature is that intriguingly it combines the form of a temporary and a traveling exhibition. It takes the form of a temporary exhibition for the organizer, the National Archaeological Museum (NAM), and, at the same time, belongs to the traveling exhibition model through its smaller version that is the product of a 2-year collaboration (2018–2019) between the major public Greek museum and the voluntary non-profit cultural foundation of the Piraeus Bank Group (PIOP), a collaboration initiated by the Director of the latter, Alexandra Rapti. The exhibition is shown, in 2018, in three thematic museums of the borrower, which have been selected from among those of the PIOP Museum Network on the basis of the needs and expectations of the communities they serve, with the aim of being more relevant to them and responsive to their interests [21]. In Sparta, the exhibition is related to the current project of the new archaeological museum of the city; in Ioannina, the local community has been shown to embrace this kind of exhibition, while in Tinos, the exhibition is integrated into the celebrations for the 10 years since the opening of the museum.

In terms of content, the temporary exhibition (inaugurated in NAM in May 2018) presents 340 works from the collections of the NAM, organized thematically, as conceptualized by its Director Dr. Maria Lagogianni [22]. The traveling exhibition (inaugurated in April 2018, so a month earlier than the temporary) shows 40 works from the Prehistoric and Vase and Metallurgy Collections of the NAM [22], some displayed for the first time, lent to PIOP for a period of 9 months in 2018. Though the traveling exhibition follows the same concept and themes with the temporary, as well as the same exhibition design style, it allows for different stories to be told, in the sense of 'situated' narratives. In each of the three museums, a different theme is enhanced through exhibition design devices (positioning, graphic design), making clear the relevance to its permanent collections: the use of oils for the care of the body, in the Museum of Olive and Greek Olive Oil in Sparta; its beautification through jewelry and accessories for cloths, in the Silversmith Museum in Ioannina; and the creation of the Cycladic marble figurines, in the Museum of Marble Crafts in Tinos. Thus, permanent displays and loaned objects are juxtaposed conceptually as well as physically, more clearly in the case of the Silversmith Museum, and ancient art and modern cultural heritage are brought together. The result is a bespoke exhibition which is relevant to the local audiences of the three museums.

Over and above the loan of works (from the side of the organizer) and the taking up of organization costs (from the side of the borrower), the sharing of resources included the offering by NAM of exhibition accessories (such as display cases) and most importantly human resources, that is the expertise of its team of experienced conservators [21, 22].

The local audiences' very positive response is reflected in the considerable increase in visitor numbers, with the exhibition being visited: in Sparta by 6500 visitors, in a period of 2 months, and so making it the most successful temporary exhibition in this museum; in Ioannina, by 15,000 visitors, and so attracting in a period of less than 2 months the average annual number of visitors [23]; and in Tinos by 18,000 visitors in a period of 2 months (so with each month being about four

times higher than the monthly average), leading to an 1-month extension of its duration [21]. The exhibition will be shown in two more museums of PIOP in 2019.

4   Interpretation and Discussion

Though this collaboration is very recent, and 'The countless aspects of Beauty' (in both its temporary and traveling exhibition formats) is still on show at the time of writing, it seems that, at a fundamental level, the exhibition itself addresses in novel ways both theoretical and practical issues raised by ephemeral display practices.

In terms of the theoretical context and at the local scale, the traveling exhibition content does not simply amplify the permanent collection of each museum but, through its relevance, helps visitors to better understand them, and see the links between past and present. This can enrich people's lives, strengthen a place-based sense of belonging, and make them feel better about where they live. At the global level, the public national museum adjusted its collections to various local visitor needs through a private partner that acted as a mediator in decision-making between state authorities and local communities. This contributes to creating a fundamental new relation between the centre and the periphery, and between the national archaeological collections and the distinctive technological activity developed in each place, shaping its local image and identity. For both sides, and in terms of the inherent social role of museums, the working in partnership enables public and private partners to reach a much wider audience and be proud for having increased access to national collections and the stories these can tell, by making them available to more people and in more places.

In terms of practical issues, the collaboration opened up a new and imaginative way for museums to exploit the loan of objects. The partnership gives marketing visibility not only to the borrowing institution, but also to the lending museum, which can turn the absence of objects to a marketing device. For NAM, it is a creative and active way for deploying its rich collections, as well as an innovative gesture in its communication policy. By presenting them outside Athens, in 'satellite' exhibitions, it significantly develops the museum's distribution channels [24]. Even more interestingly, it innovates by showing its archaeological collections in non-archaeological museums.

Not least, the act of collaborating is in itself a significant contribution to the 'self-consciousness' of each institution [21]. Building up trust with shared knowledge and ways of working can have far-reaching benefits for both partners. It could then be argued that this scheme of collaboration can be seen as a response to the need for a new model of exhibitions identified by the international museum literature (focus on smaller exhibitions, drawing on permanent collections, working with new partners) and as a way ahead in a period of changing political, social, and economic contexts. It is widely acknowledged [25] that 'new and imaginative ways of using collections can make a major contribution to sustainability', one of the key concerns of museums today. At a national level, this form of collaboration is well integrated

within the efforts of Greek museums to develop networks with other institutions. In particular, it can act in complementary ways with the exhibition policy of the Acropolis Museum that, since 2015, has been organizing a series of temporary exhibitions showing archaeological sites in collaboration with regional Greek museums, so as to raise interest to these places. At a European level, this sharing of collections is consistent with the focus on 'Collection Mobility', which emerged as a priority in 2004 and since 2008 has become a systematic pursuit. Mobility initiatives, such as the 'Lending for Europe 21st Century Collections Mobility' (2009) and the more recent 'Connecting Early Medieval European Collections' (2016) scheme intend to facilitate antiquities mobility between cultural heritage institutions within the EU, in order to generate operational museum strategies that are both public-centered and workable.

The discussion about museum models of public-private partnerships is in fact rapidly developing internationally [26–28]. Taken together, the above developments suggest that the joining in partnership of private and public bodies in the context of temporary museum exhibitions can work in favour of culture, and become a tool for cultural innovation, while at the same time extending business support for museums well beyond the traditional forms of funding and sponsorship. Incorporating joint ventures in exhibition and marketing strategy could be particularly beneficial for smaller, regional public museums, which have unique collections but lack the human resources, infrastructure and budget to promote them. It is of particular interest that the intervention of the private body is not in our case seen in terms of economic numbers (not least in the sense that there is no special admission charge beyond the low museum entrance fee), as might be expected from a private institution. Instead, it targets socially desirable aims in the cultural sector through an 'accountability grounded more in societal interests and aspirations' [29]—a contribution to the conservation of resources through sharing, localization and engagement of local communities, enticing of new audiences, and diversification of what is on show. In this sense, it could be suggested, this innovative way of using collections and sharing resources through temporary exhibitions incites a reflection on the new possibilities and new challenges for museums: their transformative potential towards the concept of the post-museum as defined by Hooper-Greenhill, that is, the museum that is directly linked to the concerns and ambitions of communities [29], and their critical task to make the museum work as 'a civic space that is full of experiences that one can have in public or private terms' [30].

References

1. Davies S (2011) Co-production and values in museums: with special reference to the production of temporary exhibitions in Britain. Ph.D. Thesis, Open University, UK
2. Gonseth MO (2013) MEN-Musée d'Ethnographie de Neuchâtel. In: Peressut B, Lanz LF, Postiglione G (eds) European museums in the 21st century: setting the framework, vol 3. Politecnico di Milano, Milan, pp 771–775
3. Belcher M (1991) Exhibitions in museums. Leicester University Press, Leicester

4. Herreman Y (2004) Display, exhibits and exhibitions. In: Boylan P (ed) Running a museum: a practical handbook. ICOM, Paris, pp 91–103. https://icom.museum/en/ressource/running-a-museum-a-practical-handbook/

5. Lord B, Piacente M (eds) (2014) The manual of museum exhibitions, 2nd edn. Rowman & Littlefield, Lanham, MD. Chapters 11 and 12

6. Leahy HR (2010) Shows must go on: a squeeze on funding for temporary exhibitions could lead to the creative use of collections. Museums Journal 110(4):22–27

7. Hersov M (2017) The temporary exhibition in the Sainsbury Wing, National Gallery: commission, design and outcome. Ph.D. Thesis, University of Essex, UK

8. Sixsmith M (1999) Designing galleries: the complete guide to developing and designing spaces and services for temporary exhibitions. Arts Council of England, London

9. Witteborg LP (1981) Good show! A practical guide for temporary exhibitions. Smithsonian Institution, Washington, DC

10. Tobelem JM (2011) Le rôle des expositions temporaires dans les stratégies événementielles des musées. Revue Française du Marketing 232:45–59

11. Jacobi D (2013) Exposition temporaire et accélération: la fin d'un paradigme. La Lettre de l'OCIM 15. https://doi.org/10.4000/OCIM.1295

12. Holledge R (2018) Down with blockbusters! James Bradburne on the art of running a museum. The Financial Times, 22 January 2018. https://www.ft.com/content/dc3e411c-f20b-11e7-bb7d-c3edfe974e9f

13. Schneider T (2018) The gray market: why blockbuster museum shows aren't actually solving the attendance problem (and other insights). The Art Newspaper, 30 April 2018. https://news.artnet.com/opinion/michael-jackson-blockbusters-1275152

14. Kevin A, Vegelin E, Tinsley S, Balshaw M, Dodd N, Soriano K, Allen V (2009) Brief encounter: Museums Journal brings together seven experts to discuss the future of temporary exhibitions. Museums Journal 109(5):24–31

15. Kelly J (2005) The partnership approach: collaboration is the way forward for museums looking to develop temporary exhibitions. Museums Journal 105(2):30–33

16. Kevin A, Vegelin E, Tinsley S, Balshaw M, Dodd N, Soriano K, Allen V (2009) Show business: in the second of two articles, our expert panel discuss the financial and environmental sustainability of temporary exhibitions. Museums Journal 109(6):28–33

17. Davies SM (2010) The co-production of temporary museum exhibitions. Museum Management and Curatorship 25(3):305–321. https://doi.org/10.1080/09647775.2010.498988

18. Mouliou M (1997) The writing of classical archaeology in post-war Greece (1950 to the present); the case of museum exhibitions and museum narratives. Unpublished Doctoral Thesis, University of Leicester, UK

19. Gazi A, Nousia T (2003) Archaeology in Greece, vol 3: Museology. Hellenic Open University, Patras (in Greek)

20. Lazaridou A (2008) Museum collections' mobility. Ilissia 2:8–13. (in Greek)

21. Rapti A (2018) Director, Piraeus Bank Group Cultural Foundation (Personal Communication, July 2018)

22. Athanassopoulou S (2018) Archaeologist-Museologist, National Archaeological Museum, Member of the curatorial team of the exhibition 'The countless aspects of Beauty' (Personal Communication, July 2018)

23. Foundation for Economic and Industrial Research (2017) The socio-economic impact of the museums of PIOP at the local level. Athens (in Greek). http://iobe.gr/docs/pub/PRE_20052017_PUB_GR.pdf

24. Kotler NG, Kotler P, Kotler WI (2008) Museum marketing and strategy: designing missions, building audiences, generating revenue and resources, 2nd edn. Jossey-Bass, San Francisco, CA

25. Matassa F (2002) Active collections: re-visiting our collection for more and better use. In: Pettersson S, Hagedorn-Saupe M, Jyrkkiö T, Weij A (eds) Encouraging collections mobility – a way forward for museums in Europe. Finnish National Gallery, Helsinki, pp 107–135. http://www.lending-for-europe.eu/fileadmin/CM/public/handbook/Encouraging_Collections_Mobility_A4.pdf

26. Major S, Sutherland T (2011) Strategic partnerships between museums and corporate organizations – the marriage of the Museum of New Zealand Te Papa Tongarewa and TOWER. In: Rentschler R, Hede A-M (eds) Museum marketing: competing in the global marketplace. Routledge, London, pp 250–256

27. Mason R, Robinson A, Coffield E (2018) Museum and gallery studies: the basics. Routledge, London

28. Antoniadou S, Mavragani E, Poulios I (eds) (2015) Culture and perspective. Kastaniotis, Athens. (in Greek)

29. Janes R (2007) Museums, corporatism and the civil society. Curator: The Museum Journal 50 (2):219–237

30. Frances Morris, as cited in Westbrook L (2017) Field report from yours, mine, and ours: museum models of public-private partnership. https://www.sfmoma.org/read/field-report-yours-mine-and-ours-museum-models-public-private-partnership/

The Relationship Between Service Quality and Customer Satisfaction on Luxurious Hotels So to Produce Error-Free Service

Konstantinos Varsanis, Dimitrios Belias, Nikolaos Kakkos, Michalis Chondrogiannis, Ioannis Rossidis, and Chris Mantas

Abstract Quality in service provision is one of the most important in the efforts of hotel businesses to strengthen their position in the highly competitive, competitive business environment of our day, aiming at sustainability, profitability and growth prospects. This is a literature review which will aim into investigating the current literature on the relationship between service quality and customer satisfaction with a focus on the guests of luxurious hotels. This research aims on examining the latest output of papers that examine this topic, so to see if there is a new knowledge generated and how a future research can go. Overall, it is found that the immediate and effective problem solving, the quick and error-free or omitted service, the reliable information, the compliance with the agreed and the provision of personal and individualized care presuppose the existence of a qualitative managerial staff with knowledge, skills, professionalism, interpersonal skills, conscientiousness, responsibility, high sense of responsibility and consistency in the company's effort to continuously improve the quality of the services provided. In other words, it is obvious that in the case of future behavioral intentions of customers, the quality and performance of hotel staff are the most important factor to which managers of hotel business should pay attention. Therefore, it is important to establish a future research where the authors will identify what it makes an "error-free" service production, in terms what the hotel manages are defining it and how they are trying to accomplish it.

K. Varsanis
National and Kapodistrian University of Athens, Athens, Greece

D. Belias (✉) · N. Kakkos
Technological Educational Institute of Thessaly, Larissa, Greece
e-mail: dbelias@pe.uth.gr

M. Chondrogiannis
Ionian University, Corfu, Greece

I. Rossidis
University of the Aegean, Chios, Greece

C. Mantas
University of Leicester, Leicester, UK

1 Introduction

Quality in service provision is one of the most important parameters in the effort of hotel companies to strengthen their position in the highly competitive, competitive business environment of our day, aiming at sustainability, profitability and growth prospects. The decisive contribution of service quality to creating satisfied and dedicated customers willing to resume their hotel stay in the future has turned the attention of academics and industry professionals to exploring how the quality of service is perceived by customers' hotels [1].

The relevant literature includes several scientific researches that have confirmed the directly related relationship between service quality and customer satisfaction in hotels, as well as the indirect effect that it has on the formation of loyal and repetitive customers. This justifies the choice of the majority of hotel businesses to place quality of service at the heart of their strategic concept and philosophy. At the same time, it highlights the importance for each hotel of continuous monitoring of the level of quality of the services provided and the way in which they are evaluated by customers [2].

This is a literature review which will aim into investigating the current literature on the relationship between service quality and customer satisfaction with a focus on the guests of luxurious hotels. For this reason the paper has examined the related literature found on online databases, such as emerald. The papers have emerged from the use of keywords such as customer quality and error-free services. At the same time the authors have developed the research question which was "Is there a relationship between service quality and customer satisfaction on luxurious hotels so to produce error-free service".

At this case, it is important to stress that error-free services are defined as the case of delivering services which are free from any mistake or pitfall [3]. It should be mentioned that they constitute a particular category of hotels that are usually located in large cities and are individual units of mixed capacity [4, 5]. It should be noted that in terms of luxury hotels we do not simply refer to 4 or 5 star hotels, but to luxury hotels in the sense of offering very special services [2]. They definitely have 4 or 5 stars, but they are hotels that emphasize design and interaction with the consumer, their inability to replicate due to their uniqueness and the emphasis on specific motif-themes and the provision of services offered in a unique way, are just some of the elements that characterize luxury hotels [6], while the high expectations of consumers from these units (Olga [7]) are also important, and are considered to be a unique category, however, aimed at customers with very high incomes, meaning that there is a serious benefit for both hotels and destinations [8–10]. Indeed, in many cases these hotels are and can take the weight of the destinations or be the ones for

which they will visit the destination [7]. It is understood that high service quality of luxurious hotels is strongly linked with high levels of customer satisfaction [11]. At the same time the demands and request of the consumers are increasing over time and there is pressure to the hotels to produce error-free services. This is a rather new concept, hence this paper will examine the relationship of service quality and customer satisfaction and what hotels can do so to develop error-free services.

2 Methodology

The methodology that was used in this paper is the critical review of the current literature. Relevant literature selection was derived from popular online bibliographic databases, like Science Direct, Emerald, EBSCO host and scientific search engines like Google Scholar. Also, general search engines like Google have been used. The types of bibliographic sources included in the research are articles published on scientific journals, books, conference proceedings, company papers and studies, white papers, online sites and online journals. The selection criteria of these literature sources were based on the relevance to the topic of the paper and this research is not exhaustive.

3 Literature Review

3.1 The Concept of Quality

In recent years, the quality of products and services has become a dominant strategic choice for any business that is trying to survive and grow in the highly fluid and highly competitive environment of today's globalized economy. According to [7], in our time the quality of the services offered is treated as one of the most important issues that should be evaluated and taken into account in the strategies and plans adopted by all business units, while, as [12] argues, any enterprise that aims to increase its competitiveness, flexibility and efficiency must incorporate quality at all levels of its organization.

Quality due to its importance has been extensively used in domestic and international literature. This includes a plethora of definitions that have at times been formulated for it such as [13].

- "The quality of a product or service is its compliance according to its requirements and specifications" [14].
- "Quality is customer satisfaction rather than protection from unpleasant situations" [15].
- "The quality of a product or service depends on its suitability for use" [16].

- "The quality of a product or service is related to its foreseeable uniformity and reliability at low cost and its suitability on the market" [17].

According to the definition given by the British Standards Institute (1983), quality is defined as "all the attributes and characteristics of a product or service that are based on its ability to meet specific explicit needs", while [18], quality is defined as "the degree of excellence/excellence sought, and the control of volatility in achieving this superiority in meeting customer requirements". Finally, [19], highlighting the role of customers, considers that the quality of a product or service consists of those features of a product or service that comply with specific specifications fully meet or exceed customer expectations [19]. As can be seen from the above definitions, the concept of quality is subjective and largely dependent on the angle at which it is approached, either on the part of the firm or on the part of the customer. The interpretation given by an entrepreneur-producer to the quality term refers to the ability of the production process to meet and comply with the specifications of a product or service, given the cost of production and the expected demand. In contrast to the customer-consumer, the term quality relates to the ability of a product or service to meet its personal needs and aspirations from aesthetic, functional and economic point of view. In a simplified version, which represents many consumers, quality is summed up in the phrase "you buy what you pay" or else "that you get paid," [20]. At this point, there is the concept of error-free services. According to [21] luxurious services rely in a promise. This is a promise that the services delivered will not fail no matter what happens. Of course this is a promise that none can guarantee for its effectiveness, but still the hotel management can make a promise that it will keep some very high standards while that it will make sure that even in a case of a service-failure, it will be able to recover it [22]. Of course, this means that the hotel has the necessary resources to deliver its promise for "top quality services", including the training of the employees and having an error-avoidance system [23].

3.2 The Importance of Quality in the Provision of Services

Quality in service provision is a strategic issue with beneficial effects on the external and internal environment of any business or organization. According to [24], a quality management system is so important to an organization, as important as life insurance for the "leader" of a family. In the same way that insurance coverage will help a family cope with the difficulties that will arise if something unexpected happens to the family's leader, a well-designed quality-oriented management system can effectively help each organization adapt and respond to unpredictable events and undesirable situations [24]. In recent years, the interest of both academics and businesspeople has grown for quality of service, given the very important importance it plays in a range of critical issues for the development of entrepreneurship. According to [25], quality of service has become the international language of

communication for global entrepreneurship. Nowadays, a growing number of public and private sector organizations and enterprises aim to continuously improve the quality of their services, recognizing its key contribution to enhancing their competitiveness and through securing favorable conditions for sustainability [26]. According to [14], in a dynamic and volatile economic environment where there is intense competition between businesses, quality is recognized as the most decisive factor in offering competitive services, although creation and maintenance require time, patience, perseverance and unwavering dedication. Besides, it is no coincidence that in our time, the most well-known, renowned and profitable companies at the international level advertise and promote their services and products by highlighting their quality and reliability despite their price [27].

Quality of service as a strategic choice is intertwined with a number of positive results such as increasing customer satisfaction, improving their confidence, positive word-of-mouth publicity, increased staff performance, lowering operating costs, strengthening [28]. In other words, maintaining a high level of service quality assures a business a comparative advantage over competition, increasing its productivity, improving its performance and enhancing its reputation and credibility [26].

In particular, in the hospitality industry, the strategic importance of quality in the provision of services and its catalytic role are recognized by all the stakeholders involved in the process of supply and demand of tourist services [13]:

- Customers are showing interest in quality because they are looking for reliable services trying to meet given needs. In this context, they particularly appreciate personal contact, increased care, gracious service behavior, and a satisfactory relationship between the value of the product offered and the price required to obtain it.
- Businesses, for their part, are interested in quality because they recognize that this is a powerful competitive advantage that is very difficult to copy and which consolidates the image of the business, leading to better financial results. They also consider improving the relationship with employees by ensuring better coordination and communication that results in lower operating costs and productivity gains.

3.3 Customer Satisfaction

Satisfaction is a concept that reflects the psychological state of completeness and pleasurable emotions experienced by a client when, after obtaining an attractive product or service, its expected expectations are confirmed. In other words, satisfaction is the same as the feelings of pleasure or frustration created as a result of the value of a product combined with the expectations that have been cultivated. In the international literature there are extensive references to the question of customer satisfaction, with Oliver's theory more prevalent 1980, who developed the model of disconfirmation model. According to this approach, which has been tested and

confirmed in several studies [29], customer satisfaction after a consumer experience is determined by the degree of verification of expectations in relation to actual performance which he himself perceived. When the client's expectations are confirmed or when they happen to be overcome because the actual performance is higher than expected (positive disconfirmation), satisfaction is clearly evident. In contrast, where service performance is below disconfirmation, and there is a denial of expectations, the client feels unhappy [30]. The same view is shared by [31], describing satisfaction as the resulting emotional state of a person that is shaped by the confirmation or discarding of expectations associated with a particular consumer experience or transaction. According to another approach, satisfaction can be defined in two different ways, either as a result or as a process. It can be interpreted as the final situation and the result of a consumer's experience of using a product or service, or alternatively be seen as a perceptual process with a predominant part of the assessment. In all of the above definitions, customer satisfaction is valued in relation to the expectations being grown, which demonstrates their role and importance in reaching satisfied customers.

For this reason, businesses that respect the customer must ensure that the image they promote for their products and services is realistic and does not create unreasonable expectations that cannot be fulfilled. Based on the theory of non-confirmation, expectations are divided into [32]:

- Ideals: those that refer to an excellent and exemplary service
- Desirable: those that are desirable to be confirmed in practice
- Acceptable: those that are accepted, although deviating from the desirable
- Predictable: those expected to be achieved unimpeded
- Comparative: those based on previous experiences from other relevant competitive services.

In hotel services, the criteria that shape the expectations of each customer in relation to the expected quality of service are many and different. Expected expectations are greatly influenced by factors such as the personal needs, experiences and culture of each customer, competitors' services, advertising and word-of-mouth information, the promises made during the booking, and the purchase price of services. Tourism businesses that are better able to understand these criteria and cultivate similar expectations for their audience are in a better position to compete, since the services they provide are considered to be of high quality and satisfy their customers to the fullest extent [33].

4 Discussion: Relationship Between Service Quality and Customer Satisfaction and the Need to Produce Error-Free Services

Exploring the relationship that links a company's quality of service with the creation of loyal and satisfied customers has long been a subject of research for many scholars. According to Spreng et al., [34], quality of service is a prerequisite element of customer satisfaction, whether the concepts of these concepts are cumulative in time or stem from individual transactions. This theory has been practiced by several researchers [34] who have confirmed that customer satisfaction is the result of the quality of services they receive. The above concepts have several common features, and are therefore often used interchangeably to give the same conceptual content. However, there is a general perception that customer satisfaction is a wider meaning, while service quality focuses on the individual dimensions that constitute the service.

A number of researches on different types of tourist services, such as island tourism [35], cultural tourism [2006] and rural tourism [36, 37] have confirmed the relationship of dependence between the tourist's satisfaction at a destination and his intention to resume his visit in the future. Getty and Thompson [38], studying the above relationship in the hotel services sector, concluded that a customer's intention to set up a hotel to accommodate guest visitors is a function of their perception of the quality of accommodation services and of satisfaction he felt from his experience of staying in it.

Having established an error free service system is not an easy task. Surely it will lead into high levels of service quality but also in a high volume of satisfied customers. Nonetheless, it is important to understand that there is always the risk that a service will not be delivered properly. Even on them most advanced service systems, there is going to be a possibility of a failure. However, if the employees are well trained and motivated, this error will not be counted as a fail. Customers have high demands but also ways they will recognize an effort to fix a failure and make sure that it will not happen again [3]. This also means that the hotel's management will invest into creating the necessary systems and a culture which will ensure that mistakes will not happen. It is not just a matter of luck that a mistake will not happen but it is a matter of been prepared [23]. On the other hand [39], recall the servuction model by reminding us that the services are produced and delivered with the assistance of the customer. Hence, it is important allow the customers to create the services that they want to buy from the hotel and to indicate them the limits. This will allow the hotel to avoid services which have problems but also to ensure that the customer will understand that he or she has part of the blame about an error on the services.

5   Discussion and Conclusion

This conclusion has confirmed that in the hotel sector, as in other service sectors, the creation of loyal and dedicated customers depends on the perceived quality of service and the satisfaction of customers. According to [40] especially in the case of luxury hotels, where increased service expectations are grown, satisfaction and positive customer feedback are important reasons for them to extend their stay and recommend the hotel to around them. Berry et al. [41] argue that the visitor who had a pleasant stay is very likely to come back and suggest this hotel to his family and friends. In this effort, the contribution and role of the Internet and various social networks, which, with ease of communication, speed and immediacy, are particularly useful as channels through which consumers freely express the satisfaction or dissatisfaction feel, recommending or rejecting tourism products and services [42].

Crucial role on services and a mean to ensure the customers' satisfaction is to deliver error-free services. It is not an easy task and it requires from the management to ensure that it has set up the necessary quality systems, including employee training and motivation but also allowing the customer to choose his or her own tailor made services [43]. It is important to produce more research on this topic. For this reason, future research is proposed to examine the practices that the luxurious hotels can use so to produce error-free services.

References

1. Lee Y, Jeong Y, Choi J (2014) Service quality, relationship outcomes, and membership types in the hotel industry: a survey in Korea. Asia Pac J Tour Res 19(3):300–324
2. Grobelna A, Marciszewska B (2013) Measurement of service quality in the hotel sector: the case of Northern Poland. J Hosp Market Manag 22(3):313–332
3. Guchait P, Paşamehmetoğlu A, Dawson M (2014) Perceived supervisor and co-worker support for error management: impact on perceived psychological safety and service recovery performance. Int J Hosp Manag 41:28–37
4. Aliukeviciute M (2011) Boutique hotels evolution. https://ojs.kauko.lt/index.php/stmd/article/download/233/229
5. Wang T, Luo Y, Tang LR (2015) The investigation of consumer motivations to patronize boutique hotels using push-pull theory: a case study in Xiamen, China. Int J Tour Cities 1 (4):317–328
6. Lim WM, Endean M (2009) Elucidating the aesthetic and operational characteristics of UK boutique hotels. Int J Contemp Hosp Manag 21:38–51
7. Olga A (2009) The alternative hotel market. In: Proceedings of the 16th international conference on management science & engineering, State University of Management, Moscow, 14–16 September 2009, pp 2021–2025
8. Gunaratne U (2014) Relationship between service quality and customer satisfaction in Sri Lankan hotel industry. Int J Sci Res Publ 4:1–8
9. Gunasekaran N, Anandkumar V (2012) Factors of influence in choosing alternative accommodation: a study with reference to Pondicherry, a coastal heritage town. Procedia Soc Behav Sci 64:1127–1132
10. Van Hartesvelt M (2006) Building a better boutique hotel. Lodg Hosp 62:32–44

11. Asirifi HG, Gablah GP, Kwaw E, Honny J (2014) Quality service in the hotel industry: evidence from Alisa hotel Ghana. Sci J Bus Manag 2:131–135
12. Oakland JS (2004) Total quality management in services. Int J Qual Reliab Manag 11(3):27–42
13. Dervitsiotis A (2005) Ollie quality management. Legal Library AEBE, Athens
14. Crosby PB (1979) Quality is free: the art of making quality certain. McGraw Hill, New York
15. Garvin D (1988) Managing quality: the strategic and competitive edge. The Free Press, New York
16. Juran JÂ (1984) Quality control handbook, 3rd edn. McGraw-Hill, New York
17. Deming WE (1986) Out of the crisis. Massachusetts Institute of Technology Center for Advanced Engineering Study, Cambridge
18. Wyckoff DD (1984) New tools for achieving service quality. Cornell HRA Q 25:78–93
19. Kotler P (2000) Marketing management. Interbooks, Athens
20. Siomkos G (1994) Consumer behavior and marketing strategy. Stamoulis Publications, Athens
21. Hart C (1988) The power of unconditional service guarantees. Harv Bus Rev 54–62
22. Masiero L, Heo CY, Pan B (2015) Determining guests' willingness to pay for hotel room attributes with a discrete choice model. Int J Hosp Manag 49:117–124
23. Guchait P, Lee C, Wang CY, Abbott JL (2016) Impact of error management practices on service recovery performance and helping behaviors in the hospitality industry: the mediating effects of psychological safety and learning behaviors. J Hum Resour Hosp Tour 15:1–28
24. Stebbing L (1990) Quality management in the service industry. Ellis Horwood, New York
25. Javalgi RG, Martin CL, Todd PR (2004) The export of e-services in the age of technology transformation: challenges and implications for international service providers. J Serv Mark 18:560–573
26. Agus A, Barker S, Kandampully J (2007) An exploratory study of service quality in the Malaysian public service sector. Int J Qual Reliab Manag 24:177–190
27. Dale B (1994) Managing quality. Prentice-Hall, New York
28. Sureshchandar GS, Rajendran C, Anantharaman RN (2002) The relationship between service quality and customer satisfaction – a factor specific approach. J Serv Mark 16:363–379
29. Wilson A, Zeithaml VA, Bitner MJ, Gremler DD (2008) Services marketing. McGraw-Hill Education, New York
30. Pizam A (2004) What happened to the quality of services revolution? Int J Hosp Manag 23 (3):201–202
31. Getty JM, Thomson KN (1994) The relationship between quality, satisfaction and recommending behavior in lodging decisions. J Hosp Leis Mark 2(3):3–22
32. Ramanathan (2013) Investigating the impact of resource capabilities on performance: a structural equation approach for hotels using online ratings. J Serv Mark 27:404–415
33. Cron MCG, Barry WL (1993) The expectations-performance comparison process: an investigation of expectation types, International fare in consumer satisfaction and complaining behavior, Indiana University, Bloomington
34. Oliver RL (1993) A conceptual model of service quality and service satisfaction: compatible goals, different concepts. Adv Serv Mark Manag 2:65–85
35. Prayag G, Ryan C (2012) Antecedents of tourists loyalty to Mauritius: the role and influence of destination image, place attachment, personal involvement, and satisfaction. J Travel Res 51:342–356
36. Kastenholz E, Carneiro MJ, Marques CP, Loureiro SMC (2018) The dimensions of rural tourism experience: impacts on arousal, memory, and satisfaction. J Travel Tour Mark 35:189–201
37. Bitsani E, Kavoura A (2012) Accessibility versus advertising for mountain tourism: the case of Nafpaktia. Tourismos 7:217–235. UDC: 338.48+640(050)
38. Getty JM, Thompson KN (1994) A procedure for scaling perceptions of lodging quality. Hosp Res J 18:75–96
39. Luo Z, Qu H (2016) Guest-defined hotel service quality and its impacts on guest loyalty. J Qual Assur Hosp Tour 17:311–332

40. Nasution HN, Mavondo FT (2008) Customer value in the hotel industry: what managers believe they deliver and what customer experience. Int J Hosp Manag 27:204–213
41. Berry LL, Wall EA, Carbone LP (2006) Service clues and customer assessment of the service experience: lessons from marketing. Acad Manag Perspect 20:43–57
42. Kim T, Kim WG, Kim HB (2009) The effects of perceived justice on recovery satisfaction, trust, word-of-mouth, and revisit intention in upscale hotels. Tour Manag 30(1):51–62
43. Ekiz E, Khoo-Lattimore C, Memarzadeh F (2012) Air the anger: investigating online complaints on luxury hotels. J Hosp Tour Technol 3(2):96–10

The Use of Customer Relations Management's Digital Technologies from Greek Hotels

Ioannis Rossidis, Dimitrios Belias, Stefanos Papailias, Dimitrios Tsiotas, Spyridon Niavis, and Labros Vasiliadis

Abstract Today, the usefulness of a customer-centered approach to administrative decision-making is recognized internationally. Particularly in the tertiary sector due to the nature of the services and the importance of human resources in providing the service, the necessity of a customer-centric approach has been fully recognized by the market. The term Customer Relationship Management or Marketing (CRM) denotes the methodology that helps to identify and attract consumers through the process of developing interpersonal relationships (client-company). This is a methodology that puts the customer at the heart of the business process. This paper is a literature review which analysis the role of digital technologies on CRM in an era where clients of a company employ digital technologies in their everyday communication. The research relies on the extensive use of the related literature review and of similar reports and publications. The findings of the paper indicate that the role of Tourism Marketing, the application of CRM in business, the application of CRM in tourism is analyzed, with emphasis on luxury hotels. The outcome is that the digitalization of CRM can provide the management of the hotel with information such as hotel marketing philosophy, customer relationships, access to communications and information technologies, how their website is used, what hotel performance and what strategy they follow are assessed. Having in mind that Greek tourism has shifted towards quality, it is important for the Greek luxury hotels to

I. Rossidis
University of the Aegean, Chios, Greece

D. Belias (✉)
Technological Educational Institute of Thessaly, Larissa, Greece
e-mail: dbelias@pe.uth.gr

S. Papailias
Hellenic Quality Assurance and Accreditation Agency, Athens, Greece

D. Tsiotas · S. Niavis
University of Thessaly, Volos, Greece
e-mail: tsiotas@uth.gr

L. Vasiliadis
Technological Educational Institute of Sterea Ellada, Evia, Greece

invest into digital CRM and the use of well-known applications such as social media so to leverage the performance of Greek hotels.

Keywords CRM · Digital media · Customer satisfaction · Greek hotels

1 Introduction

Today, the usefulness of a customer-centered approach to administrative decision-making is recognized internationally. Particularly in the tertiary sector due to the nature of the services and the importance of human resources in providing the service, the necessity of a customer-centric approach has been fully recognized by the market. Companies in the service and tourism sector—such as Thomas Cook— with 97 aircraft, 2962 offices, 32,722 employees and more than 19.1 million customers, Thomas Cook, is the second largest travel company in Europe and it has realized the importance of good customer relationship management [1].

For this reason, it is important for a tourist company to maintain a customer base on an electronic basis and shapes appropriate marketing mixes tailored to the individual needs and wishes of customers. This ensures on a long-term basis a sustainable lasting relationship between the companies and the markets they serve. These actions affect the viability and profitability of a business, since the long-term stability of a lucrative customer base creates favorable conditions for its survival against competition. Through an array of applications primarily electronic, businesses can learn their customers' consumption habits, record them in a database, plan a customer engagement strategy, and implement it in order to increase sales. The term Customer Relationship Management or Marketing (CRM) indicates the methodology that helps to identify and attract consumers through the interpersonal development process (client-company) [2].

This is the methodology that puts the customer at the center of the business process. The goal of customer-centric CRM is to sell and serve customers, products and services faithfully through a management system. The priorities of this methodology are to concentrate on the specific and often different needs of customers. Also the priority is to place a series of actions on the part of businesses, with the ultimate goal of serving the consumer. A dominant element of CRM is the change that brings about business thinking and structure, through facilities and, of course, profit prospects [3]. CRM is a successful method, which was inaugurated abroad mainly during the 1970s, evolved into that of the 1980s but experienced its most significant impetus in the late 1990s due to the great evolution of information systems. The term CRM is used to describe Internet practices, software and applications through which a business understands and better serves the needs of an old or even future customer.

CRM is a set of business tactics and features that are designed to help us acquire, maintain and serve our clientele. CRM is not technology, technology helps make

client relationship management a reality [4]. This is basically a methodology based on the extensive use of databases. In these, the company maintains a wealth of information that can be used either to increase sales directly or to better serve its existing clientele (which will, of course, increase sales in the long run). The approach of Customer Relationship Management (CRM) as a cognitive subject of the Marketing Administration is due to remarkable projects by academic researchers [5]. Some established concepts in the 1990s that were used to describe Customer Relationship Management (CRM) in the research projects were: "customer centric marketing," "segment of one", "One to one marketing" [6].

At a time when businesses change personality and become more customer-centric, the big promise of CRM is the ability to respond to individual customer needs with a systematized methodology. The new technology and the evolution of computer software allow the planning and activation of contacts with customers based on their own purchasing behavior and their habits, which we can be quite aware of. For this reason, this paper examines the role of CRM on Greek hotels and more precisely how they can leverage the hotel's performance.

2 Methodology

This is a literature review which aims on analyzing the existing literature so to indicate the expected outcome which is to show in which ways CRM can improve a hotel's performance with the implementation of digital technologies. The types of bibliographic sources included in the research are articles published on scientific journals, books, conference proceedings, company papers and studies, white papers, online sites and online journals. The selection criteria of these literature sources were based on the relevance to the topic of the paper based on specific keywords for a 5 year period and this research is not exhaustive.

3 Literature review

3.1 CRM

CRM is not technology. As you will see, this is true, but not the strict truth. I also heard that it is a customer response system. That is a strategy or a set of business processes, a method, is all the above or whatever [4]. Customer Relationship Management (CRM), is a business strategy designed to help businesses get to know their existing or potential customers and build strong customer relationships next year. Customer data is collected from various points of the company, merged into a central database, and, with the utmost use of technology, are analyzed and "distributed" at specific points within the business. These are the so-called "contact

points" [7]. These points are sales, entry points, and all other points where the business comes in contact with customers and suppliers [2].

CRM recommends the expected evolution of traditional marketing and sales. This development comes as a feedback to the rapidly evolving global developments at the financial and operational level. These changes have questioned whether the basic terms of marketing are in place, recipes of the past show that they can no longer operate in a sufficient way [8]. CRM is the latest recipe in business search for creating a competitive edge in the markets in which they operate. CRM is the management of awareness how you can understand and serve the customer. It is a concept that places the customer at the center of an organization. Customer service is an important part of CRM, but CRM also applies to customer relationship management through all business functions and points of interaction [9].

3.2 CRM in Practice

In this subsection we will look at the main points of implementation of customer relationship management technologies as we see it in the international bibliography. According to Brown Stanley ([10], pp. 16–17), five elements are needed to implement a CRM program: strategy, segmentation, technology, processes and organization, where an information system is important so to integrate those elements. The CRM processes are based on electronic data processing; hence on digital technologies. Creating an electronic file is a key achievement. Other key elements to consider are software for the database, support tools, as well as the necessary software to use, such as call center software. Identifying the procedures needed to implement a client relationship management system has a degree of difficulty. The difficulty lies in organizing and developing systems to measure the effectiveness of our new processes and technology. The CRM process is the way and method by which direct marketing activities are performed. The CRM process focuses on minimizing the time it takes to run a marketing activity, based on the advantages of digital technologies. The organizational structure is often one of the key components in the implementation of CRM. The organization of the market segments to be addressed is very important for the implementation of a customer relationship system. The transition to direct marketing is particularly difficult when coinciding with the introduction of new segmentation bases [11].

Companies are urged to adopt a customer relationship management information system for defense and offensive purposes. Aggressive incentives are linked to the desire to improve efficiency by lowering costs, and by increasing revenue through improved customer satisfaction and loyalty. Defense incentives arise when key competitors have adopted a successful customer relationship system, resulting in loss of customers and revenue. Companies before implementing a CRM technologies are faced with a major concern. They need to know the cost of implementation. Investing in a CRM digital system can cost a few thousand dollars [10].

4 Discussion: CRM and e-CRM on Hotels

In most businesses and companies, particularly in the hotel sector, customer relationship management is a valuable means of maximizing the return on investment. This trend may be due to the common perception that the value of attracting potential customers is equal to maintaining the existing ones. More specifically, the cost of acquiring new customers is about four to five times the cost of retaining the customer [12].

The installation of a CRM platform—well known as e-CRM, in a hotel will allow the managers and the personnel of the hotel to collect data in a digital forma which will allow them to analyze the profile of the customers, affiliates, suppliers of materials or service providers, the environment, competitors, product, administration, employees and customers [2]. In hotel, using the terms Marketing Services, a region's customers can be described as internal and external customers. All employees in the field of accommodation and accommodation, in the factoring industry, in the transport, and in the field of transportation, in the catering industry, in the equipment rental and service sector, in the factoring and organization of hotel, can be described as in-house hotel clients, where the digital CRM can help them to collect data, store it and use it so to improve their relationship with the customers. This section of customers includes all those who work and are involved in hotel. As external customers, the various visitors, such as tourists and tourists of the above destinations, as well as organizations and businesses that act and resell the whole or part of a tourist product of a region. We would therefore say that digital CRM in the case of hotel has as its object the analysis:

1. Customers (i.e., "what needs and who will we please?"). All internal and external customers who incorporate into their categories the visitors and employees of a tourist destination. As visitors can be defined here all those who come in contact with the visitors (contact points) [13]. Especially for the case of a luxury hotel, it is important to fully understand the customers' expectations

2. Environment (i.e., "what should I consider"). All those factors that affect the performance of a tourist destination and are not easy or impossible to be affected. This includes a small level of environmental analysis, the industry, competitors, financial institutions, shareholders and stakeholders, as well as the structure of the local community, while at macro-environmental level, natural, political, economic, social and technological factors [2].

3. Resources (i.e., what are the bases of comparative advantages and competencies I have?) includes management and administration, hotel products and the structure and quality of the tourist and material goods of businesses and organizations. The analysis of the above important dimensions is the basis for developing a CRM platform. The implementation of the project aims at retaining our valued customers and characterizing them as a strategy for the sustainable development of our activities. Every client of this group is approached according to his particular needs and desires, with the result that the value offered and the resources committed to value creation are differentiated per customer. Personalizing the

value offered to the customer is also the basis for shaping personalized marketing. Applying our personalized offer to customers requires the ability to identify the customers to be approached and to maintain a customer base that has been measured and evaluated accordingly [2].

The objectives of digital CRM in luxury hotel are mainly ([14], p. 28): Customer retention: Keeping a company dedicated and lucrative customers [14].

Win customers: Win the right customers based on the information they draw from them, especially on luxury hotels where the customers are very demanding. Have a customer benefit. Increase customer profits by providing the right products to the right customers at the right time. A specific route you should follow in the hotel application of CRM in a digital platform. All customers do not have the same value for the company. Customers must first be categorized based on the value they have shown to the company then by other criteria.

The implementation of a CRM digital system (e-CRM) in a hotel business also requires the implementation of a customer-centric approach. Thus, for example, a hotel that focuses on the customer will have significant benefits such as: better knowledge of the market, better and faster communication with partners (travel agents, partner organizations), better knowledge of competition, faster response, reduced management costs [14].

Taking into account the obstacles we have described for the implementation of e-CRM, many tourist organizations remain cautious about the application of e-business methods. This step-by-step approach aims to take into account the business identity and image that customers have. If e-business (e-business), it requires savings and deepening customer relationships, some companies believe that the adoption of e-CRM should follow the market rules and the circumstances of the hotel industry which is very sensitive to unforeseen events (e.g. terrorist acts, Natural Disaster). Nevertheless, the majority of hotel businesses have a willingness to expand into e-business. They believe that the more consumers will be more confident and familiar with the internet, they will also deepen their e-business solutions. Many companies believe that expanding to e-entrepreneurship will be the strategic choice that will help them become the dominant market players in the real-time (online market) [15].

It is obvious that the growing maturity of the market and the sufficient number of experienced e-clients makes it necessary to apply e-business methods. This is why KRM's strategies are considered as "regional activities" of companies operating in less mature and small markets. They do not prioritize the implementation of solutions offered by an e-CRM system do not consider that there will be a large number of users and show fear of the success of the investment. Regardless of the fact that consumers are very interested in surfing the internet, majority of e-consumers prefer personalized travel services. As they stumble on information, consumers persist in personal communication from travel agencies.

However, a new e-client emerges. This client uses the internet as a medium that can be rich in information. It searches for tourist information, compares prices, and then moves into complex internet markets. This is why tour operators, including

airlines and tour operators, have begun to offer a wide variety of services in real time (online), and are very successful in attracting online customers. We can see that e-business technology has made it easier for companies to maneuver from supply to service demand, while customer retention and satisfaction seem to have improved as a result of the online presence of hotel businesses [16].

In order to realize the benefit to productivity of hotels, their management needs to increase the level of efficiency in back office operations. In fact, the value of CRM depends on back office processes and the flow of customer information between the front office and back office of a hotel company [5]. This tactic allows companies to focus on key client groups that can make a profit. For the hotel industry, e-business methods contribute to the use of cheaper distribution channels and the development of better sales methods. The constant transfer of information to customers is extremely beneficial to the hotel business, as the competitor is a "click" away, companies must be constantly on hand to satisfy their customers. Customer satisfaction has been recognized as a key factor influencing long-term customer relationships with hotel businesses in both the traditional and the e-business environment. It is also of strategic importance for customer loyalty and long-lasting essential communication in the hotel industry. The profitable customer relationship, the big advantage of CRM, can become a reality by winning customer satisfaction [17].

5   Conclusions and Recommendations

CRM has a dynamic role in the business of a hotel. The critical point is how the business will be able to approach and embrace the CRM philosophy using it as a strategic tool. As found in the survey, hotels emphasize the need to develop the necessary pellet-centric character, select, develop and implement the technological infrastructure and develop a customer strategy [11]. Elements that support a CRM system. In the new challenges, tourism companies try to answer with new logic and approaches. Primary research has shown an effort to change the mindset and philosophy of hotels. This change is dependent on the category that belongs to the hotels and is most pronounced in luxury hotels. Hotels try to boost their extroversion developing mechanisms for managing the pressures and requirements that imply the features of the modern tourist environment [13]. This means that the hotel management must give emphasis on monitoring, adapting and generating customer service developments and tackling competition are key elements of this logic.

Applying the above, the organization of hotels becomes more customer-oriented, as should be Customer Relationship Management (CRM). The relationship between customer loyalty and profitable growth has been proven and is the future of hotels. The paper focused on some key elements of Customer Relationship Management. It would be interesting in the future to investigate to a greater extent some points such as customer satisfaction or the timely anticipation of their loss. In addition, it would be interesting to investigate the impact (risks and opportunities) arising from the increasing use and influence of the Internet in customer relationships. It would also

be interesting to study the application of CRM to other tourism businesses such as travel agencies or airlines. CRM is multidimensional and dynamic and its various aspects and applications could be explored in depth. The final conclusion is clear, the literature review confirms and underline that the future for hotels is the strong links with customers and this can be achieved by implementing CRM as a strategic choice.

References

1. Dursun A, Caber M (2016) Using data mining techniques for profiling profitable hotel customers: an application of RFM analysis. Tour Manag Perspect 18:153–160
2. Belias D, Velissariou E, Kyriakou D, Vasiliadis L, Roditis A, Koustelios A, Sdrolias L (2017) The use of digital CRM in the operation of Greek Hotels. In: The 5th international conference on contemporary marketing issues ICCMI, Thessaloniki, Greece, 21–23 June 2017, p 384
3. Campbell A (2003) Creating customer knowledge: managing customer relationship management programs strategically. Ind Mark Manag 32:375–383
4. Greenberg P (2001) CRM at the speed of light: capturing and keeping customers in internet real time. Osborne McGraw-Hill, Berkeley
5. Buttle M (2004) Customer centric business processing. Int J Product Perform Manag 53:44–51
6. Vasiliadis C (2008) Customer relationship management and tourism destination marketing. Klidarithmos Publications, Athens
7. Kavoura A Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214
8. Kavoura A, Tomaras P (2015) Qualitative communication research methods and techniques. In: Ghorbani A, Amandeep T (eds) Market research methodologies: multi-method and qualitative approaches. IGI Global, Hershey, pp 156–171. (Chapter 10)
9. Bose R (2002) Customer relationship management: key components for IT success. Ind Manag Data Syst 102:89–97
10. Brown S (2000) Customer relationship management. Strategic imperative in the world of e-business. Wiley, Toronto
11. Mohammed AA, Rashid B, Tahir S (2017) The mediating role of customer orientation strategy on the relationship between CRM technology and hotel performance. J Mark Manag Consum Behav 1(5):63–81
12. Padilla-Meléndez A, Garrido-Moreno A (2014) Customer relationship management in hotels: examining critical success factors. Curr Issue Tour 17:387–396
13. Rahimi R (2017) Customer relationship management (people, process and technology) and organizational culture in hotels: which traits matter? Int J Contemp Hosp Manag 29:1380–1402
14. Swiftt R (2001) Accelerating customer relationship using CRM and relationship technologies. Prentice-Hall, Englewood Clifss, NJ
15. Tian J, Wang S (2017) Signaling service quality via website e-CRM features: more gains for smaller and lesser known hotels. J Hosp Tour Res 41:211–245
16. Udunuwara M, Sanders D, Wilkins H (2017) Customer relationship management (CRM) practices in the hotel sector from the perspective of leisure travelers. Colombo Bus J Int J Theory Pract 7(2):35–49
17. Josiassen A, Assaf AG, Cvelbar LK (2014) CRM and the bottom line: do all CRM dimensions affect firm performance? Int J Hosp Manag 36:130–136

The Sharing Economy and How It Affects the Conditions of Consumption and Competition in the Tourism Industry: The Case of Airbnb in Greece

Konstantinos Varsanis, Dimitrios Belias, Stefanos Papailias, Michalis Chondrogiannis, Ioannis Rossidis, Christos Mantas, and Athanasios Koustelios

Abstract The purpose of this study is to investigate the issue of new participatory economy online companies and how these affect the conditions of consumption and competition in the tourism sector. The main trigger for this research was the fact that in Greece there have been several studies on the subject, while there are no participatory economies with the success of international efforts. The paper has made a literature review on the possible effects of the sharing economy in the tourist industry, with a focus in the hotel industry, based on the literature review which has derived during the past 6 years by using relevant keywords, such as "airbnb and Greece". The contribution of the paper is that it makes an investigation of the effect of airbnb in the Greek hotel industry's consumption and competition based on the existing literature; therefore to make a critical analysis of the existing literature. It is a fact that sharing economies, and in particular Airbnb, have entered a very sudden

K. Varsanis
National and Kapodistrian University of Athens, Athens, Greece

D. Belias (✉)
Technological Educational Institute of Thessaly, Larissa, Greece
e-mail: dbelias@pe.uth.gr

S. Papailias
Assurance & Accreditation Agency (HQA), Athens, Greece

M. Chondrogiannis
Ionian University, Tsirigoti Squ. (Old Psychiatric Hospital), Corfu, Greece

I. Rossidis
University of the Aegean, Chios, Greece

C. Mantas
University of Leicester, Leicester, UK

A. Koustelios
University of Thessaly, Trikala, Greece

way into the business process, with the result that there are no required regulatory safeguards to ensure fair competition on the market and consumer protection. However, it is necessary to set as a basic proposal of this study the further regulation of Airbnb transactions in the field of taxation, consumer protection and competition. It is certain that these companies offer very competitive services from an economic point of view, but it is also necessary for consumers to weigh all the benefits of doing so and to be particularly careful in choosing their place of stay.

1 Introduction

The continuous changes in the business setting in recent years are due largely to the rapid development of technology that is now an integral part of human life. Together with the technological development, not only the processes followed by the business sector, but also the way in which businesses operate. In particular, the internet, and its widespread use by almost all social structures, has brought about significant changes in the way human activities work.

The modern economy has to cope with the constant changes in political decisions, terrorism and other important events, while the corrupt—if any—state has imposed on citizens a new thinking that is intended for a more "autonomous" entrepreneurship that has as its core value the notion of participation. Clearly, in the above exercise, technology is helping this new economy, sharing economy, which is an economic model that has mystified and commercialized the ideas of co-operation and redistribution of assets under exploitation. In order to clarify the above conceptual approach, it should be noted that one of the basic principles of a participatory economy is participative decision-making on the production, consumption and distribution of resources. That is, participatory economics is primarily aimed at self-management while promoting equality and solidarity [1].

The plethora of tourism interests has highlighted new areas, new values and orientations, stimulating new alternative forms of tourism, as well as Airbnb. That is to say, having the tourist the possibility of staying alone or together with the owner in an intimate, is a habit of hospitality that did not exist in previous years. The way of stay is changing, hotels are no longer the absolute choice and tourists choose to stay in homes that they rent. The above condition may sound simple, but it is particularly complex if you look at the tourist preferences of consumers in previous years and the different circumstances that apply today even in the place where tourists will stay. However, we should not forget to mention the fact that the development and diversification of the tourism phenomenon has created the need for an organizational and legislative framework that includes all activities related to it [2]. These regulations, in the case of Airbnb, have been designed and implemented by the company itself to ensure confidence, elimination of risk and transparency. Besides, for the

proper functioning of any organized function, especially when there is a great deal of people involved, it is necessary to have appropriate organizational and legislative arrangements that will be able to contribute to the protection of the interests of all parties [3].

The main objective of this study is to investigate the factors that affect the consumption and competition of participatory economy enterprises, and in particular Airbnb, which is active in the wider tourism industry.

The importance of this study originally generated by the timeliness of the subject which is undeniable given the upsurge scoring online companies and participatory economy companies, as is indicated by the majority of researchers have addressed the issue [4–6]. In particular, modern society is characterized by the rapid technological development that has contributed to the creation of a series of needs for people who are inseparably linked to technological derivatives and products.

The main reason that led the researchers to deal with the case of Airbnb and the way it affects the conditions of consumption and competition in the tourism sector is mainly the rapid growth of the company that started operating in 2009 [6]. Since then, Airbnb has evolved rapidly and is currently booking millions of rooms for tourists to stay globally, with the result that research interest in this particular company is particularly high [7]. It is also of great interest to study the impact of Airbnb's development on consumption and competition in tourism [4, 8]. Finally, several researchers have dealt with the way in which Airbnb has influenced the consumption of purely tourism businesses such as hotels, and many of them believe that corresponding studies should be carried out around the world [4, 9].

2   Methodology

The methodology that was used in this paper is the critical review of the current literature. Relevant literature selection was derived from popular online bibliographic databases, like Science Direct, Emerald, EBSCO host and scientific search engines like Google Scholar. The expected outcome is to deliver a paper which will clarify the effect of airbnb on the hotel industry of Greece. The types of bibliographic sources included in the research are articles published on scientific journals, books, conference proceedings, company papers and studies, white papers, online sites and online journals. The selection criteria of these literature sources were based on the relevance to the topic of the paper and this research is not exhaustive.

3   Literature Review

3.1   The Sharing Economy

The concept of sharing economy was imprinted by William Morris, who defined the concept through his desire to create appropriate social conditions in order not to have rich and poor, people who work hard or do not work at all [1]. There is a society that lives through equality and manages relationships effectively, knowing that harming someone means harming the whole of society. He also determined that the ideal society he described should have fully realized the importance of pursuing a world good practice.

Albert and Hahnel [10] have developed in their book the concept of sharing economics and the view that most professional economists have now accepted that human nature in connection with modern technology has certainly led to "sharing" choices. The researchers, however, began to analyze this type of economy from the fall of communism, which, in their opinion, equality and justice cannot be forced by force, since each person must have freedom of choice while designing creative and efficient workers.

According to the researchers, for a long time the companies followed an operational plan that included specific inflows and outflows that did not allow employees and consumers to decide on certain issues. Ultimately, businesses created an unequal relationship between consumption and job opportunities, resulting in the establishment of a treaty on unequal terms. The same researchers have developed in their book the idea that an ideal economy should distribute tasks and earnings in a fair manner while in the process the people involved in the economy should be able to develop their views to such an extent which eventually produces a fair result. Also, this "ideal" economy to which authors refer should develop a range of skills for the people involved in it, such as creativity, cooperation, compassion, while at the same time making good use of human and natural resources in the light of effective functioning of society [4]. One example of sharing economy application is the case of Airbnb.

3.2   Airbnb as a Key Example of Sharing Economy Activity

There has been a lot of debate on sharing economy, where Airbnb seems that it has attracted the majority of the academic interest, where there have been lot of debate on the pros and cons of Airbnb [11, 12]. Those who are in favour argue that, apart from everything else, the participatory economy will also have a positive impact on global pollution. On the other hand, critics advise on the shared economy that it is a way to boost economic self-interest rather than enhance sharing. This view is based on the basic idea that the world is made up of people who pretend to use the participatory economy to take advantage of—economically—in other ways—consumers.

However, the researcher's opinion differs to a certain extent from the above positions, which concludes that this new kind of participatory economy has several "dark" aspects that should be explored in order finally to make this kind of economy work for the benefit of societies. In particular, it concludes that the emergence of P2P (Peer to Peer) communities, such as Airbnb, has several benefits, such as sharing goods and reducing costs, while stressing that they can form the basis for developing less socially dependent societies and can differentiate their income and their ability to offer goods and services. However, according to the same researcher, the cooperative economy platforms are still at an early stage, and there is a risk that a notional surplus value will be created that would hit the "common" type of business [9].

4 Discussion: The Effect of Airbnb to the Consumption and Competition in the Tourism Industry in Greece

It is important to study the case of Airbnb in Greece, which seems that it constitutes a solution for the owners of properties who suffer from the crisis. Psaros et al. [12] carried out a study titled "The Impact of Sharing Economy in the Tourism and Hospitality Sector in Greece", which focused on the analysis of the way resources and assets are shared within of the widespread outburst of the phenomenon in recent years with major online businesses taking up much of this new sharing economy. According to the study, consumers have the possibility of temporary access to goods and services in order to use them according to their existing needs. As pointed out by the researchers, there are strategic reasons for the Greek tourism sector for this growing participation of participatory businesses in tourism and hospitality industries to be studied in depth. According to the survey, it is necessary to examine the factors that shape the perceptions and the behavior of travelers around the world in order to have a clear picture of this new kind of participatory economy [12]. Thus, following their research, they concluded that the increase in consumer participation in co-operative enterprises is due to three main factors: (a) the impact of the global economic crisis; (b) technological developments; and (c) the impact of social media, which in essence constitute a large network of contacts through which consumer behavior is shaped.

Following on from their study, the researchers present a series of concerns and issues to deal with, mainly related to the rapid spread of the phenomenon, coupled with the fact that the way in which goods and services were previously largely disturbed. The researchers, however, point out that these participatory economies have been widely deployed in sectors related to transport, accommodation and entertainment, with the result that the tourism industry is at the heart of the scholars in terms of its impact new businesses. However, as noted, the key issues to be resolved to safeguard the interests of all parties are taxation, licensing and certification in order to avoid unfair competition, consumer safety and consumer protection as well as the proper sharing of activity areas so as not to disrupt the viability of

existing businesses. As mentioned previously, the research by [12] also presented the impact of participating societies in the tourism sector in Greece, among other things they were mentioned in the case of Airbnb.

According to the statistics gathered for the presence of Airbnb in Greece, they reported the following

1 million overnight stays each month
11,800 listings of entire sites
68.5% share of cost-per-night registrations
68.0% share of the cost per night for the 2300 entries in Athens
55.5% cost-per-night cost share of 1000 entries in Mykonos.

According to [13] a key element which affects consumption and it is related with Airbnb is the case of the tourist unit's popularity. Reputation is thus a form of capital that is concentrated on good behavior and then on future P2P transactions. Botsman and Rogers [7] recently claimed that reputation would soon become the most precious asset of a person. Fame may become the judge of online markets and other enterprises in the participatory economy, which, as evidenced by the growing number of people involved in them, will grow to a much greater extent in the years to come. Information on creating and maintaining confidence in P2P electronic platforms is becoming more important than ever before, and ongoing academic research on these issues is particularly necessary in order to find appropriate regulatory rules that will further safeguard the user security, protection of competition and entrepreneurship. In addition to this, [14] has referred on the fact that hotel owners in Athens afraid of the competition driven from Airbnb. However, [13] seems to agree with authors such as [15–17] who argue that Airbnb does not pose a direct threat on the hotel industry. It is addressed for a different type of customers, who if they did not have the solution of the Airbnb they would just not visit the destination. According to [16] the service expectations are totally different in Airbnb from the average hotel, so there is not a direct competition between the hotel industry and Airbnb. In addition to this, a tourist destination will have only to gain from having Airbnb from the increase in demand due of Airbnb.

5   Conclusions and Recommendations

Airbnb is a reality for the tourist industry, especially in Greece. From the findings of this literature review, there is a clear evidence that Airbnb, as a instrument of sharing economy, affects the conditions of consumption and competition in the tourism industry. More precisely Airbnb has boosted reputation as a factor which affects consumption. Also Airbnb does not post a direct threat as a competitor for local hotels. Instead, Airbnb can be a factor which will leverage the competitive position. These conclusions further reflect a simultaneous trend in the modern area of sharing economy: a digital signature utilizing the movement of a person and building a credible reputation. A number of new companies, in fact, has recently tried to resolve

trust and safety issues associated with transactions P2P to develop global trust system for the Internet that combine social, transactional and personal data from various markets, social networks, and other sources [11]. Based on the fact that certain parameters exceed expectations slashes different participatory economy, different vertical sharing economy, these collective confidence data could be presented as grade portable Fame will theoretically follow a person throughout the internet.

The findings of the case study are intended to serve as a basis for future research since they can be extended by the same method to a larger research sample. However, it is important to highlight the centrality—which is empirically demonstrated through quality interviews—of this emerging philosophy of "as much information as the best", since it is a basic criterion for Airbnb users, and therefore it would be useful to develop a study will analyze how each user understands the profile of the owner and what are the characteristics that encourage him/her or prevent him/her from entering into an agreement with him/her. Furthermore, it would be useful to further investigate the impact of reputation systems and the Social Inclusion Chart on confidence building among Airbnb users as this would lead to facilitating transactions through Airbnb. Finally, it is essential to study the relationship of the tax system with Airbnb having the tax reforms as trigger for increase of the interest of property owners for Airbnb.

References

1. Hahnel R (2013) Participatory economy. From society to society. Exarchia Publications, Athens
2. Lagos D (2005) Tourist financial. Critique Publications, Athens
3. Said C (2012) Short-term rentals disrupting the SF housing market. San Francisco Chronicle SFGate
4. Sigala M (2014) Collaborative commerce in tourism: implications for research and industry. Curr Issue Tour 23:1–10
5. Malhotra A, Van Alstyne M (2014) The dark side of the sharing economy and how to lighten it. Commun ACM 57:24–27
6. Guttentag D (2015) Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector. Curr Issue Tour 18:1192–1217
7. Botsman R, Rogers R (2010) What's mine is yours: the rise of collaborative consumption. Harper Business, New York, pp 20–63
8. Hamari J, Sjöklint M, Ukkonen A (2015) The sharing economy: why people participate in collaborative consumption. J Assoc Inf Sci Technol 67:2047–2059
9. Zervas G, Proserpio D, Byers J (2016) The rise of the sharing economy: estimating the impact of Airbnb on the Hoteel industry. Boston U. School of Management Research Paper No. 2013-16, Boston
10. Albert M, Hahnel R (1991) Looking forward: participatory economics for the twenty first century. South End Press, Boston
11. Schor J (2014) Debating the sharing economy. Great Transition Initiative, San Francisco
12. Psaros M, Rinne A, Jordan P, Pastras P (2015) Sharing economy and tourism and hospitality sector in Greece. Hotel Chambers of Greece, Athens
13. Apostolopoulos D (2017) The development of sharing economy and the influence of listings (Airbnb, Homeaway, Holidaylettings) in the hotel industry. Diploma Thesis, Patras

14. Bratsianou I (2016) How the Airbnb raised Koukaki to the top of the world, news247, 17 January. http://news247.gr/eidiseis/weekend-edition/pws-to-airbnb-anevase-to-koykaki-sthn-koryfh-toy-kosmoy.3864043.html
15. Bae SJ, Lee H, Suh EK, Suh KS (2017) Shared experience in the experience and experience sharing in posttrip: a survey of Airbnb users. Inf Manag 54:714–727
16. Priporas CV, Stylos N, Vedanthachari LN, Santiwatana P (2017) Service quality, satisfaction and customer loyalty in Airbnb accommodation in Thailand. Int J Tour Res 19:693–704
17. Merve Yanar Gürce M (2019) Does sharing economy shape consumers' attitudes? In: Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism, ICSIMAT 2018

Tourism and Destination Branding: The Case of Greek Islands

Ioannis Rossidis, Dimitrios Belias, Konstantinos Varsanis,
Stefanos Papailias, Dimitrios Tsiotas, Labros Vasiliadis,
and Labros Sdrolias

Abstract Tourism is undoubtedly one of the most important areas of the Greek economy as Greece as a country has the chance to have many and special beauty tourism resources. The challenge for the future of Greek tourism is to understand the needs and wants of tourists and always with respect to the natural and social environment of the place to acquire competitive advantage. The key to success is the Greek tourism to focus in developing an effective brand strategy which will make Greece an attractive destination. Marketing is what makes tourists to buy a service and branding but also it is what it connects them with the destination, which creates confidence and security for them a promise of an unforgettable experience that brings to mind memories of her experience they have experienced. The purpose of this paper is to study marketing strategies, brand, branding initiate as part of the destination marketing and branding of Greek islands. Based on the results of the literature review made for the purpose of this paper, we see that while there have been some remarkable branding initiatives in Greek islands, they have already developed as key brands where they have their own identity and value standing for the quality of the services offered to their tourists. This means that one of the

I. Rossidis
University of the Aegean, Chios, Greece

D. Belias (✉) · L. Sdrolias
Technological Educational Institute of Thessaly, Larissa, Greece
e-mail: dbelias@pe.uth.gr

K. Varsanis
National and Kapodistrian University of Athens, Athens, Greece

S. Papailias
Hellenic Quality Assurance and Accreditation Agency Athens, Kapodistrian University of Athens, Athens, Greece

D. Tsiotas
University of Thessaly, Volos, Greece
e-mail: tsiotas@uth.gr

L. Vasiliadis
Technological Educational Institute of Central Greece, Psachna, Greece

basic principles of tourism marketing and destination branding that is the knowledge and satisfaction of tourists' needs in the case of Greek islands is overlooked. This is expected in the long run to reduce the level of experience experienced by tourists and consequently to reduce both the perceived brand quality of the tourists and their attachment to what are the elements of the value of the brand. Additionally, word-of-mouth advertising will decrease and consequently need more time to expose and promote the island in the long run. However, there is a need for more research on this field by using primary data.

Keywords Marketing · Tourism marketing · Tourist destination · Brand · Destination branding · Greek islands

1 Introduction

Tourism is an activity that has the ability to use data from other disciplines such as economics, business administration as well as marketing [1]. Especially in relation to marketing, there is a special field of practices related to tourism marketing. Since tourism refers to the provision of services, tourism marketing has a special role to play in the efficient operation of tourism organizations [2].

Tourism marketing is applied to all tourism activities, including destinations [1]. Indeed, destination marketing, also known as destination branding, is now seen as an indispensable tool for a destination to achieve its goals [3]. This means that special attention should be paid to the marketing planning of the destinations, especially if we consider that competition increases between destinations. Especially for the case of Greece, [4, 5] have argued that Greece has managed to leverage its brand and reputation. Despite of the economic crisis, Greek tourism has managed to increase its market share and to shift towards high-end markets. However, it is important to examine how this shift is reflected from the literature review as it is reflected on the current research. Since there is a lack of similar researches, the authors will make an attempt to examine how the destination branding can leverage the efforts made to leverage the Greek islands, which is the aim of this paper.

2 Methodology

The paper is a literature review which has taken information from online databases, such as EBSCO but also reports from high value organizations such as SETE, which represents the Greek tourist professionals. The outcome is to present how destination branding can support the efforts made from Greek tourism destinations to leverage their efforts to attract tourists. The selection criteria of these literature sources were based on the relevance to the topic of the paper based on specific keywords for a 5 year period and this research is not exhaustive.

3 Literature Review

3.1 Tourist Branding

Branding is one of the most important concepts of marketing. Branding can be a composition of elements such as name, symbolism, colors, images, and other elements that either individually or as part of a combination of elements of the brand will define its identity [6]. The use of blue and yellow in the brand is directly linked to Sweden's values (innovation, good product quality and creativity)—which is also the country where this business started—as well as its tradition of wooden furniture [7].

Branding also applies in the field of tourism. Most destinations use branding to link the features of the destination to the needs and expectations of tourists. For example, Aspen has relied on the brand image of a luxury destination that is linked to providing unique experiences to tourists, who are willing to give large amounts of money to have these services [8]. It is understandable that branding gives the tourist a clear picture of what to expect and can be used as a differentiation element [1]. An example is Mykonos, whose success is based on the creation of a destination branding based on the triptych sun-sea-sand, but accompanied by luxury hotel services as well as intense nightlife that has a special quality. In this way, Mykonos can have elements of summer tourism, but they are aimed at a privileged audience, so it differs from the usual summer destinations.

3.2 Product Positioning

A very important decision in tourism marketing is the strategies for how to place the organization or destination on the market [2]. An important role in the placement of the tourist brand will be the perception—image that will be created by tourists—consumers for the brand [9]. For this reason, it is up to the tourists to decide which strategy they will follow, usually the one of diversification or cost leadership. In the first case, emphasis will be placed on differentiation from competition through the image of the brand and elements such as the quality or uniqueness of the services. In the case of cost leadership, the goal of the tourism agency is to reduce operating costs so that the organization can offer the lowest possible prices [10]. The goal in this strategy is to identify some "gaps" in the market that are market segments that are unexploited to place the brand. Of course, the success of the strategy will depend on how well the management of the organization can communicate this movement with the public [1].

It should be noted that brand placement can have significant benefits for the tourist organization, as it is very important to always be considered by the management of the organization and the possibility of relocating. Piqué [11], refers to the destinations of the European South that the economic crisis has led to the

consideration of multi-destination placement. As a result, well-known destinations such as Rhodes and Kos, among others, have re-approached the brand's placement as a quality destination for affordable destinations. This placement highlighted both quality, which is something given, while at the same time adding the tolerable price as an element that encourages tourists to come to destinations at a relatively low cost.

The benefits of branding in tourism [1]: 199–200, refer to a number of advantages associated with the use of Branding in tourism. In summary, the use of branding can have the following advantages:

- Better Crisis Management: In many cases a brand may have to handle a crisis like a political turmoil or a new competitor. A strong tourist brand will help the organization get back faster as well as keep its existing customers closer.
- Quality Assurance: In a proper Brand Management strategy, the customer will know—through the brand—what to expect and reduce the uncertainty that exists due to the lack of physical evidence. For example, the use of well-known brands like Hilton serves as a guarantee for what the tourist will get.
- Segmentation: Through brand identity and brand image, the tourist organization can appeal to very specific tourist groups. For example, the British tour operator "18–30 club" has created a brand that has a repercussion on very specific audiences who are new tourists who want to go to a summer destination that will combine the intense nightlife with the sun and the sea, always at a low cost.
- Internal Marketing: Successful Branding can work well within the organization. Through branding, employees, shareholders and generally the audience of the organization can understand the subject and philosophy of the organization. Examples are luxury hotel workers such as Lagonisi Grand Resort, where the emphasis is on service quality. The employee at this hotel when he knows that customers and management have particular requirements so that the hotel can have such a good reputation, so the employee knows he has to offer his maximum abilities.
- Long-Term Design: Branding can be the basis of long-term planning. An example is Singapore Airlines whose strategy was based on the positioning of its brand as a global and regional airline.
- Internet: Branding has an important role in searching the web. The tourist will show his preference for a brand he knows and trusts. At the same time, this preference increases the "clicks" of the organization's website, which means that the site has better search engine rankings.
- Distribution Strategy: The ultimate advantage is that branding strengthens the negotiating power of the touring organization vis-à-vis its consumers, and especially with middlemen, and for intermediaries is a strong point. When a tourist wishes to travel to a destination he does not know, he or she will trust a tour operator or tour operator who will have a good Brand name or whose brand will be associated with the specific trips.

4 Discussion: Destination Branding and Strategies the Greek Islands Can Use

Organizations today operate in a highly volatile environment. That is why it is particularly important for organizations to constantly adapt their strategies. To do this, it is necessary to have a relevant model that will indicate what an organization's development strategies are and how to implement it, in order to model the growth strategies of Ansoff. The model is based on two parameters. The first parameter is whether the organization will be developed with new or existing products and the second parameter a will be developed in new or existing markets [12]. This model has been parameterized for the operation of tourism by [1]. More specifically, the four strategic options are the following:

- The penetration strategy for increasing the organization's share of an existing market with its existing products. For example, a hotel focused on summer tourism should strengthen its communication campaign as well as make new partnerships with tour operators to increase bookings.
- The product development strategy, which concerns the expansion into an existing market with new products. For example, a tour operator operating on the European market, decides to develop with offers for Asia, focusing on its existing customers.
- The market development strategy that a hotel can spa and operate only in the summer to expand into the health tourism market by operating its spa all year round. This is a strategy that the hotel focuses on new markets by offering a service that already exists.
- Finally, the strategy of diversification concerns the strategic expansion into new markets with new products. An example is Virgin Atlantic, which was expanded into the train industry via Virgin Rail. It is a high-risk strategy that requires significant capital and know-how.

At the same time, the brand has other roles, less important, of secondary importance. In particular:

- Sales of souvenirs or clothing with the logo or the name of the destination provide additional revenue at the site.
- Destination branding works cooperatively in all efforts to develop and promote the destination. Thus the tourism of the region is markedly improved.
- Branding the destination by promoting the site in an ever-growing competitive market attracts new investors and paves the way for the establishment of new businesses [13, 14].

According to Clarke [15] there are a total of six benefits of destination branding these are:

1. Helps to reduce the impact of the intangible nature of the tourist phenomenon.
2. It can reduce the risk factor associated with decision-making on holidays.

3. Facilitates segmentation of the market.
4. Expresses consistency between multiple outflows and time.
5. It is the core of the integration of producers' efforts, helping all those involved in tourism to work for a common goal.
6. As tourism is a phenomenon that requires high emotional involvement from tourists, branding helps to reduce choices when deciding on the destination [15].

More specifically, the benefits of branding for the destination as a whole are as follows: (1) It creates a unifying focus to help all those involved with tourism and based on the image and attractiveness of the destination (public and private bodies, non-profit organizations). (2) It brings to the destination increased respect, recognition, faith, celebrity. (3) Correct outdated or inaccurate perceptions that may exist for the destination. (4) Improves the income of the interested members, profit margins and increases the filing of tax revenues. (5) Reduces the cost of marketing and promoting the destination as a strong brand that has satisfied tourists activates the word-of-mouth advertising. (6) Enhances the pride of the inhabitants of the destination [15].

Please note that the first paragraph of a section or subsection is not indented. The first paragraphs that follows a table, figure, equation etc. does not have an indent, either.

For tourist destinations, it is important to shape a strategy which will allow the destinations to understand how they can improve their marketing performance and to improve their image and hence the performance of their destination branding. For this reason, the authors have chosen to use Ansoff's model.

At this case, it is important to stress the fact that this mode has been chosen since it allows us to understand how Greek tourism can develop upon the upcoming years. However, there is one key limitation which is that each island in Greece has a different brand and setting but also there are cultural varieties and differences. For this reason, the authors may suggest that Ansoff model is very useful indeed. However, there is a need to inform about the limitations that it has and that it cannot apply for the case of all of the islands.

Organizations today operate in a highly volatile environment. That is why it is particularly important for organizations to constantly adapt their strategies. To do this, it is necessary to have a relevant model that will indicate what an organization's development strategies are and how to implement it, in order to model the growth strategies of Ansoff. The model is based on two parameters. The first parameter is whether the organization will be developed with new or existing products and the second parameter a will be developed in new or existing markets [16, 17]. This model has been parameterized for the operation of tourism by [1]. More specifically, the four strategic options are the following:

• The penetration strategy for increasing the organization's share of an existing market with its existing products. For example, a Greek island focused on summer tourism should strengthen its communication campaign as well as make new partnerships with tour operators to increase bookings.

- The product development strategy, which concerns the expansion into an existing market with new products. For example, a Greek island operating on the European market, decides to develop with offers for Asia, focusing on its existing customers.
- The market development strategy that a Greek island which needs to develop into the spa market can spa market and it has many hotels with spa facilities, it can expand into the health tourism market by operating its spa all year round. This is a strategy that the destination focuses on new markets by offering a service that already exists.
- Finally, the strategy of diversification concerns the strategic expansion into new markets with new products. An example is that a Greek island which has focused in the 3S (sun, sea, sand) model of tourism can expand into new markets, such as of high quality tourism, but without pausing its 3S operations. It can just develop a brand image which will be flexible and it will reflect upon different markets and consumers.

Diversification seems to be the most effective strategy today. According to Kladou et al. [17] the Greek islands are in a process of shift for mass tourism to quality-driven tourism. Indeed, many of the Greek islands are combining mass tourism with selective segments such as the religious tourism [18], though tourists are also more demanding than ever [19] therefore the islands must be well prepared for those tourists.

5   Conclusions and Recommendations

The management of the image of a destination is an important asset. The marketing and branding of a tourist destination are two useful tools that aim to promote the place and can be associated with its image [20–24]. They have as their main purpose to show a destination to produce benefits both for the place and for those involved with the tourist phenomenon. In the present work we will approach the branding of tourist destinations that is a relatively new phenomenon. Its purpose is to highlight and diversify a destination from the competition by linking the tourist closely with him. Branding gives the destination value and distinctive identity, and to the tourist the promise of an unforgettable and unique experience. The paper has recognized the value of destination marketing and it has suggested on how to capitalize it. This can happen with the use of Ansoff's model as indicated on this paper. This will help the destinations to decide on which strategy to use. However, for a future use, it is important to examine how this strategy is used in reality. This can be examined from a future research which will focus on case studies and on the views of marketing managers on this issue.

References

1. Middleton V, Fyall A, Morgan M (2009) Marketing in travel and tourism, 4th edn. Butterworth-Heinemann, Oxford
2. Igoumenakis N (1997) Tourism marketing. Interbooks, Athens
3. Pike S (2005) Tourism destination branding complexity. J Prod Brand Manag 14:258–259
4. Ikkos A (2015) The contribution of tourism to the Greek economy in 2014 – a brief overview of key figures. SETE, Athens
5. INSETE (2016) Greek tourism prognoses – prospects from https://sete.gr/media/5444/periodiki-meleti-ellinikos-tourismos_teyhos-1.pdf
6. Aaker D (2000) Brand leadership. The Free Press, New York
7. Shamoon S, Saiqa T (2011) Brand management: what next? Interdiscip J Contemp Res Bus 12:435–444
8. Hosany SY, Ekinci M, Uysal M (2006) Destination image and destination personality: an application of branding theories to tourism places. J Bus Res 59:638–642
9. Siomkos G (2004) Strategic marketing, 2nd edn. Stamoulis Publications, Athens
10. Christou E (2000) Principles and philosophy of national and regional marketing plans. EAP, Patras
11. Piqué J (2009) The Euro-Mediterranean area and the global economic crisis. Econ Crisis Eff Mediterr 6:46–50
12. Johnson G, Scholes K (2009) Exploring corporate strategy: text and cases. Prentice Hall, Upper Saddle River, NJ
13. Gertner D (2011) A (tentative) meta-analysis of the 'place marketing' and 'place branding' literature. J Brand Manag 19(2):112–131
14. Kavaratzis M (2005) Place branding: a review of trends and conceptual models. Mark Rev 5(4):329–342
15. Clarke J (2000) Tourism brands: an exploratory study of the brands box model. J Vacat Mark 6:329–345
16. Karampela S, Kizos T, Papatheodorou A (2015) Patterns of transportation for tourists and residents in the Aegean archipelago, Greece. Archipelago Tour Policies Pract:35–50
17. Kladou S, Kavaratzis M, Rigopoulou I, Salonika E (2016) The role of brand elements in destination branding. J Destin Mark Manag 6(4):426–435
18. Karampela S, Papazoglou C, Kizos T, Spilanis I (2017) Sustainable local development on Aegean Islands: a meta-analysis of the literature. Isl Stud J 12:71–94
19. Puri M (2010) Travel and tourism. Wiley, London
20. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia, Austria. Tour Int Interdiscip J 61:289–312
21. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66
22. Kavoura A, Stavrianea A (2016) A brand experiences' conceptual model for visitors' attitudinal loyalty. Tourismos 11:9–30
23. Terzidou M, Stylidis D, Terzidis K (2018) The role of visual media in religious tourists' destination image, choice, and on-site experience: the case of Tinos, Greece. J Travel Tour Mark 35:306–319
24. Zacharia A, Spais G (2017) Holiday destination image and personality of a Greek Island during an economic recession period and the intermediate effect of the utilitarian and non-utilitarian needs. J Promot Manag 23:769–790

Greek Culinary Tourism Is Lost in Translation

Stella Markantonatou and George Pavlidis

Abstract In the framework of the ongoing development of an application that both offers a multilingual, comprehensive (ingredients, nutritional properties, cultural context, location) presentation of the culinary wealth of Central and East Macedonia and Thrace and draws on OCR and Machine Translation techniques, we develop an ontology of national and local foods and wines supported by a standards compatible multilingual thesaurus. We talk about the problems encountered in the particular terminological domain and outline our methodology of populating the thesaurus.

Keywords Greek culinary tourism · Thesauri · Food terminology

1 Introduction

Today, the culinary aspect of tourism is prominent and it seems that it is going to take more ground in the next decade [1]. At the same time, mass tourism seems to reach a tipping point as the quest of individual experiences is taking over [1]. This implies that the tourist of the next decade will seek the pleasure of discovering tastes together with the cultural traits of foods in their local settings rather than being directed to pre-selected restaurants. However, allowing oneself to savouring foods in (medium or low) cost local restaurants and, at the same time, enjoying their cultural content and context, requires multi-dimensional knowledge. Naturally, knowledge of details of a foreign language and scripture is absolutely necessary [2]. However, more is required such as knowledge of the materials and their dietary properties, knowledge of the cooking techniques and, of course, knowledge of the cultural settings of the foods.

S. Markantonatou (✉)
Institute for Language and Speech Processing/'Athena' RC, Paradisos Amarousiou, Greece

G. Pavlidis
ILSP/Athena RIC, University Campus at Kimmeria, Xanthi, Greece

Greece has a language with own scripture and boasts a wealth of local foods and drinks that form part of a rich cultural context and could play a major role in culinary tourism. At the moment, however, only guided tours are available with gastronomy as the sole topic while gastronomy enhanced with the cultural traits of food seems to be a rare theme for guided tours. No relevant electronic applications are available at the moment, to the best of our knowledge. This paper describes the methodology that the project GRE-Taste will adopt in order to face this challenge for the areas of Central and East Macedonia and Thrace.

Certain IT solutions that have recently been proposed for solving the linguistic problem of culinary touristic experience provide the restaurants with menu translations [3]. The advantage of this approach is that the presentation of the food can be controlled by the restaurants but the disadvantage is that restaurants have to pay the relevant costs; this fact implies that small/medium restaurants will be reluctant to invest this money. Other solutions provide Machine Translation of menus through mobiles and typing in/OCR-ing, such as the Word Lens [4] and the Purdue Menu Translator [5]. This approach seems better suited for the experience seeking tourist because, apart from ensuring freedom of movement, it allows for enhancements such as personalization and infinite enrichment of the information.

For our discussion here, it is important to stress that despite their technical differences, the so far mentioned applications require a special database for each language and none of them includes Greek (as yet). Greek has to make do with solutions such as Google Images, Google Translate, BabelNet and the Wikipedia. Google Images works best because it harvests the Greek food sites for images using powerful transliteration algorithms. However, images are not enough for the purposes of culinary tourism, for instance a Muslim visitor cannot know whether a meat dish is made of veal or pork. BabelNet and Wikipedia require some minimal knowledge of Greek as the names of the foods have to be searched either in Greek or be transliterated. However, a machine that would simply provide transliteration and then direct to these resources would not be a good solution because, unfortunately, it is a fact that neither satisfactory translations of Greek food terms nor sufficient multilingual descriptions exist out there in the web and the aforementioned resources cannot generate them. In addition to the above, it should be stressed that understanding a menu is not a terminological problem only, it has to do with the way menus are written and on the contextual knowledge required to fully appreciate a type of food.

We will expand on the linguistic problems in Sect. 2. In Sect. 3 we will talk about international efforts to offer a structured presentation of the combined knowledge that is necessary for supporting culinary tourism. Lastly, in Sect. 4 we will outline our methodology for developing multilingual thesauri and ontologies in order to support Machine Translation of menus and searches on culinary issues.

2   The Language Problem

Below, we present the features of Greek menus that increase the difficulty of understanding and make them a challenging target for Machine Translation. Additional evidence for our presentation we draw from 15 menus of restaurants, fast food places and taverns in Macedonia (8 menus from the Municipality of Serres) and Thrace (7 menus from the Municipality of Xanthi).

It should be mentioned that most of the menus do not provide an English translation (13 out of 15). One of the two menus providing an English translation is supplemented with a separate sheet presenting the dishes of the date in Greek only. The provided English translations are generally reasonable given the challenges involved in the translation of culinary texts.

As said before, understanding a menu requires some non-trivial knowledge of Greek. The problems we have identified are listed below.

Terminology   For several characteristic dishes of Greece in general and of Macedonia and Thrace in particular there is no description or even no hint in the Wikipedia. On the other hand, Google translations, when they exist, are not always reliable. An indicative list of very well known dishes offered in the menus that have no Wikipedia lemma follows: κλέφτικο, εξοχικό, στιφάδο ('stew', unsatisfactory Google translation also used in the menus), τζιεροσαρμάς, χουνκιάρ, κολοκυθοκεφτέδες ('pumpkin balls', wrong Google translation), μπουγιουρντί.

Furthermore, types of food that feature in the menus are not found in Wikipedia such as λαδόκολλα (=cooked or served in parchment paper), της ώρας (=grilled food), παντρεμένη (=something is combined with something else), τουρλού (=mixture of ingredients, often a creative approach of the chef). Types of meat such as κόντρα φιλέτο ('sirloin', Google translation), καβουρμάς, κοψίδι, πανσέτα, ψαρονέφρι[1] ('tenderloin', Google translation) are also missing from Wikipedia.

Given that most of the terms referred so far are about meat dishes and ways of cooking meat, all the contents of the menus from ψησταριές (=taverns and restaurants serving only roasted meat) could not be found in Wikipedia.

Compounding is a major word creation process in Greek and it is compounding that Greek uses to denote a range of foods that are not standardized, for instance creative versions of well-known types of food featuring in the menus such as κεφτέδες, κροκέτες, τηγανιά made with less-standard prevailing materials, e.g. κασερο-/φαβο-/κολοκυθο-κεφτέδες ('kaseri' =a type of yellow cheese/'split pea'/'zucchini' − 'balls'). These terms are unlikely to be found in databases such as Wikipedia or BabelNet while Google Translate returns good translations if both the parts of the compound are fairly common, for instance κρεμμυδοκεφτέδες 'onion balls'.

---

[1]The terms mostly describe the part of the animal; some of them are animal specific, e.g. pork or buffalo.

Furthermore, Greek uses multiword expressions to denote foods such as αγκινάρες αλά πολίτα, χοιρινό με σέλινα ('pork with celery', reasonable Google translation), μπακαλιάρος σκορδαλιά ('salt cod and garlic dip', reasonable Google translation, not in Wikipedia).

Lastly, dialectal names should also be taken into account. For instance, βλήτα is the name of a very popular summer dish based on the plant *Amaranthus blitum*. However, on some of the Ionian islands the term βλήτρα is used in the menus instead.

Independent searches in Wikipedia and BabelNet show that very common Greek dishes such as λεμονάτο, λαδερά (the most prominent family of Greek dishes), σπετζοφάι, αγκινάρες αλά πολίτα are either not mentioned at all or, more rarely, the corresponding Wikipedia lemma is in Greek only. Google translations do not fare well on this front either, for instance, λαδερά is translated as 'greasy'. In general, foods with multiword expression names receive a literal translation in Google, for instance, μπακαλιάρος σκορδαλιά is reasonably translated as 'salt cod and garlic dip' but, on the same par, μελιτζάνες παπουτσάκια is translated as 'eggplant shoes'.

Morphosyntactic Issues Several food names are multiword expressions, however, for some of them the order of the constituent words may vary freely e.g. πατάτες τηγανητές/τηγανητές πατάτες (=French fries). Furthermore, spelling of certain terms may vary widely, e.g. τηγανιτός, τηγανητός (=fried) while spelling mistakes are not rare. Lastly, terms that are either well known e.g. τηγανητές (=fried) or are used frequently in the same menu, e.g. χειροποίητες (=handmade) may be abbreviated in irregular ways, for instance τηγ. and χειρ., χειροπ. respectively.

In the overall, the English speaking tourist, let alone tourists that speak other languages, has to switch between Google Translate and the Wikipedia in the hope to find a translation of food terms—this hope is often forlorn. In most cases it is unlikely that s/he will have some illuminating description of the food.

As expected, the main linguistic problem of translating menus is terminological, some of the terms being fixed and others being creative. Misspellings, idiosyncratic abbreviations and normal syntactic phenomena of Greek contribute to the complexity of the problem.

3   Structuring Culinary, Dietary and Cultural Knowledge

The international literature offers several examples of structuring culinary, dietary and cultural knowledge, most often than not independently of one another. Here we briefly describe two ontologies that adopt a comprehensive approach.

The YAMO+ Ontology [6] YAMO+ is a core ontology for food aimed to support application ontologies. Its creators have combined interviews of experts and extraction of knowledge from a wealth of resources including courses on food science, recipes, culinary dictionaries, nutrition glossaries, other food oriented ontologies, encyclopedias, relevant technical reports, the AGROVOC controlled vocabulary [7]

and large electronic lexica [8]. The facets of the developed ontology reveal some of the main types of information on food that is required by application ontologies: Food, Diet, Ingredient, Recipe, Meal. All facets are structured with the ISA relation. In the Food facet, two main subclasses inherit from the root class Food, namely the classes Edible Food and Drinkable food. In the Diet facet, the top node Diet is subsumed by Regular diet, Special diet and Vegan diet, therefore the ontology covers the possible dietary preferences. In the Ingredient facet, the top node Ingredient is subsumed by Plant origin ingredient and Animal origin ingredient. Properties of the foods that are encoded as such are Colour, Nutritional Information, Taste, Temperature, Flavour, Texture, Appearance, Freshness, Recipe yield, Course Type, Diet type, Recipe category and Ingredient used. In short, the ontology describes all the foods from the point of ingredients, cooking techniques and nutritional properties and can support answers to questions like "shall I have this food for breakfast or for lunch", "is this food compatible with my diet", "does this food contain ingredients that I should avoid".

Europeana Food and Drink (EFD) Ontology [9] European Commission has funded the project EFD that has developed a multilingual ontology in order to "facilitate search (our comment: for cultural objects, in particularly in Europeana) and semantically enrich Cultural Heritage items pertaining to the 'food and drink' theme" [10: 1]. The project used Wikipedia as a primary resource for structured knowledge on food and its relations to material and immaterial culture such as objects of cooking and history of foods and drinks respectively. In addition, EFD used a host of resources such as food ontologies, AGROVOC and the Art and Architecture Thesaurus [11] and the TNG [12] for defining the ontology it has delivered. The project has produced "drink and food gazetteers" as foods and drinks are related with information about their geographical distribution, their role in social events (such as festivities, weddings etc.) and with other cultural traits (such as instruments for cultivating their ingredients that can be accessed through Europeana).

Structured multidimensional knowledge on food will be the backbone of the GRE-Taste work as it is outlined in the next section.

4   Outlining the Approach

GRE-Taste aims to provide the visitor of Central & East Macedonia and Thrace with a multilingual application that will offer culinary, nutritional and cultural information about the Greek and regional foods and drinks. The application, through keying in or an OCR plus Machine Translation or an optical recognition facility or combinations of them, will offer multidimensional knowledge about Greek food in Greek, English and Russian.

Such multidimensional knowledge has to be structured in order to be useful both for Machine Translation and for searching purposes. We develop rich multilingual

Table 1 Basic ISO standards for terminology

Code	Name and field
ISO 1087-1:2000	Terminology work—Vocabulary—Part 1: Theory and application
ISO 704:2009	Terminology work—Principles and methods
ISO 860:2007	Terminology work—Harmonization of concepts and terms
ISO 29383:2010	Terminology policies—Development and implementation
ISO 23185:2009	Assessment and benchmarking of terminological resources—General concepts, principles and requirements
ISO 15188:2001	Project management guidelines for terminology standardization
ISO 1951:2007	Presentation/representation of entries in dictionaries—Requirements, recommendations and information
ISO 10241-1:2011	Terminological entries in standards—Part 1: General requirements and examples of presentation
ISO 10241-2:2012	Terminological entries in standards—Part 2: Adoption of standardized terminological entries
ISO 12620:2009	Terminology and other language and content resources—Data category specifications

thesauri that are at the heart of the enterprise. The thesauri capture the names of foods and ingredients, in addition to nutritional terminology and names of items, places, events and dates (instances of the last three classes are denoted by the so-called named entities) and their dialectic or other variants and map them on English and Russian names. Several food names, e.g. λαδερά, or cooking processes (e.g. αυγοκόβω) are unlikely to have translational equivalents in the other languages; these terms are transliterated in the corresponding languages in order to guide the visitors in pronouncing them. The thesauri offer a description of the transliterated word, for instance, for στιφάδο the description explains that it is a type of stew ('stew' is the translation provided by Google and used in various menus and recipes) and proceed in clarifying the exact nature of the dish. Vocabularies are being built from monolingual and parallel corpora consisting of menus and recipes collected with dedicated crawlers [13] as well as from local enterprises (the last ones are OCRed and edited), as well as existing food ontologies (including the ontologies presented in Sect. 3), various lexica (both printed and online), the AAT, the AGROVOC and the Wikipedia. Experts in nutrition and local producers of meat products, wines and patisserie products support the enterprise. The relevant standards will be adhered to (Table 1 offers an overview of relevant standards).

To develop the multilingual thesauri, we use the in-house thesaurus editing environment and the thesauri for Greek folk art museums described in [14]. The thesaurus editing environment has been designed to allow for both building a thesaurus with a structure defined by the editor and mapping the terms on established thesauri such as the AAT.

To support searches, the overall information will be structured as an ontology that will share the features of EFD and YAMO+ since GRE-Taste will offer multidimensional information about food extending over the culinary, the nutritional and the cultural domain. We will use Protégé [15] as an ontological editor.

The parallel corpora are in their majority Greek–English ones and will support the development of the Machine Translation system.

5 Conclusion

The study of menus from areas of Central Makedonia and Thrace has shown that the tourist, English speaking or not, has a serious difficulty in deciphering them, even if s/he can transliterate or type in Greek (a rather unlikely case). This is so because menus tend to be monolingual and the existing international resources (namely the Google Translate and the Wikipedia) are not well-stocked with translations for Greek dishes and foods. Misspellings and idiosyncratic abbreviations in the menus as well as normal syntactic phenomena of Greek contribute to the complexity of the problem. This situation seriously reduces the visibility and promotion of local gastronomy and begs for an immediate solution. Such a solution has to combine wide coverage of culinary Greek with international standards in terminology and the food domain (AGROVOC) and relevant European initiatives such as the EFD.

References

1. The Ontario Culinary Tourism Alliance + Skift (2015) The rise of food tourism (Special Report)
2. Jurafsky D (2014) The language of food: a linguist reads the menu. W.W. Norton & Company, New York
3. Translate my menu. https://translatemymenu.com/en_US/
4. Word Lens. https://en.wikipedia.org/wiki/Word_Lens
5. Purdue Menu Translator. http://www.purdue.edu/newsroom/research/2011/110908BoutinMenutranslate.html
6. Madalli D, Chatterjee U, Dutta B (2017) An analytical approach to building a core ontology of food. J Doc 73:123–144
7. AGROVOC. http://aims.fao.org/vest-registry/vocabularies/agrovoc
8. WordNet. https://wordnet.princeton.edu/
9. Europeana Food and Drink. https://foodanddrinkeurope.eu/
10. Tugarev A, Tolosi L, Alexiev V (2015) Domain-specific modeling: towards a food and drink gazetteer. First International Keystone Conference, Coimbra, Portugal, Sep 2015. http://vladimiralexiev.github.io/pubs/Tagarev2015DomainSpecificGazetteer.pdf
11. Art and Architecture Thesaurus (AAT). http://www.getty.edu/research/tools/vocabularies/aat/

12. Thesaurus of Geographical Names (TNG). http://www.getty.edu/research/tools/vocabularies/tgn/index.html
13. Mastropavlos N, Papavassiliou V (2011) Automatic acquisition of bilingual language resources. Proceedings of the 10th international conference of Greek linguistics, Komotini, Greece
14. Vacalopoulou A, Markantonatou S, Minos P, Toraki K (2018) Openly available resource for the management and promotion of Greek museums with folk exhibits. Paper presented at ICSIMAT, Athens
15. PROTÉGÉ ontology editor. https://protege.stanford.edu/

The Crucial Role of the Museums in Allying Alternative Forms of Diplomacy

Kyriaki Oudatzi

Abstract Diplomacy, which is as old as humankind, is the art and practice of conducting negotiations. Traces of diplomacy may be found in the Amarna Tablets, the earliest known ancient records. In ancient Greece, diplomatic affairs concerned, at first, the relations among the Greek city-states resolving tensions and setting the standards for commercial exchange. Cultural diplomacy, though existent for centuries, officially has only recently been established. An informal type of diplomacy exercised through time by travelers, merchants and other such cultural ambassadors encouraged contact, interaction and the establishment of good relationships between different cultures by means of art, music, sport etc. At present, the discussion concerning cultural diplomacy takes place mainly on a state-level while academic research studies the ways in which it may act as a vehicle of politics and international affairs. A sequence of actions that capitalizes on ideas, principles, traditions and other layers of civilization or local identity is involved in view of strengthening relations and socio-cultural collaborations and of promoting national interests. In our constantly advancing societies, cultural diplomacy and its exploitation of heritage, sport, gastronomy, etc. in major events, increases the prospects of development. Moreover, concerning the power of Olympic diplomacy the context of culture, sport and tourism is investigated, with the events organized by an Olympic Museum seen as driving forces for economy and society.

Keywords Cultural · Alternative · Diplomacy · Olympic museum

K. Oudatzi (✉)
Department of Sports Organization and Management, Master's Degree Programme "Olympic Studies, Olympic Education, Organization and Management of Olympic Events", University of Peloponnese, Athens, Greece

1 Introduction-Museums in a New Role of Alternative Forms of Diplomacy

The complexity and diversity of international relations over the past decades as well as crucial international issues, such as the nationalist upheaval and the immigration problem pose serious concerns on governments and the everyday life of citizens. Traditional forms of diplomacy do not always deliver the expected results, while the need for peaceful coexistence and mutual understanding is sometimes sought in alternative ways of expression and action. Cultural diplomacy, an alternative form of diplomacy, having culture as vehicle, aims in bringing people together, in breaking down prejudices and leading to respect and acceptance of diversity, highlighting at the same time culture as a remarkable and certainly widely accepted solution. Within this context, museums are emerging as the main support bodies of cultural diplomacy, thus taking on an active and important role in modern society. The aim if this paper is to focus on the crucial role of the Museums in allying of cultural diplomacy and moreover of the Olympic Museums as special case study of cultural Diplomats.

1.1 Definition of Diplomacy

Official diplomacy is a political activity that requires capabilities of international relations management and is typically performed by appointed state representatives [1]. The term "diplomacy" was first used in 1796 by Edmund Burke (Irish politician and philosopher) to describe information gathering activities, clarifying intentions and creating a climate of goodwill, cooperation and communication between officials. Although the concept of diplomacy is directly interwoven with institutions, rules and principles among governments it could also be described as managing of crises relationships or developments among other establishments such as legal or natural persons and international organizations, who act as representatives of a country.

1.2 Historical Evolution of Diplomacy

Diplomacy is an art and technique almost as old as humanity, dating back the earliest known diplomatic records, the letters of Amarna of the 18th Dynasty of Pharaohs in Egypt. During the fifth century B.C., the conditions prevailing among Greek city-states created the prerequisites for a more sophisticated type of diplomacy concluding peace conditions, declaring war, negotiating commercial issues. In Medieval Europe, the development of diplomacy was originally influenced by the Byzantine Empire wherein the signs of an advanced diplomacy first appeared. The transformation of the accidental-informal diplomacy, prevailing in the West, into a targeted and

formal operation in charge of maintaining permanent relations with civil servants took place mainly in Italy in the fifteenth century, especially when Venice and Genoa, unilaterally extended their permanent diplomatic representation outside the Italian peninsula to protect financial interests [2]. The I World War marked the end of a period of individuals diplomats who, irrespective of their nationality, belonged to the same social class and possessed the discretion to negotiate in great secrecy [3]. Secret diplomacy was replaced by the principle of public one, the practice of which was accepted by the US and the Soviet Union.

1.3 Modern Forms of Diplomacy

Diplomacy, as art and technique, has evolved over the last few decades into something more than a simple negotiation on war or peace. It involves talks and negotiations [4] between representatives of groups or states on issues having to do with trade, economy, culture, environment, human rights, etc. with the ultimate goal being that of gaining a strategic advantage or finding acceptable solutions that eliminate conflict risk, ensure peace and promote prosperity and understanding among nations. Same as in any other sociopolitical phenomenon, new questions arise. Questions that challenge traditional forms of diplomacy, both in terms of content and outcome, since conflicts and tensions have not only disappeared, but are probably not even diminished. What are the emerging trends in diplomacy? What are, or might be, the new methods of diplomacy? Are they capable of leading to mutual understanding and respect? How much have they been tested and if not, is there scope for testing? In addition, current problems—ethnic tensions, extremism and economic competition—are looking for innovative solutions. New forms of diplomacy are diverse and some are even unexpected, like fashion diplomacy, a 20-year trend that has come to the fore due to the recent success of the "Fashion for Development-F4D", a non-profit one that uses fashion as a means of creating businesses and of bridging cultural differences. "Athletic diplomacy" is, also, based on American-style diplomatic techniques. The US has often used elements of culture and sport to improve diplomatic relations. In particular, "football diplomacy" aims to reduce ethnic tensions between countries, having as vehicle a sport that is popular worldwide. Thus, the so-called "diplomacy of the stadiums" allowed China to invest in the creation of African infrastructures, building soccer stadiums in countries such as Angola, Gabon and Guinea. "Digital diplomacy" is, also, becoming an important force, with social media being part of the planning of the diplomatic community. In conflict zones, society uses social media to inform and raise awareness within the global community, organize demonstrations, communicate and bypass local censorship, as happened at the Arab Spring and the demonstrations in Egypt and Ukraine. Social media build strong relationships among diplomatic community, academia and business. A broader understanding of digital diplomacy provides practices for using the internet to achieve diplomatic goals. However, there are weak points such as the validity of information, anonymity and dependence on

telecommunication networks, especially in less developed countries. However, due to the spread of technology and complex crises, non-traditional diplomacy techniques tend to become the norm. Diplomats and peacekeeping missions are based on NGOs, cultural exchanges and other forms of mild diplomacy to rebuild communities after conflicts. It is clear that these emerging trends cannot replace traditional institutions and governments, able to help in complex, large-scale humanitarian crises, but have often been successful at a local scale and community level. Probably, a combination of traditional and modern diplomacy techniques is the key of an ideal solution. One of the new forms of diplomacy is "cultural diplomacy".

2   Culture and Cultural Diplomacy

Culture, can be used to reach any number of goals and pursue any number of policies. Culture is the grid of real relationships between nature and man on one hand, and between people on the other. It is the way in which these relationships are shaped and evolve, and the particular form in which they appear in a given place and time. It is a widespread concept, because it tends to include both the past and the present of human life on our planet. Because of this extremely wide concept, cultural diplomacy has been established in recent years. The confusion dominating the "cultural diplomacy" concept and the disagreement on the exact meaning of the term, arises [5] from the fact that it is difficult to concisely describe a practice accompanied by a variety of actions [6]. The difficulty in describing cultural diplomacy emanates, also, from the fact that "cultural diplomats" themselves, interpret on their own terms the motives and the aims of this practice. As Christogiannis [7] mentions, the term cultural diplomacy is new and the content given to it varies and depends on the way governmental or non-governmental bodies exercise it. The debate on cultural diplomacy concerns the ways in which culture can be seen, either as an 'osmosis' process or as an exported product, understood on one hand as a political or economic power instrument, while on the other as a tool for international communication and comprehension. In particular, the prevailing positions dominate the dipole, politics or tactics, a means of communication or a tool for mutual understanding between different countries concerning their intangible characteristics and interests. Cultural diplomacy is a way of developing international relations [8]. It is, therefore, the form of diplomacy that seeks to familiarize different cultures in terms of morals, customs, traditions, art, values, history, language in order to mitigate communication differences between people and nations, to achieve mutual trust and thus develop an optimal level of economic, political, trade and social relations [9]. Cultural diplomacy cannot replace traditional diplomacy and, of course, under no circumstances can it substitute for the production of the cultural product. This practically means that diplomacy in order to achieve its goals must best promote cultural heritage while, at the same time, provide the ideal conditions for the promotion of contemporary thought and creation. In fact, cultural diplomacy consists of what Joseph Nye refers to as "mild power", which is nothing more than the

ability to shape the preferences of others, and consists of three main sources: culture, political values, and Foreign Policy. In essence, cultural diplomacy is a two-way communication process that involves both the promotion of the image and values of a state, as well as the understanding of the culture, values and image of other states. Cultural diplomacy programs include, inter alia, exchanges of people from different countries through which individuals are able to visit foreign states and thus obtain information on other cultures and societies. They create channels of communication between different peoples, thus setting the foundation for the creation of strong links among different nationalities. Cultural diplomacy helps to create a trustworthy human network. Policy makers can build on this trust and thus succeed in political, economic and military agreements. In addition, cultural diplomacy can approach influential personalities from other societies, something that traditional diplomacy cannot do [10]. For example, cultural diplomacy programs bring professionals and investors closer to the economies, societies and people of other states and increase the prospects of financial investments in these countries. Apart from attracting foreign investors, cultural diplomacy has other economic benefits, too. In today's globalized environment, many businesses are active in foreign markets and have business links with foreign counterparts. Without appropriate language skills and cultural knowledge, businesses have less chances of success. In addition, many of today's global professional challenges require globalized groups of people of different ethnicities who work for extended periods of time in an environment beyond cultural barriers and time zones. The success of these multicultural groups is becoming more and more vital for the success in the international market. Insufficient familiarity with foreign cultures can have a negative impact on the professional functions of multicultural groups. For example, US businesses lose $2 billion/year due to inadequate employee intercultural guidance. Additionally, cultural diplomacy programs are often targeted at young audiences. The increased cultural interaction of young people from different countries enables a country to have a positive impact on individuals who may later develop to be influential leaders in their countries. Forged friendships with counterparts in other countries and pleasant travel memories are likely to be recalled when a leader will have to take important decisions, which may affect the country once visited. One of the most important areas that benefits significantly from cultural diplomacy is that of education. Throughout the world, cultural diplomacy has penetrated into the field of education. Manuals in secondary education and universities often provide information about other countries, religions and nations. Such efforts are often designed to educate young people into understanding and respecting the traditions and lifestyles of different countries. Cultural diplomacy, although defined as a technique of the human/humanitarian aspect of International Relations, is not always used for good purposes. The fact that culture can be used as a vehicle for politics offers negative signs to cultural diplomacy, while its role as a bridge of understanding, reflects its positive action [11]. According to Ardnt, "relations between national cultures, these aspects of intellect and education that reside in a society and tend to cross borders and relate to foreign institutions" are "literally" cultural relations that develop naturally. Cultural diplomacy "can be said to take place when official diplomats, serving national governments, shape and

coordinate this natural flow to promote national interests." Although the term cultural diplomacy is relatively recent, its techniques are already met in the campaigns of Alexander the Great. In 1946, the establishment of UNESCO was a stopover for cultural diplomacy since it is the first international body to effectively coordinate the actions of more than two states and sets the foundations for a globalized cultural management. Speaking of mild power, public and cultural diplomacy, it would be an omission not to mention nation branding as one of the newest forms of mild power, which has much in common with both public and cultural diplomacy. In terms of marketing, brands are geared to gaining customer recognition, thereby gaining economic value. A brand must use its tools to influence public opinion by combining customer services, performance, logos and product advertising and creating a sense of value in consumer consciousness. National branding is related to the ways in which a nation is presented. Nations gain customer recognition by building in the consciousness of other nations positive images and in creating a convenient ground within which they will be able to compete with other brands. To ensure that people will make a choice beneficial for their brand, they need to diversify in order for their brand to stand out from the rest. This is achieved by creating a positive image, by using the uniqueness of nation's culture and identity. Essentially national branding is nothing more than creating a respectable environment for capital both internally and abroad. As economies are globalized, nations need to find ways to diversify their products and make them more desirable to markets.

3   Definition and Historical Development of Museums

The museum, a word familiar to Greeks having its roots in antiquity, etymologically originates from the muses (temple of the Muses: a space designed for meditation and philosophical discourse). The first official reference made to a public museum is placed around 1683 at the University of Cambridge, UK, where the first attempt to house a private collection accessible to the public, resulted in the necessary building facilities. In the eighteenth century, two of the largest museums in Europe are born whose composition, structure, function and mission remain largely stable over time. In the nineteenth century, the existence of "classical" museums that embellish the major capitals of the world and are devoted to the preservation of antiquities and objects of special interest, is established in its current form. Today, a century later, the Museum (according to ICOM) is a "permanent non-profit institution serving society and its development, open to the public, with the task of collecting, studying, preserving and exhibiting culture and with the aim of knowledge, education and entertainment". This is a definition that highlights the new role of a museum as the guardian of cultural heritage and the vector of cultural change, with a multi-dimensional contribution to society, economy, culture. Today's museum, is directly related to society's structure and evolution on which it has an influence in a direct and decisive way. Observing the changes in the conceptual development of

museums, it is clear that evolution is in direct dialogue with the society. It has gradually turned from a space accessible to a specific elite audience to a space open to the general public. During its evolution, focus shifted to the public, transforming the museums into a purely human-centered entity, responding to the needs of modern society. The crisis of our era, is mainly cultural, and it is here that cultural institutions, such as museums, should have constant presence in everyday life and decisive contribution. Museums today are means of cohesion, communication and interaction with society, for its benefit, for the diffusion of culture. They are called to act in a fluid environment, to face challenges, to emulate their multidimensional contribution to society, culture, tourism and economy. Through their educational, social and cultural action, they are transformed into a nucleus of attraction and knowledge transfer and become dynamic representatives of their country—through their international visits and the possibility of their online, international presence and cultural action—completely disregarding the classic concept of "museum". Modern museums are characterized by extroversion, educational, cultural activities and international presence. Nowadays, the existence of a museum promoting the cultural heritage in interaction with its natural or digital audience, is a factor in the development of cultural diplomacy.

3.1 Museums and Cultural Diplomacy

Museums embodying their modern, multifaceted role become promoters of cultural identity of a country abroad. By twinning with other museums, having exhibitions exchanges, partnerships and mutually beneficial actions, they build a network of relationships that is undoubtedly an important aid to international diplomacy.

The arts, largely relied on and promoted by the Museums, are a complementary field to cultural diplomacy programs around the world. It is worth noting that museums have for more than 30 years used the artwork mobility of their collections as a field of cooperation and the exchange of specialists for international cultural relations. Nowadays, museums are used as centers for bilateral or multilateral external relations which far exceed the limits of the cultural context. Major examples are the Grand Egyptian Museum (Cairo) and the Saadiyat Cultural District (Abu Dhabi). These new museums, used as promoters of cultural diplomacy, support intercultural dialogue and create a framework of synergies in fields such as education, development, economy and culture. Worldwide, large museums establish branches in other countries (Bilbao, Venice, Berlin, the Louvre in Abu Dhabi). Reporting and highlighting the country's historical cultural backgrounds turn the representatives of the Museums into authentic diplomats, who re-establish the dialogue and reshape relations that cannot always be achieved through official diplomacy. In China, Museum Diplomacy is an integral part of country's one. The Chinese organization "Art Exhibitions China" has organized more than 200 exhibitions in 30 countries. Instead, the UK and US museums operate as autonomous self-financing entities independent of the state.

3.2   Olympic Museums as Cultural Diplomats

The Olympic Museums, the official bodies of rescue and promotion of Olympic History and of Olympism, preserve the memory of the past, ensure the continuity of cultural identity and of Olympic heritage, offer knowledge and stimuli, especially to the new generation and promote culture and sport. Sport, as a means of individual integration, contributes to the strengthening of social institutions, to cultural, social and economic development and ultimately to the exit from the moral and economic crisis. Olympic museums, due to their special themes, participate, among other things, in the promotion of alternative forms of tourism, such as cultural and athletic tourism, contributing to different levels of modern development. In addition, the Olympic Museums take on an additional role: the nurturing of the new generation, with the Olympic ideals and values. It is an educational and social role that Olympic Museums have as living cells of a society that influence its structure and evolution. Olympism is a grid of philosophical, ethical, educational and organizational principles that form the basis of the Olympic Movement. It is a philosophy and a way of life that combines sport, culture, art and education, aiming at the harmonious development of the individual through Olympic values. Today, the concept of Olympism as a bridge of an ideal lifestyle with modern reality, is a difficult bet, since the goals of the Olympic Charter (truce, fair play, peace, respect) are not easy to achieve only by the Olympic Games. These goals should be cultivated methodically and with daily education, which only a museum can offer, through rich educational and social action. Olympic Museums are, or are likely to become, excellent ambassadors of alternative forms of diplomacy, precisely because of their particular, global interest, thematic and supra-local content that overcome national borders. The combination of sport-Olympism and the organizational structure of a cultural player, with anything that this implies, multiplies the benefits of sports and cultural diplomacy. The values of Olympism—as an international passport—are universal, facilitating the "penetration" into societies and cultures. The promotion and dissemination of the treasures of the Olympic Museums are worldwide accepted and concern especially Greece, which has a link to the brand name of the Olympic Games. The recognition of Greece association with the Games will lead to an improvement in the country's profile, in tourism, in cultural exchanges and to an upgrade in world map. In the same context is based the official proclamation of 2018 as the Year of European Cultural Heritage. This is defined to create a sense of common identity for all. "We have to keep it for the next generations, because this is the opportunity to encourage young people to explore the rich cultural diversity of Europe and to reflect on the position of the cultural heritage in our lives, to understand the past and build a better future" (T. Navracic).

3.3   Epilogue

The power of cultural diplomacy, always with the implementation of a specific strategic planning, as part of the broader "smart diplomacy", is great, especially for a country like Greece, which is fortunate to have a rich cultural reserve. However, the current crisis is different, as it created in our society a deeper, moral crisis, a previously unknown aspect that reflects the gap in values, education and culture. Culture, is the framework within people engage the world and impersonate reality. Despite the cultural crisis, the Museums are dynamically present and give "cultural battles", more active than ever. In times of crisis, where societies tend to become conservative, politics outside the conventional diplomatic space contribute catalytically to the rescue and promotion of culture, tradition, and history, and can, by collective conscience and effort, provide a guarantee of a better future for all. Its more crucial than ever, in the context of cultural diplomacy, modern Museums to take on new roles because culture is the "litmus test" of a nation's survival and development and Museums, the official rescue and promotion bodies, aiming at the sustained nurturing of the new generation and ensuring the continuity of the cultural heritage.

References

1. Nicolson H (1963) Diplomacy. Oxford University Press, London
2. Mattingly G (1965) Renaissance diplomacy. Penguin, London
3. Frey LS, Frey LM (1999) The history of diplomatic immunity. Ohio State University Press, Columbus, pp 217–219
4. Satow E (1917) A guide to diplomatic practice. Longmans Green & Co, London
5. Chakraborty K (2013) Cultural diplomacy dictionary. ICD, Islandia, NY
6. Haigh A (1974) Cultural diplomacy in Europe. Council for cultural cooperation, Strasbourg. http://files.eric.ed.gov/fulltext/ED102067.pdf
7. Christogiannis G (2006) Hellenic Culture Diplomacy. Hellin, Athens
8. Ανδρεάδης Γ (2005) Πολιτιστική Διπλωματία. Σιδέρης, Αθήνα
9. Schneider C (2003) Diplomacy that works: best practices in cultural diplomacy. Center for Arts and Culture, http://www.interarts.net/descargas/interarts645.pdf
10. U.S. Department of States (2005) Cultural diplomacy. The linchpin of public diplomacy-report of the advisory committee on cultural diplomacy, http://www.state.gov/documents/organization/54374.pdf
11. Γιανναράς Χ (2003) Πολιτιστική Διπλωματία. Ίκαρος, Αθήνα

Digital Inbound Marketing: Particularities of Business-to-Business and Business-to-Customer Strategies

M. Chouaib Dakouan and M. Redouane Benabdelouahed

Abstract This paper aims to explain the new practice of digital marketing known as the concept of Inbound Marketing which consists of becoming its own media and create content. However, the media takes several forms. In order to comprehend the types of media, different authors have put together a model named PESO which will be explained thereafter. In the digital world, the majority of companies faces various types of customers, this study will help to determine the steps that should took place in order to reach the audience on the internet and to derive benefit from it on both business-to-business and business-to-customer approaches. This is a pure theoretical contribution that could allow for more practical studies in future researches.

Keywords Inbound marketing · Media · PESO model · Business-to-business · Business-to-customer

1 Introduction

The basic task of marketers is to spread the word about their products and services to get people to buy them. To accomplish this task, marketers used in the past a combination of outbound techniques that only serves to transfer their messages through explosions of emails, telemarketing, direct mail, television advertising, radio, print and trade shows.

The problem with these traditional marketing techniques is that they have become less effective at getting the message across, as consumers have become better adapted to blocking these interruptions.

Consumers now buy, search and learn in a completely new way compared to previous years. The marketers must therefore adapt to this change or they will lead to extinction. Consumers now uses the internet to buy and collect information.

M. Chouaib Dakouan (✉) · M. Redouane Benabdelouahed
Hassan II University, Casablanca, Morocco

However, where do they go on the internet for these activities? Therefore, we can divide the internet into three main areas [1].

Consumers primarily shop and collect information through search engines such as Google. They do dozens of searches a day and it is better for them then to listen to a commercial, read a spam message, watch a TV ad, or visit a salon. Most consumers find it easier to sit at their desks and find information online.

The other place that consumers use to gather information is the blogosphere, and they are more than 100 million blogs to date. The target audience no longer reads commercial publications and instead searches in search engines and subscribes to blogs written by people who used to write for the rag of commerce.

The third place where consumers get information and buy is in the social media sphere, the name of the collection of social sites such as Twitter, Facebook, LinkedIn, Digg, Reddit, YouTube and others. These sites started as niche technological sites, but are becoming more and more common.

To succeed and grow business and revenue, companies must adapt the way they market their products to the way their prospects learn and buy. Therefore, they have to generate leads via Inbound Marketing.

Inbound marketing has caused a lot of anchors in recent years. However, most people do not dissociate between the digital Inbound marketing strategy on business-to-business and business-to-customer approaches. This study offers a better understanding of the term inbound marketing on both approaches. Moreover, this paper represents a pure theoretical contribution that could lead to numerous empirical studies in the future.

The idea of Inbound marketing is to become its own media and create relevant content. This article provides in the first part a clearer view of the concept of digital Inbound marketing and how it effects the consumer. The second part explains the different types of media that will help us better understand the steps of digital inbound marketing strategies. Finally, we'll give a deep understanding of digital Inbound marketing strategies in both business-to-business and business-to-customer approaches in way of set up a comparison between both.

2   Definition of Inbound Marketing

Inbound marketing is the strategy of connecting with potential customers through materials and experiences they find useful. Using media like blogs and social networking, marketers hope to entertain and inform viewers with content they seek by themselves [2].

On other hand, inbound marketing can be explained as form of marketing that requires a very careful targeting of the audience and a custom communication with it via high quality [3].

Moreover, Venisse (2016) defines Inbound marketing as a way to become its own media in order to more easily convert the audience into customers. The implementation of the global inbound marketing strategy requires the respect of four essential

steps. The first step is to become its own media and build a qualified audience. For the company that sets up its strategy, it is to offer interesting content on its site, its blog or its social network page, to attract an audience [4].

Schwebel (2017) also suggests that Inbound marketing is a brand to become its own media, that is to say, offer instead of intrusive ads, content relevant enough and intelligent to build an audience [1].

Cantin (2014) defines Inbound Marketing is a digital marketing strategy aimed at bringing the customer to the company rather than picking him up. The prospect attracted by relevant content positioned according to phases of maturity of purchases and levels of commitment. We could also talk about the marketing of the attraction [5].

We define Inbound marketing also as a digital marketing strategy whose general idea is to continuously attract potential prospects with quality content rather than go to them. To do this, Inbound Marketing uses a four-step methodology: Attract, Convert, Transform and Retain [6].

Moreover, Inbound marketing is a strategy that focuses on attracting customers, or leads, via company-created Internet content, thereby having potential customers come to the company rather than marketers vying for their attention. This type of marketing tries to make it easier for customers, who are already actively looking for goods or services via the Internet, to find what a company offers [7].

Hubspot (2018) defines Inbound Marketing as a strategy that attract customers with relevant and useful content and add value at every step of the customer-shopping journey. With Inbound marketing, potential customers find their way through channels such as blogs, search engines and social media [8].

Unlike Outbound Marketing, Inbound Marketing does not need to fight for the attention of potential customers. By creating content to address the issues and needs of ideal customers, the brand attracts qualified prospects and builds trust and credibility.

Inbound marketing is a systemic approach that allows each brand to become its own media, create an audience and convert it into prospects and then customers. A whole process works well on the details while eliminating any failure [1].

Every step in the Inbound process is of great importance. Bringing in the customer and becoming your own media is not a simple affirmation, behind, there is hard work. This is what we will detail in the next lines.

3   Media Types: PESO Model

Since its inception, the notion of the media has experienced a set of developments in terms of forms and trends. The PESO reflect a model that allows us to know the evolution of the media and the different forms of media. There are four forms of media hence the term PESO: PAID, EARNED, OWNED and SHARED.

Burcher (2012) was one of the first to talk about media categorization, referring to three-dimensional media content, which are paid, owned and earned media. Known at that time as the media trinity [9].

Luttrell (2014) introduces a new form of Shared Media in his searches. He suggests an innovative model of media known as Peso model referred to as: Paid, Earned, Shared, and Owned Media [10].

Dietrich (2015) defines the PESO model as a strategy that integrates the assets of paid, earned, shared and owned media in order to deliver new marketing campaigns that will help extend the reach of consumers and establish leading brands in a market [11].

The Peso model stands for Paid, Earned, Shared and Owned. It presents a new way to segment the different marketing channels of a brand into distinct groups. It allows keeping an overview of these four aspects in order to manage each one separately [12].

The technological development in recent years has pushed companies to wonder why the Peso model? Why start with paid media? Therefore, Dietrich (2018) proposed the OESP model starting with owned, earned, shared and then paid [13].

In the same context, Macnamara (2016) proposes the SOEP model for Shared, owned, earned and then paid. He suggests that the shared media should be in the top of the list given the magnitude of the latter including with the advent of social networks, followed by Owned media, then Earned media and then paid media [14].

In what follows, we will focus on the PESO model to understand the aspects that appear in each media type apart. These different forms of media have arrived gradually over time. Indeed, the time of traditional media where there was only TV, radio or the press. Companies could do only two forms of communication.

Paid communication in PAID form: where the company buys advertising space in a media, 30-s TV or radio, full page or quarter of a page in the press. Moreover, through this paid advertising media, the company can say that it exists, that it is very strong, or that its service is better than that of competitors. This form of communication shows the power of the company, because not everyone has access to a paid media [15].

The non-paying communication in the form EARNED: namely, all what is relate to the press relationship. Because the company has done something innovative, differentiated or launched a new product. Others can talk about it for her innovation and success, and sometimes for bad things about traditional media. In addition, here we are in the logic of acquired media that allow the company to get visibility gracefully because a journalist considers an interesting topic [16].

The third form of media, which appeared mainly with the internet, is the OWNED media (the media that belongs to the company). It is essentially the websites. Today with digital and internet, all companies can afford a website or a blog, and sometimes they have nothing to pay if they use social media platforms or free blogging platforms [1].

Therefore, everyone can create his own media, in which, they can say many more things than they could say by paying or doing press relations in the sense of a free forum. The company can put testimonials of experts, employees or customers create

content and blog articles, make a glossary. Moreover, all activities that may interest the audience.

The challenge is to create its specific media for its prospects, future employees and partners. In this way, create an ecosystem where all the questions that customers and employees can ask themselves exists on the Owned media.

With the web 2.0 and the social networks, we live the appearance of a fourth form of media, which is the SHARED. This form is related to sharing content in social networks. However, this makes it possible to make the real edition, because a well-animated social account will have intelligent curation, sharing of contents intelligent, relevant and interesting for the target [14].

The PESO model is about sharing all types of media. In other terms, do not rely on one media and ignore others. Today, we have entered a protean world in which it is not a question of paying as much as we could before, but if, on the other hand, the company has the means, this type would be relevant. It's not just about media relations, because the company will completely depend on the media and journalists or bloggers in the sense that today the name of the press relationship has expanded to new influencers who are the bloggers and the Instagramers. It is not about doing Owned either because it will be at home and much more focused. However, the best strategy to do is to be everywhere.

The four forms of media are completely complementary. Therefore, to seize all the opportunities offered by the market, it is necessary to combine between all, and make a global strategy that will affect all targets and potential customers.

4 Digital Inbound Marketing Strategy

The idea of Inbound Marketing as already cited, is to become its own media, build an audience and convert that audience into customers. To achieve this, the company must follow four major steps [1].

The first step is to become your own media and build a qualified audience. By attracting strangers to make visitors to the company's digital platform.

The second step is to identify these visitors and collect contact information. This is the heart of the logic of the lead generation. It relays on the fact of collecting names, first names, addresses, emails and a little more info to know more about his prospect.

The third step is to turn your prospect into a customer. This is the main business of the commercial, in the B to B, digital can intervene in a logic of sales support then in logic of doing the sale instead of the seller. This is not necessarily the case in e-commerce and B to C logic where the sale is taking place completely automatically.

The fourth step is to make his client an ambassador, so succeed in satisfying him, keeping him loyal and leading him to become a promoter of the brand (ambassador).

However, these four steps needs to be in a systemic way and by thinking about it on a regular basis. Indeed, to succeed these four steps, it is necessary to go through

four phases: Conception, production, diffusion and conversion in order to emerge after each phase with decisions and results.

4.1 Business-to-Business Approach

Conception The first phase of design is to define your strategy. Since the approach of Inbound marketing is a global and systemic approach, in which, we must play on several levels at once, it is essential to always start with a real strategic thinking. For that, we must think about the concept of branding, is it well suited in terms of logo, colors and visibility. Thus, we must reflect on its positioning, it is essential to build its editorial line, offer content and become a media. The second phase is to think about the editorial and the persona, which are the mirror of the target. In an Inbound marketing approach, we must make sure that this target comes to the company. Therefore, the object is to look for the questions they ask themselves, think about their problems and write answers. This persona work builds an editorial line and helps to assemble and aggregate relevant content to create a media.

The third phase of the design is the work on the UX (User Experience) and the user journey. This phase consists of developing a set of actions that influence this journey, such as call to action, visible white papers, marketing automation scenarios and e-mailing sequences that are relevant. It is all an assembly as a funnel to bring strangers and visitors to become prospects, then customers and finally ambassadors.

The fourth phase of the design is the work on the data. On a media level, the company must know which level will allow proceeding with the acquisition. Thus, the strategy put in place will require having financial or human resources so that companies can execute the projects.

At the end of this design stage, the company must be able to build an action plan and define objectives.

Production The production phase consists of setting up the tools to know its website, its social networks or its mobile application. A set of premium offers that are been used in insurance or acquisition. Thus, the company must put the point on the subject of training and coaching, so that all teams are the vector of media and have the same posture of the company Inbound.

At the end of the second phase of the production, the company will have all the tools and the resources to move on to become a media and proceed to the diffusion.

Diffusion In this phase, the business really becomes a media (Owned Media) and broadcasts relevant content. Therefore, companies must work on SEO, set up social networks and ensure the animation of her communities (Shared Media). Indeed, they must be very present and in a very regular way on social networks. Thus, working on press relations and blogger relations (Earned Media), they must be able to inform influencers that the product and service of the company exists and that they relay it.

The four levels that we have just introduced into this phase all come from an Inbound approach. However, the company must know that it is both relevant to

combine with the Outbound to cover the market and expand its target. Therefore, in parallel, the company can afford television ads, radio or the press (Paid media), buy AdWords to increase its visibility, do native advertising to propel its social networks and its communities and lean towards direct marketing to deliver relevant content to its customers. Therefore, Inbound Marketing and Outbound Marketing are not necessarily in opposition.

At the end of this dissemination phase, the goal is to generate quality traffic against the targets that the company wants to target.

Conversion The fourth phase is conversion, it relies on how the company can turn prospects into customers and then ambassadors. The first phase of conversion is that of collecting contact information, collecting leads and setting up call to action. Moreover, this is taking place through landings pages, retargeting that makes it possible to catch someone who would have come on these landings pages and who would not complete the form. In parallel, it is necessary to set up scenarios of marketing automation, which makes it possible to automate the sending and the sequencing of emails, to automate the contact with the sales men or to automate the sending of the SMS. However, it is necessary to put analytical tools that track the progress of traffic and conversions. The second step of the conversion is to re-contact and inform prospects through newsletters. Repack and reuse the same content by relaying it to all media so that the company has multichannel multicasting of the same content. Once the company has recovered a prospect, it can also set up scenarios of nurturing lines or set up sales tunnels or conversion tunnels, though sequences of mails or sequences of SMS that will make it possible to relaunch, convince and participate in the prospect's decision process. In addition, having CRM tools and customer testimonials will help people who are about to buy to reassure themselves and trust. Once the company wins the client, it is time for the third step of transforming it into an ambassador through loyalty and commitment. This transformation can take place through events such as organizing breakfasts, making salons, after work or evenings. Indeed, the event is a very interesting media and really creates emotions. However, it must either be reserved to existing customers to build loyalty and strengthen the relationship with them or book a little higher to the funnel to very hot prospects.

In this logic of loyalty, it is very important to set up satisfaction surveys to protect e-reputations, get positive feedback and compensate for negative feedback. At the end of this phase, of course, the company will notice the increase of the turnover and the increase of its market share.

4.2 The Particularity of Business-to-Customer Approach

Inbound marketing remains the same at the level of the B to C, except that it applies more in trades where there is activation to send people to a store or to a city trade, which was not the case of funnel B to B where we were rather in the lead generation.

The first four steps remain the same, namely, to become your own media and build your audience, by attracting strangers and making visitors, and then identifying those visitors for them to eventually become members and then customers and finally as ambassadors. As well as the making of the funnel goes through the same big phases of the logic B to B. Indeed, one finds:

Conception In the design phase, the first step is not only to address branding and positioning issues, but also to talk about licensing which means using other brands, and endorsement where the company must talk about the personalities who can bear his marks. The second step involves writing, storytelling and UX. The third step is to make a media plan and process the data. At the end of this design phase, the company must have an action plan and know how to set goals.

Production The production phase is obviously, where the company sets up tools to know its website or mobile application. These tools will allow the company to build an audience through which it can broadcast relevant content. This time the brand content has to be more adapted, more varied and dynamic in the form of VR commercials (virtual reality), games or series around the brand and its values. It is thus necessary to interest and seduce in a different way than in the world of B to B. The company must have other supports like print and scenography. That said, without forgetting the training and the coaching to have the uniform image and to involve all the staff in the Inbound strategy.

Diffusion In the same way as B-to-B, the company will decide how it will broadcast its content, is it in the form of blog or vlog? The company has to maintain her SEO, her social networks and her press relations or bloggers and eventually combine with Outbound. Thus, all the media of the PESO model.

Conversion The conversion phase is the first step in engaging visitors by creating communities, inviting people to join the company on social networks to re-contact, personalize content and retargeting. These applications will allow consumers to have a better relationship with the brand by directly offering products and content that interest them. Therefore, setting up analytics and logics of community panels are ways to do the study in real time. In addition, they must always have the ability to collect information about their community. The second step of the conversion relate to activation, which is offering for example coupons email promo and bring customers to the store. The third step of the conversion is to retain customers while doing street marketing, events or retail.

At the end of this stage, the company will be able to turn its customers into ambassadors and have a good turnover.

5   Conclusion and Future Research

One of the great advantages of the internet is that it reaches consumers around the world, the globalization of business promises a lot thanks to the advent of new technologies. In this article, we proposed an explanation of the term media based on the PESO model. Inbound marketing is about becoming your own media while following a precise funnel. However, the Business-to-Business approach differs completely from that of the Business-to-Customer, this paper has dissociated these two concepts and provide a clearer vision of both approaches.

However, the success of the Inbound marketing approach directly imposes the knowledge of the customer. Companies must be able to reach the customer at every step of the way to become an ambassador and defender of their brand.

This theoretical article can extend to encompass an empirical study that calculates through metrics the degree of impact of Inbound marketing practices on consumers. Therefore, the application of these metrics in each step of the funnel could determine the effectiveness of each one.

References

1. Dabi-Schwebel G (2017) L'inbound marketing permet de convertir son audience en clients. http://www.entreprendre.fr/gabriel-dabi-schwebel
2. Marketing-Schools.org (2016) Inbound marketing – explore the strategy of inbound marketing. http://www.marketing-schools.org/typesof-Marketing/inbound-marketing.html
3. Patrutiu-Baltes A (2016) Inbound marketing – the most important digital marketing strategy. Bull Transilv Univ Brașov Ser V Econom Sci 9(58):2
4. Venisse M (2016) Créer sa stratégie inbound marketing global. https://www.1min30.com/formations-e-learning/strategie-inbound-marketing-1287455005
5. Cantin A (2014) Inbound marketing definition. https://www.mychefcom.com/blog/definition-de-linbound-marketing
6. Inbound value (2018) What is inbound marketing? https://www.inboundvalue.com/definition-inbound-marketing/
7. Rouse M (2014) What is inbound marketing? https://www.techtarget.com/contributor/Margaret-Rouse
8. Hubspot (2016) The inbound methodology – the best way to turn strangers into customers and promoters of your business
9. Burcher N (2012) Paid, owned, and earned: maximizing marketing returns in a socially connected world. Kogan Page, Philadelphia, PA
10. Luttrell R (2014) Social media: how to engage, share, and connect. Rowman & Littlefield, Lanham, MD
11. Dietrich G (2015) How PESO makes sense in influencer marketing. In PR Week. Asia Edition. June 8. http://www.prweek.com/article/1350303/peso-makes-sense-influencer-marketing
12. Robinson S (2016) What is the PESO model for marketing? http://iterativemarketing.net/peso-model-marketing/

13. Dietrich G (2018) What is the PESO model? https://contentconnection.prsa.org/resources/articles/what-is-the-peso-model
14. Macnamara J et al (2016) 'PESO' media strategy shifts to 'SOEP': opportunities and ethical dilemmas. Public Relat Rev 42(3):377–385
15. Bayles S (2015) What value does paid media hold for the PR industry? In: Hall S (ed) FuturePRoof: the go-to guide for managers of agencies and communication teams. Sarah Hall Consulting, London, pp 129–134
16. Stephen A, Galak J (2012) The effects of traditional and social earned media on sales: a study of a microlending marketplace. J Mark Res 49:624–639

Open-Access Resource for the Management and Promotion of Greek Museums with Folk Exhibits

Anna Vacalopoulou, Stella Markantonatou, Katerina Toraki, and Panagiotis Minos

Abstract We describe ongoing work on the design of an online application to support the standardized classification of a large volume of folk exhibits collections and contribute to their management and promotion. The rationale behind our work is the normalization of comparable and multilingual controlled terminologies and their parallelization with internationally recognized schemata. Our approach strongly relies on (1) the identification of the real needs of Greek museums, as depicted in the organization of their collections and, (2) the identification and exploitation of the (eventually) terminological apparatus provided by Greek that expresses widely held conceptualizations serving the museums as organization pathways. We will contribute to the issue of openly available online resources by freely offering the collection in its entirety (circa 600 terms). From this point of view, the emphasis is mainly on research focusing on term disambiguation and classification. The proposed application aspires to serve as a point of reference both for managing and for promoting cultural heritage in the field of tourism.

Keywords Heritage and museum management in the digital era · Art and culture in tourism · Art and cultural marketing

1 Exploring Online Greek Museums with Folk Exhibits

1.1 The Hypothesis

The increasing online presence of Greek museums results in the accumulation of digital material over the web; one wonders, however, whether the outcome is helpful to users—be them professionals or members of the general public—or it simply contributes to the acknowledged "pathology of information overload"

A. Vacalopoulou (✉) · S. Markantonatou · K. Toraki · P. Minos
Institute for Language and Speech Processing/'Athena' RC, Paradisos Amarousiou, Greece
e-mail: avacalop@ilsp.gr

[1]. Information overload has long been identified as being presented with "too much information" in numerous aspects and processes of management [2]. As both the contents and presentation methods of online Greek museums is rather diverse, the hypothesis formed was that the required information on the contents of the museums would not be easy to locate in the plethora of websites. This hypothesis was based on the assumption that each museum would use its own classification system, which would result to lack of interoperability between different systems due to (1) different conceptual density of documentation, namely whether an adequate set of categories is used for classifying cultural heritage ensuring that cultural objects are visible to different queries, and (2) different organization of terminologies for cultural object documentation. As effective retrieval of information is vital to managing and promoting any type of collection, we proposed that, provided our hypothesis was true, solving the problem of information retrieval would necessarily facilitate museum management and promotion [3].

1.2   Methodology

To test our hypothesis, we considered a small sample of Greek museums with online presence. We concentrated on museums with folk exhibits that contain more region-specific exhibits and information as we felt that their promotion could contribute to the improvement of the socioeconomic life of small places and as such institutions do not usually have the means to develop the technology infrastructure that would allow them to manage/present collections in the most effective way possible. As we wanted our sample to be small and easy to control but also random, we selected (a) Museum of Cretan Ethnology (MCE), (b) Historical-Folklore and Natural History Museum of Kozani (FMK), and (c) Korgialenio Historical & Folklore Museum (KFM), representing distinctively different geographic regions of both mainland and island Greece. With this small-scale research, we first hope to identify the real needs of museums, as depicted in the organization of their online collections. Next, we plan to identify and exploit the terminological apparatus provided by Greek, which expresses widely held conceptualizations that serve museums as convenient organization pathways. To this end, we draw on our experience in the organization and presentation of digital collections of museums, art galleries, libraries, archives, and the development of multilingual terminological and conceptually organized lexical resources using state-of-the-art technology (i.e. ontological/dedicated editors) [4, 5]. New technologies require standardized multilingual documentation of cultural assets in order to ensure sound cataloguing that entails (1) Reliable retrieval of information from the museum databases: this is vital for collection management and promotion e.g. in exhibitions and virtual collections such as Europeana (https://www.europeana.eu/) and related applications, and (2) Interoperability with other repositories that exploit them, i.e. enabling data linking that would allow retrieval and promotion from museums at regional and national level towards world-wide visibility. For the documentation of a digital collection, the following are used: (a) a

controlled vocabulary or thesaurus, and (b) an encoding/classification schema, using a formal language to express a hierarchy. An encoding schema represents the conceptual categories used to document an object or a collection of (digital and physical) objects and their relations [6]. Encoding schemata are taken into account when the museum database schema is designed. Controlled vocabularies and thesauri provide terms representing the concepts that correspond to entities and structure these sets further. Selection and structuring of entities expressed by appropriate terms (representing concepts) are the core of our study. Structuring is very often achieved with the application of two main relations: genus-species (otherwise known as IS-A) and part-whole (also known as partitive). In addition to these hierarchical relations, associative relations are additionally applied when semantic or conceptual associations between entities need to be explicitly defined [7]. To ensure retrieval and interoperability, the envisaged resource aims to help in structuring object and category names in the classification schema as controlled vocabularies or thesauri with national and international usage potential.

1.3 Findings and Analysis

The analysis of the different categories in the documentation of our sample museums resulted in the following models:

Museum of Cretan Ethnology The MCE categorizes its exhibits drawing on what can be described as a six-facet based taxonomy, according to which exhibits can be placed under the following facets: *food* (from the sources of food, i.e. agriculture, arboriculture, viticulture and animal breeding to its storage and consumption); *architecture* (from mining, processing and carrying materials to building and furnishing); *weaving* (from raw materials, tools and material types to dying, textile types and clothing), *handicrafts-manufacture-trade* (comprising basket weaving, pottery, metallurgy, carpentry, shoe making, saddle making, horseshoeing and commerce), *transport* (human transport, produce transport, communications), *customs and traditions* (containing ritual objects and functions), and *social organization* (a general term encompassing such diverse activities as religion, music, art, and warfare). The taxonomy also contains several subcategories to which the objects of the collection belong. Typical examples include: the *agriculture* category consisting of tools belonging to the subcategories of ground clearing, tilling, surface smoothing, harvesting, threshing, milling; the animal *breeding category* comprising shepherds' tools/accessories, shearing tools, cheesemaking tools, etc. The MCE introduces a category under *social organization*, dedicated to its token exhibition in honor of the French influential generalist Leroi-Gourhan, organizer of museum collections [8].

The Historical-Folklore and Natural History Museum of Kozani It consists of a wide range of exhibits, involving history, folklore, and natural history. Folk exhibits are categorized under the following broad types: *guns*, *clothes*, *home utensils*,

jewels, *samplers*, *manuscripts*, *ceramics*, *interior decoration*, and *photographs*. This first categorization seems to serve the presentation of the collection to online visitors as, after looking at the object's descriptions, one realizes there are many more categories to this schema. FMK exhibits are classified under the following categories: *toiletries*, *agriculture*, *food*, *clothing*, *professions*, *communication*, *tools*, *religion*, *weaving*, *jewelry*, *housing*, and *household*. Some of these are further subcategorized so that, for instance, *food* contains *agriculture*, *consumption*, *distribution*, *animal breeding*, and *cooking*, and *household* is divided into *furniture*, *decoration*, *heating*, and *lighting*.

The Korgialenio Historical and Folklore Museum The KFM seems to be following a 4-facet taxonomy, generally distinguishing between *material* (e.g. ceramic, glass, wood); *place* (e.g. church, countryside, home, bedroom, kitchen, field); *craft* (e.g. handwork, decoration, religious art); and *use* (e.g. utensils, tools, furniture, lighting, weights/measures, toiletries, office supplies, musical instruments, guns). Each category consists of several subcategories. Thus, for instance, the *ceramic* category comprises the *clay* and the *porcelain* subcategories; *religious art* can refer to *icon painting* or *wood carving*; *tools* can range from *cooking utensils*, to *farming tools*, *liturgical objects*, *shoemaking tools*, *marble sculpture tools*, etc.

Analysis and Exploitation of Results As expected, we found a lot of overlapping categories in the online presentations of the museums. However, the classification systems used are quite different from each other. Two museums categorize exhibits first by specific aspects of human life (not coinciding with each other), whereas the third one is based mainly on their definition. The inevitable projection here is that the number of taxonomies will approximate the number of museums, although this cannot be proven here. Consider a user who queries a facility that views all Greek museums such as *semantics.gr* of the National Documentation Centre [9]. If this user wished to search all Greek online museums with folk exhibits to find images or information about, say, a flask, they would discover that, according to each museum's schema, their search item could be found under *metal objects*, *household*, *kitchen*, *utensils*, *food*, *metallurgy*, or *warfare*, or any of their subcategories. This eliminates the search on the basis of general categories, e.g. on machines that would easily infer that *flask* is a member of *utensils* and would return objects of the relevant category across museums with minimal requirements on multilingual NLP machinery. It also eliminates queries of the sort "get me all objects that are similar to flasks" and makes sure that queries of the sort "get me all utensils" will return incomplete and largely incompatible results. This finding verifies our hypothesis that the required information on the contents of the museums would not be easy to locate in the plethora of websites. The obvious shortcut would be a free text search option so that our example user is able to look exactly for the item of their choice.[1] Such searches require multilinguality at the level of very specific terms such as *flask* and

---

[1]Semantics.gr does implement such a facility with a shallow overall classification of objects.

do not allow for the kind of queries listed. The weakness of this hypothesis is that, as long as the classification system is not closed and there is no controlled vocabulary, consistency and inferencing are not an option. Both are vital to information retrieval but also to efficient management [10] of any content. Our example user would therefore end up with some or none of the results depending on their own skills and tools and with different conceptualizations of the same object by different museums.

Results analysis shows there is need for a common, as extensive as possible, taxonomy to be (a) flexible enough for any exhibit to fit it, and (b) wide enough for people who manage collections to arrange, present, manage, and promote (part or all of) them according to the museums' changing needs. The crucial element in creating this taxonomy is the appropriate structure of different facets, some of which will combine with each other to form a complete description of each object. One or more of these facets can be picked each time there is need to restructure the presentation of objects. A plausible choice seems to be mapping the normalized existing vocabulary with internationally recognized controlled vocabularies, such as the Art & Architecture Thesaurus [11]. Given the regional nature of the selected collections, this would mean adding to the existing controlled vocabulary alternative terms that depict regional conceptualizations/generalizations and dialects. Their inclusion would be crucial not only for search reasons, but—more essentially—for the preservation of heritage aspects in the cultural life of communities, which runs the risk of becoming decontextualized and lost [12]. This taxonomy allows for a great degree of flexibility when it comes to managing and presenting museum collections either on- or off-line. A step forward in research would be to compare these results to how other museums present their collections and whether (and how) Greek museums are different.

2 Review of Existing Standards, Vocabularies, and Thesauri

To start developing an appropriate taxonomy, we studied relevant standards, vocabularies, and thesauri. According to the definition by the International Organization for Standardization (ISO), standards are "published documents that provide requirements, specifications, guidelines or characteristics, which can be used consistently to ensure that materials, products, processes, and services are fit for their purpose" [7].

2.1 Standards for Terminology

The main standard for thesaurus construction is ISO 25964: ISO 25964-1:2011 Information & documentation-Thesauri and interoperability with other vocabularies-Part 1: Thesauri for information retrieval, and ISO 25964-2: 2013

Information & documentation-Thesauri and interoperability with other vocabularies-Part 2: Interoperability with other vocabularies. Standards also exist on computer applications in terminology, term base creation and specific terminological mark-up languages expressed in XML, such as ISO 16642:2017, Computer applications in terminology—Terminological mark-up framework.

2.2   Vocabularies and Thesauri

A thesaurus is "a vocabulary of controlled indexing language, formally organized so that a priori relationships between concepts are made explicit" [13]. For our purposes, we considered the following:

Art and Architecture Thesaurus (AAT) Developed by the Getty Research Institute (http://www.getty.edu/research/tools/vocabularies/aat/), it was designed to accommodate any kind of "material culture" object known to "the Western world from antiquity to the present" [14], although it has been noted that this scope goes beyond the Western world in certain areas such as *Styles and periods* [15] including, for instance, *ancient Nigerian styles and periods*. This scope, however, tends to be less extensive for other areas [15]. The structure of the AAT is based on facets, allowing each object to simultaneously inherit from more than one facets and be described with a combination of concepts. Let us consider the example of a random exhibit from one of the three sample museums of this research. If we were to use the AAT facet structure to describe a "cartridge brass box", we would use the following set of concepts: Styles and Periods-Ottoman (style); Materials-cartridge brass; Objects-boxes (containers).

Its comprehensive content and flexible structure have made the AAT the foundation upon which several museums base their own classification systems. Although both theory and practice show that it can definitely be used as the gold standard to develop similar classification systems, it cannot be practically incorporated to any system due to its immense size and scope. On the other hand, the thesaurus also misses smaller details in descriptors, which are nonetheless essential for term disambiguation and classification. Thus, for instance, intermediate nodes such as *chalkomata* (χαλκώματα), a common category in Greek folk tradition meaning all "cooking utensils or decorative objects made of copper or an alloy of copper" is not among the AAT set of descriptors [5]. More examples of such intermediate nodes could be mentioned here, reflecting the specific social and historical realities of each collection.

American Museum of Natural History Thesaurus This is an example of one of the museums that developed its own AAT compatible thesaurus (https://anthro.amnh.org/thesaurus). The thesaurus was created as the team felt that AAT lacked the high level of specificity required to accurately describe a comprehensive anthropology collection [16]. They used both a bottom-up and a top-down thesaurus development methodology [16], allowing them to cater for their specific collection.

As a result, the only facets which were incorporated from the AAT were *Material* and *Object*. Finally, the relations used are broader/narrower term, related term, use/use for (synonymy). This museum's classification system typically exemplifies the construction of a taxonomy which is based on the broader context of the AAT and which was adapted to accommodate the specific organization and presentation needs of this collection.

EKT Thesaurus EKT has made openly available a thesaurus named EKT Document Types (http://www.semantics.gr/authorities/vocabularies/ekt-item-types/vocab ulary-entries/tree) to support the organization of national archives at a national aggregator level since EKT has this role. The thesaurus has at most three levels and a lot of categories are accommodated in the third one. Coverage is restricted and its conceptual structure is not clear. In particular, coverage of concepts is incomplete and unpredictable, e.g. there is *bone* and *ceramic ware* but no *metal ware* or *wood*, although the thesaurus describes items belonging to these categories. As to folk exhibits, coverage is not satisfactory as key concepts such as *cooking tools* are missing and the discriminative property distinguishing between concepts is unclear. For instance, *prize*, *disk*, *lamella* and *inscription* are sister concepts under *3D artefacts & realia*. Yet, the discriminative properties used are function for the first group of terms and form for the second one. These concepts, despite their discriminative power, have not been defined at all, entailing that it is not possible to use them as search terms. For instance, one cannot search for objects used in specific setups such as food preparation, activities related with health etc. Moreover, it is possible to discriminate among objects that are only for food preparation purposes from medical instruments for the same matter of fact. Finally, the notion of facets, described earlier, has not been implemented and neither has multiple inheritance. Thus, each object belongs to a single category, which significantly reduces the usability of the thesaurus for retrieval purposes.

3   Platform Description and Use

The main tool of the platform will be a web vocabulary editor—it will run centrally on a server, and users will interact with it through a web browser. The tool will be implemented as a 3-layer application, consisting of: (1) The Presentation Layer, containing the User Interface of the application. This is based on the Symfony PHP framework and follows the Model View Controller (MVC) design pattern. The use of a framework and design pattern guarantees that the application is properly structured and maintainable. (2) The Business Logic Layer, acting as an interface between the presentation layer and the data access layer. Its role is to determine the way(s) in which data can be created, stored, and retrieved. (3) The Data Access Layer, providing simplified access to data stored in persistent storage of some kind, such as an entity-relational database. In the case of this application, the data will be stored in a relational database (MySQL). A persistence provider (Doctrine) will be

used as an intermediate layer between the database engine and the rest of the application.

4   Potential Applications and Benefits

This small-scale research aimed to identify the actual needs of Greek museums with folk exhibits by exploring and analyzing the way in which their collections are presented online. By identifying and exploiting and existing cultural content as well as relevant standards and specifications which will serve as manageable organization pathways for museums, we will contribute to the issue of openly available online resources by freely offering the collection in its entirety (circa 600 terms). Apart from the obvious advantage of the envisaged resource, namely offering end users the potential to easily and quickly locate any cultural object one might be looking for at any given time and differentiating it from similar ones, it will also have considerable merit to the managing and promotion of museums themselves. In particular, this pilot application will hopefully set the basis for the development of/will support a substantial infrastructure in the form of a repository of cultural heritage, focusing on the utilization of entire collections or any of their parts by interested parties. One of the principal organizational and other practical benefits of the infrastructure is the ability to automatically classify items by common scientific criteria. Not only does this mean that the process of classification is immediately made easier, but that people who manage collections are able to have total control of their exact contents, scope, and extend at all times. Thus, the collection's multilevel database will help the more effective organization and management of cultural heritage in the context of a museum.

Taking this a step further, one could also envisage the benefits of this infrastructure if used in complementarity with extensive online collections such as the EKT Thesaurus. The structured context of the infrastructure could thus serve as pathway to map the vast material collected through aggregation with its own metadata, making it more structured and allowing for its further enrichment.

At the same time, supposing that more similar museums and collections that offer online content are linked to the same database, it will be very easy to compare their metadata and obtain a more general picture of the current realities in the management, presentation and promotion of cultural heritage. Needless to say, the more populated this virtual community is, the more complete a representation of the kaleidoscope of cultural heritage collections will be.

Finally, one can picture a range of uses and application in tourism such as, but not limited to, smart reuse, restructuring, and utilization of data for various purposes such as employing crowdsourcing or evaluating tourist services; development of custom-made tourist infrastructures which will serve specific needs of any given museum, area, etc. To conclude, the proposed application aspires to serve as a point of reference both for managing and for promoting cultural heritage in the field of tourism.

References

1. Koltay T (2017) The bright side of information: ways of mitigating information overload. J Doc 73:767–775. https://doi.org/10.1108/JD-09-2016-0107
2. Eppler MJ, Mengis J (2004) The concept of information overload: a review of literature from organizational science, accounting, marketing, MIS and related disciplines. Inf Soc 20:325–344
3. Tzompanaki K, Doerr M (2012) A new framework for querying semantic networks. MW2012, April 11–14, 2012, San Diego
4. Markantonatou S, Minos P, Pavlidis G (2017) Retrieving structured information from semi-/unstructured cultural object documentation. IJCMHS 1:89–99
5. Markantonatou S (2016) Issues in linking English thesauri with Modern Greek controlled vocabularies of cultural heritage term. VIII Terminology Summit, EAFT, 14–15 November 2016, Luxembourg
6. Doerr M (2003) The CIDOC CRM – an ontological approach to semantic interoperability of metadata. AI Mag 24:75–92
7. ISO 25964-1:2011 Information and documentation – thesauri and interoperability with other vocabularies – Part 1: thesauri for information retrieval
8. Lenay C (2018) Leroi-Gourhan: technical trends and human cognition. In: Loeve S, Guchet X, Bensaude Vincent B (eds) French philosophy of technology. Philosophy of engineering and technology, vol 29. Springer, Cham
9. EK^T (2016) Semantics.gr: the information system for semantic vocabularies. Athens: National Documentation Centre [in Greek]. https://goo.gl/epQUKK
10. Templar R (2015) The rules of management. Pearson, London
11. Art & Architecture Thesaurus. https://goo.gl/vUuofm
12. Loulanski T (2006) Revising the concept for cultural heritage: the argument for a functional approach. Int J Cult Prop 13:207–233
13. Aitchison J, Bawden D, Gilchrist A (2000) Thesaurus construction and use: a practical manual, 4th edn. ASLIB, London
14. Petersen T (1994) Art and architecture thesaurus, 2nd edn. Oxford University Press, New York
15. Soergel D (1995) The art and architecture thesaurus (AAT): a critical appraisal. Vis Res 10:369–400
16. De Vorsey KL, Elson C, Gregorev NP, Hansen J (2006) The development of a local thesaurus to improve access to the anthropological collections of the American Museum of Natural History. D-Lib Mag 12(4)

Small Scale Event Product Analysis Based on Conjoint Analysis Results: The Case of Yedi Kule Conquest Monuments Run

Sofia Gkarane and Chris A. Vassiliadis

Abstract This paper conducts a conjoint analysis experiment in order to estimate the importance of event product attributes and product attribute utility levels (part-worth) that influence sport-tourists sport event buying behavior. The conjoint product evaluation scenarios are based on the overall sport tourist preferences or utilities associated with the conjoint attributes' levels that are used to define each of the different basic total sport event product offers. The current study is conducted with the use of a conjoint designed questionnaire that has been distributed on the International Monuments Festival, Yedi Kule Conquest Monuments Run; a small-scale local and yearly-organized sport event in Thessaloniki Greece. The results show the relative contribution of each factor to the overall evaluation of the tourism product and provide helpful consideration for host and event managers into developing a destination marketing plan based on tourists' preferences with the view of reaching the product preferences of sport-tourist target group(s). In addition, a comparison with another corresponding conjoint analysis study of sporting events in Taiwan is made in order to assess similarities and differences between the two studies.

Keywords Conjoint analysis · Small-scale event · International monuments festival

1 Introduction

Sport and tourism are "among the largest and fastest growing industries in the global economy" where local sport events may operate as mega-sport events in the tourism industry, providing the possibility for tourist activity development [1]. The existing literature on event sport tourism has concentrated mainly on large events [2–4], but small-scale sports event tourism development may also be sustainable [5], with

S. Gkarane (✉) · C. A. Vassiliadis
University of Macedonia, Thessaloniki, Greece
e-mail: sgarane@uom.edu.gr

positive outcomes providing economic, psychological, political and social benefits [5–9]. Moreover, through a sport event, a destination can improve its image and enhance its imageability [10]. What makes an event attractive and desirable for visitors and locals is important for event marketing since the attendees will be attracted by the event that will help them meet their leisure needs [11, 12].

The purpose of the study in the present paper is to determine the event product characteristics that influence tourist preferences through the examination of a small scale sport event held every year in Greece.

Conjoint analysis methodology will be used along with the comparison of the findings with another similar study in order to check same and different points with a view of comprehending the tourists' preferences and motives that affect their decisions when participating in a small scale event. To reach the aforementioned objectives, we studied sport tourist preferences in Yedi Kule Conquest Monuments Run.

In the first part of the paper, and after the literature review, we use the data obtained among a sample of sport tourists and visitors with the application of a Conjoint Analysis Questionnaire. In the second part, we compare the present conclusions with another corresponding Conjoint Analysis study being held in Taiwan, where respondents had evaluated the same characteristics.

2 Conjoint Analysis of a Small-Scale Local Sport Event, the Yedi Kule Conquest Monuments Run in 2017

2.1 Conjoint Analysis Methodology

Conjoint analysis, a statistical method that has been receiving a growing acceptance in market research and one of its most used quantitative methods, is used in predicting how customers react to product or services innovations [13–15], in pricing, advertising, distribution and in strategic decisions in market segmentation [14]. Several hundred studies have conducted conjoint analysis applications in public and private sector [13].

This method contributes to the understanding of consumer preferences through a set of hypothetical alternatives, helping to solve a variety of marketing problems [16] and targeting to identifying the combination of product or services features that is most desired by consumers [17].

It is more likely for sport marketers to use conjoint analysis methodology to "design new products features sets" so as to determine the product characteristics that are important to the sport tourist and constitute their preferences, under the lowest possible cost [18].

Table 1 Scenarios of alternative sport characteristics

1. *Time* refers to the season (Summer, Autumn, Winter, Spring) that the event occurs and whether it is day or night
2. *Entertainment* opportunities refer to services or any other activities that relate to recreational activities during the event
3. *Award* if the winner wins a prize or other prizes such as money etc.
4. *Cost* regards the registration fee for the event (and not to any other costs)
5. *Product promotion* refers to any promotions of the products during the event (such as advertising and selling sport related accessories or complementary products that are related to the sport activity during the event)
6. *Technology* is the WIFI technology during the event which can directly deliver the results of the event at any stage, with the use of Internet application
7. *Landscape (place, space, environment)* refers to the urban or outdoor environment during the event

2.2   Yedi Kule Monuments Run and Data Collection

Yedi Kule Monuments Run Small Scale Sport Event is organized every year within the International Monuments Festival Thessaloniki with the view of promoting the region Ano Poli, with its historical monuments and rich cultural heritage, as a tourist destination.

The athletes of the Run participate in a 6 km route that connects eight monuments, Eptapyrgion, Vlatades Monastery, Saint David, Byzantine Bath, Saint Nikolas the Orphan, School of Arts and Jobs Chamdie (Islachane area), The Gardens of Pasha, Alyseos Tower (Trigoniou), Eptapyrgion (Yedi Kule). UNESCO protects these monuments due to their significant historical value and international cultural heritage [19].

To collect the data for our testing, we chose a questionnaire distributed in similar events, in order to be able to make comparisons with a corresponding study being held in Taiwan [20] (Table 1).

The conjoint product evaluation scenarios were based on the overall sport tourist preferences or utilities associated with the conjoint attributes' levels that are used to define each of the different basic total sport event product offers.

The sample consisted of athletes and/or their companions, tourists and visitors in the area of Eptapyrgion. A questionnaire was developed and distributed to 130 Participants during Yedi Kule Run. Response rate was 86% since 112 participants filled in the questionnaire.

The questionnaire consisted of two parts. The first one included the 19 alternative scenarios based on a 10-point Likert type measurement, with one representing "Absolutely Unattractive" and ten "Absolutely Attractive". The second part referred to socio-economic and demographic characteristics of the respondents.

The sample profile was at 59% men, the majority being between 19–39 and 40–49 years old (62 + 15 = 77%), and at 41% women, the majority being between 19–39 years old (44%). Most of the respondents (69%) declare that they "will come back" and 27% that they "will surely come back" in the next Yedi Kule Run sport event.

Table 2 Yedi Kule monuments run conjoint analysis plancards

Time	Entertainment	Award	Cost (€)	Product promotion	Technology	Landscape
Autumn, day	No	No	15	Yes	Yes	Urban
Autumn, night	Yes	Yes	5	No	Yes	Urban
Summer, night	Yes	Yes	25	No	Yes	Outdoor
Summer, day	No	No	5	Yes	Yes	Urban
Winter, day	No	No	5	No	No	Outdoor
Winter, day	Yes	Yes	5	No	No	Outdoor
Winter, night	No	No	25	Yes	No	Urban
Spring, day	No	No	25	No	No	Outdoor
Spring, night	No	No	15	No	Yes	Outdoor
Winter, day	Yes	Yes	25	Yes	Yes	Outdoor
Winter, night	Yes	Yes	15	Yes	No	Urban
Autumn, day	Yes	Yes	5	Yes	Yes	Urban
Summer, day	Yes	Yes	15	No	No	Urban
Summer, night	No	No	5	Yes	No	Outdoor
Spring, night	Yes	Yes	5	Yes	No	Outdoor
Winter, night	No	No	5	No	Yes	Urban
Winter, day	No	No	25	Yes	No	Outdoor
Summer, night	No	No	5	No	Yes	Urban
Winter, night	Yes	Yes	25	No	Yes	Urban
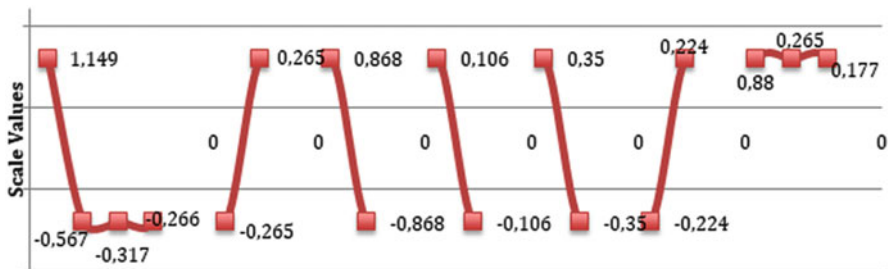
Fig. 1 Conjoint analysis results; part-worth scale values and importance of the seven event product characteristics

Twelve undergraduate students distributed the questionnaires at the time of arrival of participants and visitors at the monuments. The students, separated in teams of 2–3, distributed the survey, explained the procedure, volunteered for support or potential explanations, and collected the questionnaires.

The data was analyzed through SPSS Conjoint at the aggregate level (pooled data). The Plancards of the Conjoint Analysis are described on Table 2 whereas Fig. 1 shows the part-worth scale values and importance of the seven event product characteristics of Table 2.

3   Findings and Discussion

The results of the present study (Table 3) show that Greek sport tourists mainly prefer the "Time (Season)" as the most significant factor in choosing a sport event, with important score 29,48. The second significant factor for them is the "Award" and the third one is the "Registration Cost". The "Wi-Fi" is also important for them presenting a score of 11,11 while "Organizing Events Day or Night" comes fifth in their preferences with average score 9,37.

The lowest important factors for Greek participants are the "Product Promotion" and the "Landscape" with average important scores 9,04 and 8,66, respectively.

The correlation coefficient Pearson's R (which can report the internal validity of conjoint analysis) for Yedi Kule Monuments Run study is $r = 0.898$, indicating a strong linear relationship between the observed and the estimated data [21].

The comparison (Table 3) of Yedi Kule Conquest Monuments Run 2017 with Kaoshiung Taiwan bicycling event in Taiwan during 2015 [20] indicates that Greeks and Taiwanese appear to have similar degrees of preference towards the time that the event is organized.

However, the rest preference attributes differ between the two studies. Taiwanese seem to prefer the factor "Registration Cost" very closely with the factor "Time (Season)" while "Organizing Events Day or Night" comes third for them.

The rest attributes are very close one another to their preferences but, still, they are different from those of the Greeks. This fact may be attributed to the different events studied (marathon and bicycling event) or to the cultural differences between the participants.

4   Conclusion and Implications

The outcomes of the study show how influential each factor is to the overall evaluation of the tourism product and may be useful for host and event managers. The latter may be able to understand the participants' preferences more and get helpful consideration into developing their destination marketing strategy based on tourists' preferences with the view of reaching the product preferences of sport-tourist target group(s).

In conclusion, for both studies the attribute "Time (Season)" is the suggested one during planning and seems to be the characteristic that managers should consider in order to create an attractive proposal for their event. Regardless of the differences in the rest factors preferences, managers should include a variety of tangible and intangible attributes as most valuable for their strategic plan, based on the kind of the event and the cultures of the participants.

Managers should also pay attention to the sustainability of the event as a triple bottom line responsibility when organizing their business goals [22]. Conjoint

Table 3 Yedi Kule 2017 and Kaoshiung Taiwan bicycling event 2015, average importance

Studies/factors	Season of the year	Day or night	Animation and awards	Trade shows and exhibitions	Preferable WiFi, direct report of the results	Preferable urban or non urban event	Registration costs
	Average importance						
Yedi Kule Conquest 2017	29,48	9,37	18,33	9,04	11,11	8,66	12,16
Kaoshiung Taiwan bicycling event 2015	26,66	15,91	7,923	7,534	7,939	8,891	25,15

analysis will help them determine the variety of attributes that will influence the participants' decision-making.

This study is subject to some limitations, the first one being the geographical region, which is too limited to be generalized to other events in Greece or other countries. Besides, more research is needed to further explore coherent factors that influence sport-tourists sport event buying behavior through different sport events. In addition, future research should deal with the exploration of influential factors using qualitative approaches, such as focus group techniques for several events and regions.

References

1. Higham J, Hinch T (2002) Tourism, sport and seasons: the challenges and potential of overcoming seasonality in the sport and tourism sectors. Tour Manag 23:175–185
2. Gibson H, Willming C, Holdnak A (2003) Small-scale event sport tourism: fans as tourists. Tour Manag 24:181–190
3. Grix JE (2014) Leveraging legacies from sports mega-events: concepts and cases. Springer, Basingstoke
4. McNamara P, Pazzaglia F, Sonpar K (2018) Large-scale events as catalysts for creating mutual dependence between social ventures and resource providers. J Manag 44:470–500
5. Gibson H, Kaplanidou K, Kang S (2012) Small-scale event sport tourism: a case study in sustainable tourism. Sport Manag Rev 15:160–170
6. Duglio S, Beltramo R (2017) Estimating the economic impacts of a small-scale sport tourism event: the case of the Italo-Swiss mountain trail CollonTrek. Sustainability 9:343
7. Perić M, Đurkin J, Wise N (2016) Leveraging small-scale sport events: challenges of organising, delivering and managing sustainable outcomes in rural communities, the case of Gorski Kotar, Croatia. Sustainability 8:1337
8. Taks M, Chalip L, Green B-C (2015) Impacts and strategic outcomes from non-mega sport events for local communities. Eur Sport Manag Q 15:1–6
9. Wilson R (2006) The economic impact of local sport events: significant, limited or otherwise? A case study of four swimming events. Manag Leis 11:57–70. https://doi.org/10.1080/13606710500445718
10. Fotiadis A, Vassiliadis C, Shang-Pao Y (2016) Participant's preferences for small-scale sporting events: a comparative analysis of a Greek and a Taiwanese cycling event. EuroMed J Bus 11:232–247
11. Kavoura A, Sakas D (2017) The communication role of the 'imagined communities' in the promotion of international events. In: Proceedings in business and economics. Springer, Basel, pp 145–152. https://doi.org/10.1007/978-3-319-33865-1_18
12. Snelgrove R, Taks M, Chalip L, Green B (2008) How visitors and locals at a sport event differ in motives and identity. J Sport Tour 13:165–180
13. Green P, Srinivasan V (1978) Conjoint analysis in consumer research: issues and outlook. J Consum Res 5:103
14. Gustafsson A, Herrmann A, Huber F (2007) Conjoint measurement. Springer, New York
15. Toubia O (2018) 3 Conjoint analysis. In: Handbook of marketing analytics: methods and applications in marketing management, public policy, and litigation support. Edward Elgar, Cheltenham, p 52
16. Agarwal J, DeSarbo W, Malhotra N, Rao V (2014) An interdisciplinary review of research in conjoint analysis: recent developments and directions for future research. Cust Need Solut 2 (1):19–40

17. Siomkos G, Vasiliadis C, Lathiras P (2006) Measuring customer preferences in the winter sports market: the case of Greece. J Target Meas Anal Mark 14(2):129–140
18. Vassiliadis C, Mylonakis J (2005) Developing new ski tourism destinations marketing with the use of conjoint analysis. Editorial Advisory Board e 17(1):117–128
19. Yedi Kule Monuments Run (2018) Yedi Kule monuments run. Accessed 26 May 2018. http://www.yedikule.gr/
20. Fotiadis A, Vassiliadis C, Sotiriadis M (2016) The preferences of participants in small-scale sport events: a conjoint analysis case study from Taiwan. Tour Int Interdiscip J 64(2):175–187
21. Green P, Srinivasan V (1990) Conjoint analysis in marketing: new developments with implications for research and practice. J Mark 54(4):3
22. Stylos N, Vassiliadis C (2015) Differences in sustainable management between four- and five-star hotels regarding the perceptions of three-pillar sustainability. J Hosp Market Manag 24 (8):791–825

Art or Society with "Emotions": Manifestations of Emotions from Ancient Greece to Today

Alexandra Vezyrogianni and Efharis Mascha

Abstract The paper aims to address the issue of emotional and cultural intelligence as fundamental human values necessary for art and society to develop. Art expresses emotions in different ways and every piece of artifact is considered as art because it embodies a human emotion, which the viewer can actually identify with. Similarly, society becomes possible as soon as every cultural creation embodies meanings and significations of human emotions at the moment of creation. In other words, art and society become possible when conveying emotions to people, emotions which transcend the specific time and era. Therefore, we firstly discuss in detail how EQ (emotional intelligence) supplements IQ (intelligence). Then how emotional intelligence is supplemented by cultural intelligence and how this can be beneficial for cultural management. In other words, cultural intelligence is a strong asset for cultural managers to develop in order to lead their precious work into sustainable development. Furthermore, we will discuss the museum exhibition *A world of emotions: Ancient Greece 700 BC–200 AD* which was presented in the Acropolis museum in autumn 2017.

Keywords Emotion · Cultural intelligence · Cultural management · Museum studies

1 Introduction

The aim of the paper is to address the issue of emotions as constitutive parts of society. Emotions are seen as the link between the individual and the social. Emotions are discussed not from an individualistic, personal perspective but from

A. Vezyrogianni
Greek Ministry of Education, Research and Religious Affairs, Athens, Greece

E. Mascha (✉)
Hellenic Open University, Patras, Greece
e-mail: mascha.efcharis@ac.eap.gr

a social-cultural one. For instance, whilst writing this article a serious and lethal forest fire in Attica spread grief, sorrow and anger between the whole nation. How is society going to deal with these emotions?

Firstly, the paper discusses a theoretical encounter on emotion and then moves to the analysis of emotional and cultural knowledge as the best assets for cultural managers to develop strategies and advance their organizations. Our claim is that this type of knowledge is more significant than cognitive knowledge because it refers to the ability of the person to function with people and situations encompassing different cultural backgrounds. Secondly, the museum exhibition *A world of emotions: Ancient Greece 700 BC–200 AD* will be presented. The particular exhibition unfolds the symbolic range of emotions from pleasure to sorrow with which we can empathize and identify ourselves today. Not only did this exhibition drive us to the past but also made us feel the feelings of our ancient past. Cultural management today can develop significantly if it entails this notion of cultural empathy carried through and driven by emotions.

2 Theoretical Encounter on Emotions

Only Emotions had been considered to be infantile and uncivilized, hence need to be controlled so as society to work properly and rationally [1]. However, social sciences and humanities have recently showed a great interest in the study of emotions as sociocultural products and a more in depth analysis can actually reveal emotions as products of power relations. Therefore, we will discuss this theoretical standpoint based on Raymond Williams' concept 'structure of feeling' and Lawrence Grossberg's concept 'economy of affect'. A critical investigation of the aforementioned theoretical encounter is provided by Pribram and Harding [1], which will be supplemented by updated literature on sociology of emotion and will form the basis for the understanding of emotional and cultural intelligence discussed in detail further in the paper.

How Raymond Williams considers 'structure of feeling'? Williams begins his discussion on the structure of feeling by considering Fromm's 'social character' and Benedict's 'pattern of culture' as abstract concepts. For Williams "the structure of feeling is the culture of a period: it is the particular living result of all the elements in the general organization" [2]. Williams studied in detail English literature during the seventeenth and eighteenth century and he reached a set of conclusions with regards to the role of emotion as 'structure of feeling' which are useful and significant.

Firstly, he considers the 'structure of feeling' unique to every culture through time and place and non-transferrable from generation to generation [2]. Secondly, he uses 'structure of feeling' as a class-linked concept, analyzing what he believes are the principle structures of feeling for each class in a particular time and space. Thirdly, he links structure of feeling with 'experience' because experience represents an authentic expression of feeling and experience for Williams is real and immediate and thus credible [1].

Having these dimensions in mind Pribram and Harding moved a step forward and chose to emphasize, and we definitely agree on this, the productive process that jumps out from the analysis of structure of feeling in every social order [1]. In other words and using the example of financial crisis, austerity measures and instability introduced in Greece since 2011, we are able to detect new subject identities that constitute an always changing social order. As mentioned earlier on, Williams didn't seem to link structure of feeling with power relations and thus, following Pribram and Harding [1, 2] it is useful to see Lawrence Grossberg's account of 'economy of affect' in order to have a fuller theoretical encounter on emotion.

Grossberg's work mainly explores how power operates through affect. He is highly critical of the postmodernist account of affect as pleasure and argues that there is a lack of understanding between pleasure and form of resistance. In a sense, following Grossberg we need to describe pleasure and then return to the question of political articulation [2]. Similarly to Williams, Grossberg links "the individual with the social formation through the activities and energies of affect" [1]. For Grossberg affect is a constitutive part of popular culture and he differentiates it from emotion. Specifically, he states that "emotion exists when affect is mediated with ideology, and specific emotions exist when specific combinations of affect and ideology merge or clash" [1]. So, for Grossberg affect is energy and an investment, constitutive to popular culture.

The aforementioned theoretical encounter of emotions throws sufficient light to the importance of studying emotions. Emotions circulate meaning, transmit social relations, form subjectivities and are significant to power relations. Hence, having this theoretical background in mind, we will move towards a better understanding of what is known as emotional and cultural intelligence and its transition from cognitive intelligence.

2.1 The Transition from Cognitive Intelligence to Emotional and Cultural Intelligence

The growing interest in 'everyday intelligence' resulted in defining new types of intelligence which focus on specific sectors of content, such as social intelligence [3] emotional intelligence [4] and cognitive intelligence [5]. These terms are interwoven nowadays with the everyday routine of people and plenty of delicate balances in the working and interpersonal environment are based upon them. Below we will look into each one of them separately in order to determine their concept as well as their meaning.

The meaning of emotional intelligence is continually growing since the 1990s and on. Specifically, Bar-On in his unpublished manuscript "The development of a concept and test of Psychological Well-being" [6] Mayer and Salovey [7, 10] define emotional intelligence as a new field of thinking where, starting from the emotional world of the individual, we are guided by a series of social skills related to his/her

daily needs as well as to the development of the social universe within which he/she lives and grows. In short, the management of emotions of the individual and the emotional awareness constitute the motive but also the means for his/her development and evolution. Consequently, emotional intelligence 'encompasses the ability of somebody to interpret the emotional roots of his/her intellectual behavior and choose his/her acts in such a way to affect the results' [3]. According to Schmidt and Hunter cultural intelligence constitutes a specific form of intelligence which is focused on the ability of the individual to realize concepts through thinking in circumstances of multiculturalism [5]. Just like emotional intelligence (EQ) complements cognitive intelligence (IQ) cultural intelligence (CQ) constitutes another complementary form of intelligence that can explain flexible adaptation and function within new cultural contexts [3].

Emotional intelligence is inextricably linked to the individual's culture and so an individual with high emotional intelligence within a specific cultural context is not meant to be emotionally intelligent within another culture [11–13]. On the contrary, cultural intelligence is not linked to the specific culture of the individual but refers to a general set of abilities within the frame of a condition characterized by multiculturalism while, in parallel, provides with a research model aiming at the creation of effective leaders within multicultural environments.

Research proves that effective multicultural leadership is not simply an issue of emotional intelligence and common sense [14]. Exactly as emotional intelligence focuses on the ability of an individual to function effectively with people, paying attention to his/her emotions but also to the others' emotions, similarly cultural intelligence focuses on the ability of the individual to function with people and situations encompassing different cultural backgrounds [3, 15, 16].

In contrast, when we come in contact with unknown cultures people's behaviors and views intrigues us. Individuals with a high cultural intelligence quotient have the ability to evaluate the situation, to show understanding and to adapt appropriately within the frame of a different culture. This kind of adaptation is the result of voluntary endeavor on the part of the individual. Cultural intelligence is the set of qualities and skills which enable the individual to interpret unknown behaviors and situations of a culture as if it was theirs. One of the most important elements that help us track down an individual with cultural intelligence is how he/she can define which behaviors are universal and concern the whole mankind, which refer to a specific culture and which are clearly personal and comprise the elements of the character of a certain individual [14, 17].

Theories and handbooks that refer to the intercultural interaction are plentiful and focus on the cultural awareness, i.e. the awareness of how cultures differ regarding the rules, the habits and the behavior. The approach of cultural intelligence, besides the emphasis on awareness, also stresses the importance of evolution of a set of skills related with the understanding, the motivation and the flexible behavior within different cultural contexts. Having set both the issue of emotional and cultural intelligence in theoretical terms we will now move forward and analyze them concretely in practical terms.

3   A World of Emotions

During autumn 2017 we had the chance to visit the following museum exhibition, which will be discussed as a case study and based on the aforementioned theoretical encounter we can view clearly how emotions form constitutive part of ancient culture. During our visit we collected the exhibition brochure.

The museum exhibition *A world of emotions: Ancient Greece 700 BC–200 AD* was initially presented at the Onassis Cultural Center in New York in March 2017 and was later exhibited in the Acropolis museum in autumn 2017. In Athens, the exhibition would not have been possible without the support and belief of Dimitrios Pandermalis, President of Acropolis museum and the curators Professor Angelos Chaniotis, the former Director of the National Archeological Museum Nicos Kaltsas and Professor Ioannis Mylonopoulos. The exhibition was crowned the Youniversal Award winner, after receiving the highest number of votes in the 4-year history of the Global Fine Arts Awards [18].

Drawing information from the brochure of the exhibition and our visit we can have a first picture of the exhibition. The sculptures at the center, personifying Eros and Pothos, can be traced back to original masterpieces by Lysippos and Scopas respectively. Around them 129 sculptural works, vase paintings, drawings and small works from Greek and foreign museums aimed to introduce visitors to the world of emotions from Homer to the end of Antiquity. The exhibition had an extensive textual explanation of works, which were supplemented by brief video presentations, which drew the attention of the visitor and illustrated details of the posture and facial expressions of the works of art. As the following exhibition floor plan shows following this circular spiral we can see that the works of art are set in four major categories: the art of emotions, spaces of emotions, emotional conflicts and enslaved by emotions. Spaces of emotions have a set of thematic subcategories such as the private spaces of emotions, public spaces of emotions, emotions in sacred spaces, the cemetery space of grief and hope. The category Emotional conflicts consist of one subcategory, which is the battlefield. Last and at the very end of the exhibition the category enslaved by emotions consists of Medea (Fig. 1).

Following Dimitrios Pandermalis, President of Acropolis museum, 'emotions were present everywhere in the culture and lives of the ancient Greeks and that they also have a special place in understanding ancient Greek art, literature, history, political life, society and religion' [19]. His reference to emotions as omnipresent is exactly how Williams and Grossberg refer to emotions as constitutive parts of culture. Moreover, Pandermalis mentions that 'at the end of the fifth century, there was lively debate about Greek art in particular, amongst the circle of friends of the philosopher Socrates: can and how does an artist sculptor communicate the character of the soul, that has neither color nor form, that is the emotions, in a work of art?' [19] The issue raised in this discussion during the fifth century and what the particular exhibition brings to the fore is how art is a mediator and links the individual to the social and the importance of cultural intelligence. The sculptor communicates human emotions and documents parts of the 'strategy of feeling' of
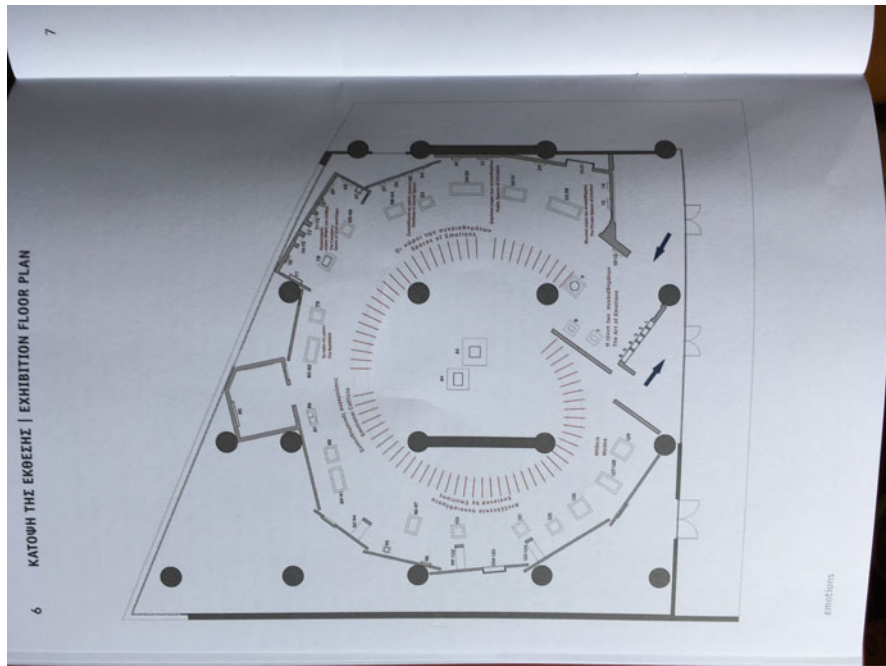
Fig. 1 Exhibition floor plan—[19]

the particular society to humanity. Similarly, the 'economy of affect' could be viewed in the different phases the exhibition is divided such as spaces of emotions where the distinction between public and private places is evident, emotional conflicts such as the battlefield and enslaved by emotions. The last category signifies in great extent the dominance of emotions in human life and their importance even if in a negative sense. Human mind and soul are enslaved by emotions and end up in Medea's tragedy, where we see the range, shock and anger.

Last but not least, Dr. Antonis Papadimitriou mentions that the exhibition's mission is 'to help us empathize with the ancient world and the emotions that ruled it' [19]. In a sense we would not be able to grasp the meaning of life within antiquity if we didn't have a clear view of the emotions. Emotions rule the ancient world as they rule the world of today, but as Williams rightly points out emotions such as anger, happiness or love might be the same but the 'strategy of feeling' is not inherited from generation to generation, so our cultural intelligence is being deployed for such understanding. Finally, what needs to be significantly considered is the role of the statutes Eros and Pothos right in the center of the exhibition plan. On the one hand love and on the other the desire for something that is absent or missing. For Plato love and desire are distinct, thus symbolized in two different sculptures. They are the driving forces of antiquity and their role is central to the ancient Greek society.

4　Conclusion

Having presented a thorough theoretical discussion on emotion, we discussed the development of emotional and cultural intelligence as advanced aspects of cognitive knowledge. Clearly we can point out that an enjoyable experience in a museum is highly likely to lead to more traffic and turn the occasional visitor to frequent visitor. Emotions count much and cultural managers should take into consideration this aspect. Emotions count and are the constitutive part of culture as it was presented in the museum exhibition. We claimed that similar emotions (joy, pride, anger, sorrow, mercy) seem to traverse each culture but their cultural investment differs significantly, thus revealing a different 'strategy of feeling' in different cultures, which signifies our cultural empathy. Finally, cultural empathy is beneficial for cultural managers in every step of management as it can advance the quality of their policies, the development of the organization and their own professional development.

References

1. Pribram ED, Harding J (2004) Losing our cool? Following Williams and Grossberg on emotions. Faculty works: communications, 9. http://digitalcommons.molloy.edu/com_fac/9
2. Harding J, Pribram ED (2009) Emotions: a cultural studies reader. Routledge, London
3. Vezyrogianni A (2016) Ο ρόλος της Συναισθηματικής και Πολιτιστικής νοημοσύνης στην διοίκηση και την επικοινωνία μεταξύ Πολιτιστικών μονάδων και κοινού (=the role of emotional and cultural intelligence for the management and communication between cultural organization and their visitors), MSc thesis (unpublished), Hellenic Open University
4. Mayer JD, Salovey P (1993) The intelligence of emotional intelligence. Intelligence 22:433–442
5. Schmidt FL, Hunter JE (2000) Select on intelligence. In: Locke EA (ed) Handbook of principles of organizational behavior. Blackwell, Oxford, pp 3–14
6. Bar-On R (1997) The emotional quotient inventory (EQ-i): a test of emotional intelligence. Multi-Health Systems, Toronto
7. Mayer JD, Salovey P (1997) What is emotional intelligence? In: Salovey P, Sluyter D (eds) Emotional development and emotional intelligence: implications for educators. Basic Books, New York, pp 3–31
8. Mayer JD, Cobb CD (2000) Educ Psychol Rev 12:163
9. Mayer JD, Caruso DR, Salovey P (1999) Emotional intelligence meets traditional standards for an intelligence. Intelligence 27:267–298
10. Mayer JD, Salovey P, Caruso D (2002) Mayer-Salovey-Caruso emotional intelligence test user's manual. Multi-Health Systems Inc., North Tonawanda, NY
11. Shutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, Golden CJ, Dornheim L (1998) Development and validation of a measure of emotional intelligence. Personal Individ Differ 25:167–177
12. Sternberg RJ (2002) Smart people are not stupid, but they sure can be foolish: the imbalance theory of foolishness. In: Sternberg RJ (ed) Why smart people can be so stupid. Yale University Press, New Haven
13. Thorndike RL, Stein S (1937) An evaluation of the attempts to measure social intelligence. Psychol Bull 34:275–284

14. Ang S et al (2007) Cultural intelligence: its measurement and effects on cultural judgment and decision making, cultural adaptation, and task performance. Manag Organ Rev 3:335–371
15. www.surveymonkey.com/r/MuseumVisitors
16. https://www.surveymonkey.com/r/H5JXS2Q
17. Ang S, Van Dyne L (2008) Conceptualization of cultural intelligence: definition, distinctiveness, and nomological network. In: Ang S, Van Dyne L (eds) Handbook of cultural intelligence: theory, measurement, and applications. New York, Sharpe, pp 3–15
18. Global Fine Art Awards. www.globalfineartawards.org, Accessed 25 July 2018
19. Acropolis Museum (2017) Exhibition brochure, "εmotions a world of emotions"

Analysis of the Relationship Between Transformational Leadership and Learning Organization in Health Care Services

Aspasia Goula, Dionisia Katelouzou, George Pierrakos, Dimitra Latsou, Sofia Dimakou, Aggeliki Stamouli, and Chrysostomos Natsis

Abstract The objective of this study was the investigation of the degree of implementation of the transformational leadership model at a private hospital of Athens and the analysis of the dimensions of the learning process of the organization. The stratified random sampling consisted of 100 hospital employees, 20% medical, 40% nursing and 40% administrative staff. Data collection lasted 6 months. In order to verify the reliability of the questionnaires, Cronbach's alpha index was calculated. The reliability index for the questions of the transformative leadership model was 0.971 and of the transactional leadership model 0.835, while in the learning organization questionnaire the reliability factor was calculated at 0.979. No significant differences were found between the dimensions of the Learning Organization Questionnaire (continuous learning, inquiry and dialogue, team learning, embedded system, empowerment, system connection, strategic leadership) and age groups and profession. The analysis revealed high correlation between learning organization variables and transformational leadership. In particular, it appears that the coherence of the organization facilitates leadership in the development of the strategy, stimulates human resources, and develops co-operation and group learning. Research and dialogue facilitates continuous learning, co-operation and the formation of appropriate systems, while the stimulation of human resources leads to continuous learning, research and dialogue. We concluded that at the private hospital there are systems and methods that enable continuous learning, information management and initiative-taking by the members of the organization. The results of this survey could constitute the starting point for reflection and further research, especially in the field of the Greek public health services, aiming at implementing transformative leadership practices.

Keywords Transformational leadership · Transactional leadership · Learning organization · Health care services

A. Goula (✉) · D. Katelouzou · G. Pierrakos · D. Latsou · S. Dimakou · A. Stamouli · C. Natsis
University of Western Attica, Athens, Greece
e-mail: agoula@uniwa.gr

1   Introduction

In a highly competitive world, health care organizations have to innovate, invent, introduce new services, and adopt innovative applications and new technologies [1] in order to achieve first survival and then growth [2]. At the same time, it is necessary to create a climate that encourages and motivates the constructive thinking of their members [3] and to seek ways to develop opportunities by implementing transformations within the enterprise [4].

Leadership's ability to transform is a collectivist approach to leadership in contrast to the individualistic approach of transactional leadership [5]. Transformational leaders provide individual consideration for the employee's needs and were perceived as leaders who stimulate and inspire subordinates to develop their own leadership capacity and achieve extraordinary results, while transactional leaders are those who lead through social exchange [5, 6]. Transformational leadership is a multidimensional concept [7]. It consists of three elements: charisma (leader's vision for the future, ways to meet goals, high performance criteria, determination and self-confidence), individualized consideration (leader's interest in developing employees' potential and talents), intellectual stimulation (leader's help so that the employees become aware of organizational problems and become innovative and creative) [8].

The most important challenge of transformational [9–11] is to form the necessary conditions in order to encourage, support and facilitate the culture of the 'learning organization'. In turn, learning organization comprises the modern organization model that allows its members to continuously ameliorate their knowledge so as to make them equipped to adapt to any changes within a continuously changing business environment [12].

Transformational leader in the learning organization is a catalytic agent and a trainer [12], is encouraging dialogue and communication among members [6] and encouraging an appropriate environment for innovative teams [13].

For many authors, transactional and transformational leadership are considered complementary forms of leadership, in the sense that leaders are more effective when they show both leadership styles [14]. Studies investigating the relationship between transformative and transactional leadership with a number of important organizational variables such as leader efficiency, team performance, organizational performance, and job satisfaction have shown that transformational leadership strengthens and expands the positive influence of transaction leadership on these variables [14, 8, 15]. A leader can use contingent reward to be more effective and at the same time be considered by the employees to be charismatic [16].

Furthermore, healthy services studies have identified that transformational leadership is consistently associated with successful implementation of change initiative, achievement of patient safety and emotional intelligence [17–19]. Moreover, job satisfaction in health care units depends on charismatic leadership [20, 21].

In Greece, public health care units are characterized by internal orientation, observance of rules and processes as well as focus on control hierarchy,

predictability and stability with an absence of employees' participation in decision-making. Centralized, hierarchical structure is an obstacle to transform health care units into learning organization [1].

The objective of the research is to investigate the degree of implementation of the transformational leadership model at a private hospital of Athens and to analyze the dimensions of the learning process of the organization. To our knowledge, there is a lack of research on leadership styles associated with organizational learning in health care units in Greece. The present study is a first attempt to investigate the specific matter.

2 Methods

2.1 Study Design and Participants

The research was conducted at a private hospital in Attica, which is one of the main private hospitals in Greece. The sampling method of the survey was stratified random sampling. The sample of the survey was the medical, nursing and administrative staff working in the hospital. The employees divided into these three sub-groups and selecting subjects from each group in order to achieve equal representation of each. One-thirty questionnaires were provided to health professionals and 100 were returned. The response rate was 76.9%. Data collection lasted from July to December 2016.

The survey adopted the quantitative approach using two questionnaires. The first one is the Learning Organization Questionnaire of Marsick and Watkins [22] that examines, through seven dimensions, the existence of learning cultures at individual, organizational and team levels. The dimensions are: continuous learning, inquiry and dialogue, team learning, embedded system, empowerment, system connection, strategic leadership. Respondents are asked to answer to 43 measurement items, to a six point Likert scale, where one represents "Totally Disagree" and six represents "Totally Agree" [22]. The second questionnaire is the Multifactor Leadership Questionnaire by Avolio, Bass and Jung [7] that measures the dimensions of both the transformative and the transactional leadership. The questionnaire measures the transformative leadership through three elements: charisma-inspirational leadership (12 sentences), intellectual stimulation (4 sentences) and individualized consideration (4 sentences) and transformative leadership through two elements: contingent reward (4 sentences) and management by exception (4 sentences). The above questions were measured in the form of a Likert scale, where one represents "Never" and five "Almost always" [23, 8].

2.2 Statistical Analysis

The reliability of the questionnaire was assessed with the use of Cronbach's alpha coefficient and the first results of the study are presented below together descriptive statistics. The relationship between dimensions of the Learning Organization Questionnaire and two leadership models was explored using Pearson correlation. Moreover, simple regression analyses were performed in order to determine the impact of transformative leadership on learning culture, where by the seven dimensions of Learning Organization Questionnaire were used as dependent variable and the transformative leadership as independent variable. For final interpretation of statistical significance, $p = 0.05$ was used. Statistical analysis was conducted on S.P.S.S. 25.0.

3 Results

The survey sample consisted of 40% of nursing staff, 20% medical staff and 40% administrative staff. The majority of the sample was female (52%) and 57% was unmarried. Fifty percent of the participants belonged to age group 29–39 years. Also, 49.0% had completed university education, 26% of them had a Masters and 8% had a postgraduate diploma (Table 1).

In order to check the reliability of the questionnaires, Cronbach's alpha index was calculated. The reliability index for the questions of the transformative leadership model was 0.971 and of the transactional leadership model 0.835, while in the learning organization questionnaire the reliability factor was calculated at 0.979.

Table 1 Frequency distribution by socio-demographic data

		N	%
Gender	Male	48	48.0
	Female	52	52.0
Age group	18–28	7	7.0
	29–39	50	50.0
	40–50	37	37.0
	$\geq$51	6	6.0
Profession	Medical staff	20	20.0
	Nursing staff	40	40.0
	Administrative staff	40	40.0
Education level	Secondary level	5	5.0
	Bachelor level	49	49.0
	Master level	26	26.0
	PhD level	8	8.0
Marital status	Married	57	57.0
	Unmarried	36	36.0
	Other	7	7.0
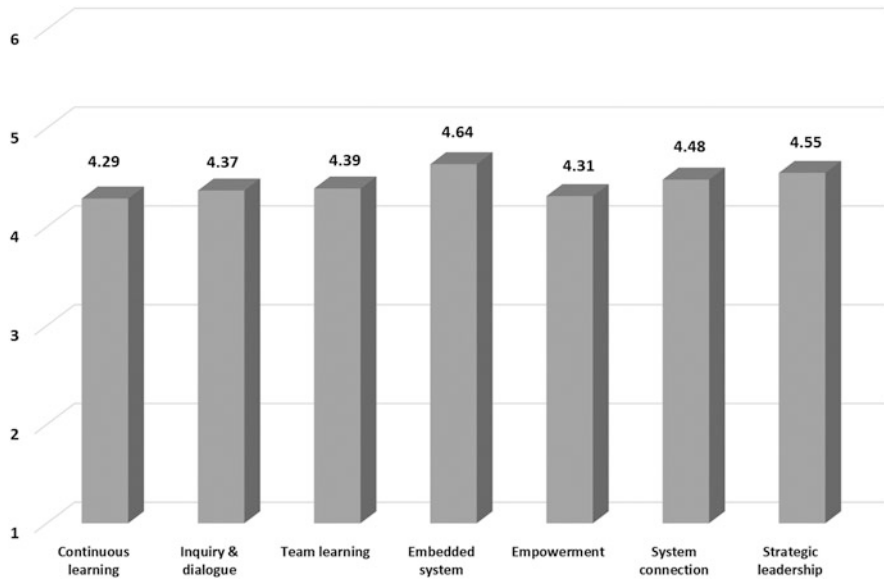
Fig. 1 Mean value of seven dimensions for learning organization questionnaire

Figure 1 depicts the mean for the seven dimensions of the Learning Organization Questionnaire. The highest overall score was noted for embedded system (4.64) and the lowest score for continuous learning (4.29). The examined hospital seems to have a moderate learning culture which means that the organization needs to encourage dynamic organizational learning processes.

The dimensions of Multifactor Leadership Questionnaire are presented in Fig. 2. The mean of transformative leadership was 4.09, while the transactional leadership was 3.92 which indicates that the examined hospital follows more the transformative leadership.

No significant differences were found between the dimensions of Learning Organization Questionnaire and socio-demographic data. Both leadership models were correlated moderately positively with all dimensions of the Learning Organization Questionnaire (Table 2). However, slightly higher correlations are observed between transformative leadership and examined dimensions in comparison with transactional leadership, which suggests that learning culture increases more with transformative leadership.

Simple regression analyses were conducted in order to further investigate whether the transformative leadership model could influence each of the seven dimensions (7 regression models) of the Learning Organization Questionnaire. The transformative leadership model was related to embedded system ($\beta = 0.420$), system connection ($\beta = 0.446$), empowerment ($\beta = 0.501$), inquiry and dialogue ($\beta = 0.512$), and strategic leadership ($\beta = 0.446$). Of the dependent variables included in the research, continuous learning and team learning had the highest standardized regression
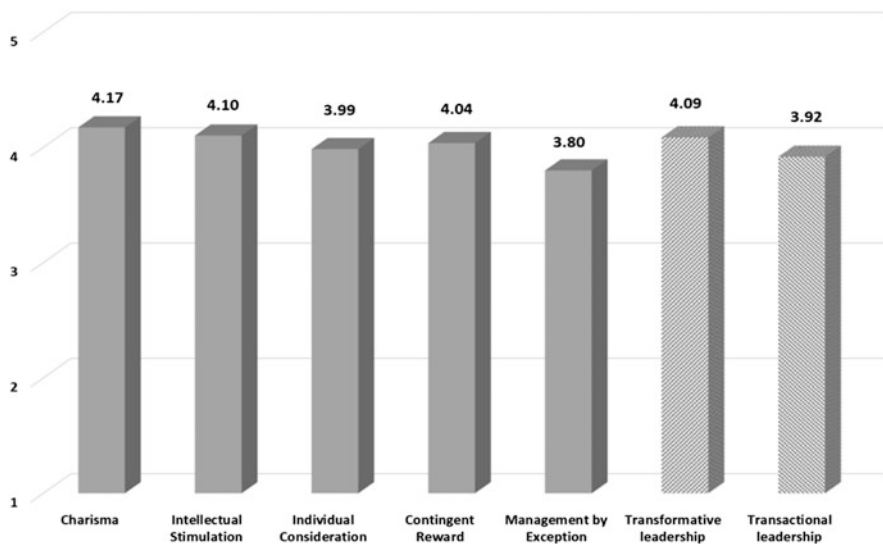
Fig. 2 Mean value of dimensions for multifactor leadership questionnaire

Table 2 Pearson correlations between dimensions of learning organization questionnaire and leadership models

	Transformative leadership[a]	Transactional leadership[a]
Continuous learning	0.481	0.451
Inquiry and dialogue	0.436	0.336
Team learning	0.536	0.472
Embedded system	0.355	0.381
Empowerment	0.406	0.398
System connection	0.379	0.371
Strategic leadership	0.462	0.458

[a]Correlation is significant at the 0.01 level (2-tailed)

Table 3 Simple regression analyses for dimensions of learning organization questionnaire vis-à-vis transformative leadership

				95,0% Confidence interval for B	
Dependent variable	β	Standard error	P value	Lower bound	Upper bound
Continuous learning	0.573	0.106	0.001	0.363	0.782
Inquiry and dialogue	0.512	0.107	0.001	0.3	0.725
Team learning	0.579	0.092	0.001	0.396	0.762
Embedded system	0.420	0.112	0.001	0.198	0.642
Empowerment	0.501	0.114	0.001	0.274	0.727
System connection	0.446	0.11	0.001	0.228	0.664
Strategic leadership	0.555	0.108	0.001	0.342	0.769

Independent variable: transformative leadership

coefficient (β = 0.573 and 0.579 respectively) and therefore were most influenced by transformative leadership (Table 3).

4 Discussion

In today's globalized conditions, the essential components of the survival of health care organizations are to respond directly to change, innovation, user-patients focus, continuous improvement, adaptation, and mostly organizational learning in new business data [1]. At present, transactional leadership is the dominant style operant in most health care organizations. Many of them have been resistant to trans-formational efforts [24]. According to Bass only organizations that are ready, able and willing to change are more transformational than transactional in terms of the new paradigm of leadership [25].

The results of this research indicate that the particular private hospital seems to fit into the transformative leadership model better. More specific, the "charisma" and "intellectual stimulation", dimensions of transformative leadership, are more recognized among health employees while the "management by exception", dimension of transactional leadership, seems to be the less recognized.

In other studies, the element of the transformational leadership "charisma," was found to be positively correlated with the employee's predisposition to identification with the organization, while the element of the transactional leadership "management by exception" had a negative correlation with the organizational identification [8]. Charismatic leadership is associated with the presence of collectivistic values in work groups and a heightened sense of community [26].

Several studies have provided strong evidence on the correlation between trans-formational leadership and organizational learning [6, 3]. A learning organization is a modern organization that inspires innovative and growth-oriented organizational behavior and is characterized by respect in every action of both leadership and its members [1]. A study using the Learning Organization Questionnaire, as a diagnostic tool in local public health departments in order to identify the organizations' capacity to learn, recorded that the variables: embedded systems, empowering people toward a collective vision, making system connections, and strategic leadership, were most highly correlated with knowledge performance [27].

The analysis of our study revealed high correlation between a set of learning organization variables and transformational leadership. In particular, it appears that the coherence of the organization facilitates leadership in the development of the strategy, stimulates human resources, and develops co-operation and group learning. Research and dialogue facilitates continuous learning, co-operation and the formation of appropriate systems, while the stimulation of human resources leads to continuous learning, research and dialogue.

At the particular private hospital there are systems and methods that enable continuous learning, information management and initiative-taking by the members of the organization. The examined hospital seems to have a moderate learning

culture which facilitates the creation of a health quality culture [28]. The results are consistent with a survey conducted at higher education institutions [29] while research conducted in hospitals abroad recorded low rates on empowerment dimension which has been connected with organizations that display a centralized hierarchical structure [30].

5 Conclusion

A limitation of the current study is needed to be recognized. The results of the survey refer to a specific private hospital in Attica, so the findings can only be limited to this hospital and may not represent the others private or public hospitals in the country.

In conclusion, the results of this survey could constitute the starting point for reflection and further research, especially in the field of the Greek public health services, aiming at implementing transformative leadership practices. Health care units should focus on transformational leadership in the organization in order to improve organizational learning.

References

1. Goula A (2014) Health care services' organizational culture. Papazizis Publications, Athens
2. Schein E (2004) Organizational culture and leadership, 3rd edn. Jossey-Bass, San Francisco
3. Garcia-Morales VJ, Jimenez–Barrionuevo MM, Gutierrez L (2012) Transformational leadership influence on organizational performance through organizational learning and innovation. J Bus Res 65:1040–1050
4. Bass BM (1999) Two decades of research and development in transformational leadership. Eur J Work Organ Psy 8:9–32
5. Burns J (1978) Leadership. Harper & Row, New York
6. Megheirkouni M (2017) Leadership styles and organizational learning in UK for-profit and non-profit sports organizations. Int J Organ Anal 25:596–612
7. Avolio BJ, Bass BM, Jung DI (1999) Re-examination the components of transformational and transactional leadership questionnaire. J Occup Organ Psychol 72:441–462
8. Georgada K, Xenikou A (2007) Transformational and transactional leadership: the augmenting effect on organizational culture and identification with the organization. Psychology 14:410–423
9. Zagoršek H, Dimovski V, Škerlavaj M (2009) Transactional and transformational leadership impacts on organizational learning. J East Eur Manag Stud 14:144–165
10. Snell RS (2001) Moral foundations of the learning organization. Hum Relat 54:319–342
11. Maani K, Benton C (1999) Rapid team learning: lessons from team New Zealand America's cup campaign. Organ Dyn 27:48–62
12. Senge P, Roberts C, Ross RB, Smith BJ, Kleiner A (1994) The fifth discipline field book: strategies and tools for building a learning organization. Doubleday Publications, New York
13. Tushman ML, Nadler DA (1986) Organizing for innovation. Calif Manag Rev 28:74–92

14. Judge TA, Piccolo RF (2004) Transformational and transactional leadership: a meta-analytic test of their relative validity. J Appl Psychol 89:755–768
15. Mutahar AY, Rasli A, Al-Ghazali B (2015) Relationship of transformational leadership, organizational learning and organizational performance. Int J Econ Financ Issues 5:406–411
16. Waldman DA, Bass BM, Yammarino FJ (1990) Adding to contigent-reward behavior: the augmenting effect of charismatic leadership. Group Organ Stud 15:381–394
17. Imran M, Ilyas M, Aslam M (2016) Organizational learning thought transformational leadership. Learn Organ 23:232–248
18. Downey LA, Papageorgiou V, Stough C (2006) Examining the relationship between leadership, emotional intelligence and intuition in senior female managers. Leadersh Organ Dev 27(4): 250–264
19. Leban W, Zulauf C (2004) Linking emotional intelligence abilities and transformational leadership styles. Leadersh Organ Dev J 25:554–564
20. Rad MA, Yarmohammadian M (2006) A study of relationship between managers' leadership style and employees' job satisfaction. Leadersh Health Serv 19:xi–xxviii
21. Chiok Foong Loke J (2001) Leadership behaviours: effects on job satisfaction, productivity and organizational commitment. J Nurs Manag 9:191–204
22. Marsick VJ, Watkins KE (2003) Facilitating learning organizations: making learning count. Gower Publishing, Aldershot
23. Avolio BJ, Gardner WL, Walumbwa FO, Luthans F, May DR (2004) Unlocking the mask: a look at the process by which authentic leaders impact follower attitudes and behaviors. Leadersh Q 15:801–823
24. Schwartz R, Trumblin T (2002) The power of servant leadership to transform health care organizations for the 21st-century economy. Arch Surg 137:1419–1427
25. Bass BM (2000) The future of leadership in learning organization. J Leadersh Stud 7:18–40
26. Xenikou A, Simosi M (2006) Organizational culture and transformational leadership as predictors of business unit performance. J Manag Psychol 21:566–579
27. Watkins K, Milton J, Kurz D (2009) Diagnosing the learning culture in public health agencies. International Journal of Continuing Education and Lifelong Learning, Centre for Research in Continuing Education & Lifelong Learning, University of Hong Kong. https://www.ufhrd.co.uk/wordpress/wp-content/uploads/2008/06/1023-diagnosing-the-learning-culture-in-public-health-agenc.pdf
28. DeBurca S (2000) The learning health care organization. Int J Qual Health Care 12:457–458
29. Nazari K, Lope Pihie Z (2012) Assessing learning organization dimensions and demographic factors in technical and vocational colleges in Iran. Int J Bus Soc Sci 3:210–219
30. Leufven M, Vitrakoti R, Bergstrom A, Ashish KC, Malqvist M (2015) Dimensions of learning organizations questionnaire (DLOQ) in a low-resource health care setting in Nepal. Health Res Policy Syst 13:6

Ways to Find Employment and Preferences in Relation to a New Job for University Graduates of the Pilsen Region in the Czech Republic

Lenka Ližbetinová and Dagmar Weberová

Abstract The aim of this article is to determine the most frequently used methods of job search among University Graduates in the Pilsen Region and to evaluate them according to the time horizon of getting a job. As the field of study may have a high impact on the results, the data will be presented with regard to the area of the graduate's focus. These outputs will then be compared with secondary data on job search patterns in selected regions of Europe from comparable published research. The article also focuses on identifying graduate preferences with regard to future employment as well as on gender and the field of study. The article is based on the partial results of research investigating the application of graduates in the Pilsen Region in the Czech Republic. The target group of the research was University Graduates, who graduated from the Bachelor's degree program in 2012–2016 and have been living in the Pilsen Region. The sample consists of 272 respondents studying different study fields at universities. The outputs presented in this article can support the work of HR professionals who deal with recruitment and acquisition of talents among the University Graduates in the Pilsen Region.

Keywords University graduates · Job search · Pilsen region · Recruitment

1 Introduction

Considering graduates employment, there are two fundamental views. The first is the entry of graduates into the labor market, when they try to succeed in their field of study and in a suitable job position. Bearing in mind that school leavers fall together

L. Ližbetinová

Faculty of Corporate Strategy, Institute of Technology and Business, České Budějovice, Czech Republic

D. Weberová (✉)

Faculty of Multimedia Communications, Tomas Bata University in Zlín, Zlín, Czech Republic
e-mail: weberova@UTB.cz

with young people, the long-term unemployed, those over 50 years of age, persons after maternity and parental leave with people with disabilities, people with no qualifications or low qualifications in problem groups on the labor market, this situation is not for everyone easy. A frequent problem in the employment of graduates lies in their zero practice [1]. Financial costs of incorporating graduates are higher than for applicants with experience. The number of graduates registered at the Labor Office fluctuates over the course of the year. The highest increase can always be seen in the autumn months when fresh graduates from secondary and tertiary schools come to get registered. Students are recommended to prefer long-term part-time jobs. This seems to be advantageous because students will be able to fill in parts related to their practice in their CV [2]. A more significant advantage is that, and it is often the case, mutual long-term cooperation results in the conclusion of a legal labor relationship and the student has secured a smooth transition between the school and the profession [3].

This brings us to a second perspective on the employment of graduates [4]. Many high-quality graduates do not have the problem of finding employment during their studies, before graduation or shortly after graduation. For employers, these graduates are the target group of their interests [5]. It may especially be the labor market situation in technical branches where there is a strong lack of university-educated workers [6, 7]. Employers have to address this demand and it is in their interest to get the best graduates. Employers' understanding of preferred ways of seeking employment by this group of candidates and their preferences for future employment can provide a competitive advantage [8] and make the search and recruitment process more effective [9, 10]. Expansion development of information technologies [11] also changes the level of preferences of the way of seeking employment at terminating students of universities. The Internet has become the largest source of job opportunities and ranks among the most effective sources [12–14]. Today, it is common for organizations to advertise via the Internet, not only on their websites, but also through the personal portals with which websites are linked. These portals offer an extensive overview of vacancies in one place [15, 16]. According to Kowalska [17], the benefits of looking for a job over the Internet lie in a wide database of offers and the possibility of a free publication of the candidate's CV. Fu et al. [11] considers the prospect of searching on the Internet also as an opportunity to verify the company, its structure and the amount of its registered capital in the Commercial Register. On the other hand, Geisslerova [3] complains of the disadvantage that the offer on the website does not include all types of jobs.

Hitka and Lorincova [5, 18] state that the use of job search over social networks is now becoming a sophisticated process of job search. This option is not used only by jobseekers, but also by employers who present their offer on social networks. Employers are starting to search for new employees via specially targeted networks. The most famous network is LinkedIn. Král [19] defines LinkedIn as "a social network that connects users with the labor market. It is a place where demand for work from employers meets the offer from users". According to Yagra [20] there are Facebook, Classmates or Xing in addition to the LinkedIn network. These

progressive ways of looking for a job can be complemented by, for example, job fairs, trainee programs, a company's website, or distribution of CVs by e-mail.

The aim of this article is to determine the most frequently used methods of job search among University Graduates in the Pilsen Region.

2 Methods

The goal of this article is to determine the most frequently used ways of finding employment applied by University Graduates in the Pilsen Region. The presented results take into account the time horizon of success as well as the area of the graduate's focus. These outputs are then compared to published outputs of comparable surveys that provide an overview of how to find employment in selected European countries. In addition, the article focuses on identifying graduates' preferences with regard to future employment as well as on gender and the field of study. The article is based on the results of research investigating the employability of graduates in the Pilsen Region in the Czech Republic. The target group of the research was graduates who, during the period 2012–2016, successfully completed their Bachelor's degree program and have been living in the Pilsen Region. The research sample consists of 268 valid questionnaires. It is made up of respondents from different study fields at universities and colleges in the Pilsen Region. The selection sample was chosen by quote. The survey was carried out by using quantitative research—a questionnaire survey. In order to ensure the localization of the respondents, the questionnaire is focused on the respondent's residence so as to avoid the inclusion of data from respondents who live outside the surveyed area. In order to achieve good results, pre-research was performed on a small sample of respondents prior to the distribution, in order to verify whether the questionnaire was correctly and comprehensibly structured. The distribution of the final version of the questionnaire was done through groups of graduates on social networks, especially Facebook, by email and in paper form. Data collection took place in 2017.

The sample is made up of 66% of women (absolute number 176) and 34% of men (92). Higher numbers of female respondents are due to the fact that 60.5% of graduates in the academic year 2015/2016 were women. In economic, pedagogical and natural sciences, the percentage of graduates is even higher. These fields are widely represented in the questionnaire survey. During the period of the questionnaire survey, the highest number of respondents, i.e. 33% (87) completed their bachelor study in 2016, while the lowest number, i.e. 13% (36) in 2013, 16% (43) in 2014 and 19% (51) successfully finished their studies in the years of 2013 and 2015. Most respondents, 53% (141) are in the age range of 25–35 years, of which 53% (75) are women and 47% (66) are men. Thirty-nine percent (105) are in the age category under 25, of which 81% (85) are women and 19% (20) are men. The lowest number of respondents, a total of 8% (22), exceeds 35 years, of which 72% (16) are women and 28% (6) are men. In the age range of up to 25 years, most (64%) graduates completed their bachelor study in 2016. The age range from 25 to 35 years

is represented in all the years of the reference period as the only possible category. Most respondents in this category (28%) completed their studies in 2012, and then the distribution of respondents in this group is on the decline, with 10% representation in 2016. Furthermore, 50% of respondents, aged 35+, finished their studies in 2012. The basic descriptive statistics are used for data processing and ANOVA.

3   Results and Discussion

At present, the level of unemployment in the Czech Republic is decreasing. According to the Czech Statistical Office, the average number of unemployed (seasonally adjusted) declined by 4.8 thousand in the first quarter of 2018 compared to the fourth quarter of 2017. The lowest unemployment rate of the Czech Republic as at 30 April 2018 is in five regions—the Pilsen Region, the City of Prague, the Pardubice Region, Hradec Kralove Region, South Bohemian Region, with the lowest unemployment in the Pilsen Region (20.8%). Employers in the regions with the lowest level of unemployment are experiencing a shortage of quality workforce. University Graduates are a potential source of good quality human resources for these employers. An important attribute for these employers is therefore to get the best job seekers entering the labor market. Employers' knowledge of preferred ways of seeking employment by this group of candidates and their preferences for future employment can provide a competitive advantage and make the search and recruitment process more effective.

The obtained data from the research was processed by using basic descriptive statistics. The value of the time spent on finding employment is expressed by the weighted arithmetic average of the respondents' rating on the scale from 1–7, where:

- Studying part time is 0,
- Before graduation is 1,
- Immediately is 2,
- One month is 3,
- Up to 3 months is 4,
- Up to half a year is 5,
- Up to one year is 6,
- More than one year is 7.

The utilization rate of individual Job Search is presented in Table 1 for each study branch separately.

The results presented in Table 1 show that the most successful job seekers are graduates in technical fields; especially in the field of Electrical Engineering and Construction (they find employment during their studies or immediately after graduation). Graduates of Engineering usually find a job within 1 month after graduation. The worse results are for the students of the Economics and Management disciplines who have the longest Job Search period approaching an average of half a year. Graduates in other fields need about 3 months. Graduates in the most successful

Table 1 Ways of job search vs. field of study

| | % of the selected method used by the respondents | | | | | | | | | | |
	Economy and management	Social sciences and humanities	Pedagogy	Medicine and pharmacy	Transportation	Agriculture	Engineering	Electrical engineering	Information technologies	Construction	Speed of finding work
Employment department	9.1	12	3.9	4.9	3.1	10	3.2	0	0	0.1	4.90
Labor web portals	24.3	23	21.6	20.1	21	17.8	17.2	16.2	21.6	18.6	4.33
Enterprise website	11.2	14.7	14	11	22.7	15	17.4	21	38.1	24.2	3.61
Using connections	19.3	21	20	16.1	8.3	13.1	14	15.7	12.6	23.6	3.82
Sending many CVs	13.1	11	21.6	6.7	17.8	7.5	14.4	10.9	12.5	14	3.92
Personal visit	7	1.2	5.5	23	13.1	13.5	13	5	3	9.5	2.85
Magazines/press	1	2	2	0	0	0	0	0	0	0	3.2
Labor agency	2	2.6	1.8	2	2	5	6.3	0	0	5	3.88
Social networks	12	9.5	8	14.2	11	13.1	4.3	5.2	9.5	5	4.41
Job fairs	1	3	1.6	2	1	5	10.2	26	2.7	0	3.14
Time to find a job	4.76	4.09	4.18	4.18	3.75	4.43	3.24	1.64	4.40	2.20	4.12

Table 2 ANOVA of length of search and field of study

ANOVA table			Sum of squares	df	Mean square	F	Sig.
Length of search/field	Between groups	(Combined)	275.45	17	16.203	1.828	0.025
		Linearity	93.96	1	93.961	10.603	0.001
		Deviation from linearity	181.49	16	11.343	1.280	0.210
	Within groups		2215.48	250	8.862		
	Total		2490.93	267			

fields of employment (technical fields) visit, to a large extent, websites of specific companies. Graduates in Electrical Engineering visit mostly job fairs. This is directly related to the fact that schools are organizing job fairs, and these students report that they have found a job during their studies, i.e. companies are trying to get these specialists as soon as possible. Looking at the ways of Job Search, the most effective seems to be personal visit of the employer (up to 1 month), this is followed by job fairs (it is also a personal contact), the press and the websites of the particular employer.

In Table 2 the zero hypothesis was verified whether the individual fields have comparable or the same length of finding employment. The result of the p-value of 0.25 (at a 5% level of significance) shows that the different disciplines have significant differences in the success of finding a job.

According to research, Hitka and Lorencova [5, 9, 13, 18], who concentrate on the use of modern communication technologies in finding employment, present research where they compare Slovak, Italian, and collectively foreign respondents (from the selected states of Europe). Looking at the Italian respondents, the most common option is the Internet search, followed by personal contact and, the Labor Office and Social Networks. The most common way of Job Search of the Slovak respondents is on the Internet (76.58%). The second most frequent response was personal network (64.56%) and a relatively non-negligible percentage chose the option through social networks. Considering the Internet use, people's search is based on recommendations in Slovakia and also other European countries. This is followed by company websites and special applications (job portals). Preference in these ways is comparable.

4   Conclusion

According to research results, work portals, then company websites and contacts are the most preferred options. The least used are print media and job agencies. The most effective way of finding employment is personal visit, job fairs and print media. Considering technical disciplines, where the success rate is higher, organizations focus on tools that help to search for graduates directly during their studies (e.g. job

fairs). On the other hand, these graduates address selected employers primarily through their company websites. Compared to the results presented in other articles [4, 9, 10, 12, 18], graduates in the Pilsen Region are more oriented towards personal contact. Considering social networks, this trend is less preferred in the Pilsen Region than in Slovakia and other countries where for example students employ innovative communication technologies in higher education and then employ them in employment search [21, 22].

References

1. Hrmo R, Kucerka D, Kristofiakova L (2012) Developing the information competencies via e-learning and assessing the qualities of e-learning text. In: 15th international conference on interactive collaborative learning (ICL). IEEE, Villach, pp 1–4
2. Mura L (2012) Performance of human resource management in an internationally operating company. Serbian J Manag 7:115–129
3. Geisslerová A et al (2012) Mít přehled: Průvodce informačními a poradenskými službami pro mládež v ČR. Národní institut dětí a mládeže Ministerstva školství, mládeže a tělovýchovy, Praha
4. Hitka M, Kozubíková L, Potkány M (2018) Education and gender-based differences in employee motivation. J Bus Econ Manag 19:80–95
5. Bartakova GP, Brtkova J, Gubiniova K, Hitka M (2017) Actual trends in the recruitment process at small and medium-sized enterprises with the use of social networking. Econ Ann XXI 164:80–84
6. Cejka J, Bartuska L, Turinska L (2017) Possibilities of using transport terminals in South Bohemian region. Open Eng 7:55–59
7. Dobrodolac M, Svadlenka L, Cubranic-Dobrodolac M et al (2018) A model for the comparison of business units. Pers Rev 47:150–165
8. Kampf R, Lizbetinova L (2015) The identification and development of talents in the environment of logistics companies. Nase More 62:139–142
9. Vetrakova M, Hitka M, Potkany M et al (2018) Corporate sustainability in the process of employee recruitment through social networks in conditions of Slovak small and medium enterprises. Sustainability 10(5):1670
10. Hitka M, Závadská Z, Jelačić D, Balážová Ž (2015) Qualitative indicators of company employee satisfaction and their development in a particular period of time. Drvna industrija: Znanstveni časopis za pitanja drvne tehnologije 66(3):235–239
11. Fu T, Li C, Guo L, Wang Y (2015) How we view competitions between the converging internet social platforms: does higher user number mean the final victory. Int J Modern Phys C 26 (8):1550084
12. Kucharcikova A, Miciak M (2018) Human capital management in transport enterprises with the acceptance of sustainable development in the Slovak republic. Sustainability 10(7):2530
13. Lorincova S, Potkany M (2015) The proposal of innovation support in small and medium-sized enterprises. The international conference on engineering science and production management, Tatranska Strba

14. Kampf R, Lorincová S, Hitka M, Stopka O (2017) Generational differences in the perception of corporate culture in European transport enterprises. Sustainability 9:1–14
15. Lorincová S, Schmidtová J, Balážová Z (2016) Perception of the corporate culture by managers and blue collar workers in Slovak wood-processing businesses. Acta Facultatis Xylologiae Zvolen res Publica Slovaca 58:149–163
16. Vilcekova L, Starchon P (2017) Consumer perception of selected brands explored through archetypes. In: Proceeding of the 4th international conference on education and social sciences (INTCESS), Istanbul, pp 819–823
17. Kowalska R (2014) Ekonomika pro střední zdravotnické školy. Grada, Praha
18. Lorincová S, Ližbetinová L, Brodský Z (2018) Social networks as a tool for job search. Sci Pap Univ Pardubice, Ser D Fac Econ Adm 25:140–151
19. Král M (2015) Bezpečný interent. Chraňte sebe i svůj počítač. Grada, Praha
20. Yager J (2012) Productive relationship – 57 strategy for increase business contacts
21. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and future outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 3827–3838
22. MacLeod J, Kiriakidis S, Kefallonitis E, Kavoura A (2017) Strategic innovative communication tools in higher education. In: Proceedings in business and economics. Springer, Berlin, pp 759–764

Entrepreneurial Intention Determinants Among Female Students. The Influence of Role Models, Parents' Occupation and Perceived Behavioral Control on Forming the Desire to Become a Business Owner

Alexandros Sahinidis, Dimitrios Stavroulakis, Evangelia Kossieri, and Sotiris Varelas

Abstract The study of entrepreneurial intentions has received considerable attention, since intentions have proved to predict entrepreneurial behavior. This paper attempts to shed light on the formation of female students' entrepreneurial intentions through the mediation of parents' occupation, role models and Perceived Behavioral Control. According to Ajzen's theory of Planned Behavior, Perceived Behavioral Control indicates an individual's perception concerning the ability of performing a specific behavior. An empirical research was conducted on a sample comprised by 952 students from 5 Greek higher education institutions during the academic year 2014–2015 and data were processed with SPSS. Our research findings illustrate that Perceived Behavioral Control and Role Models of female students do influence entrepreneurial intentions. This finding was also confirmed by considering Role Models and Perceived Behavioral Control as Independent variables. Parents' occupation also has emerged as a cardinal determinant in our study, since students having both parents entrepreneurs expressed a significantly stronger intention to start a business than the ones with only one parent entrepreneur. On the other hand, maternal influence on daughters in the vocational field was not confirmed since female students whose mother was entrepreneur (but the father was not) did not show statistically significant differences from the rest with regard to entrepreneurial propensity. Our research focuses on the impact of female youths' social context and perception of personal abilities in developing entrepreneurial aspirations. Research results would be beneficial to government bodies and business communities in

A. Sahinidis (✉) · D. Stavroulakis · E. Kossieri
University of West Attica, Egaleo, Greece
e-mail: asachinidis@teiath.gr

S. Varelas
Neapolis University Pafos, Pafos, Cyprus

promoting entrepreneurial spirit, starting from the family. Entrepreneurial education could offer a positive contribution to this end.

Keywords Student's entrepreneurial intentions · Perceived behavioral control · Gender · Role models

1 Introduction

Entrepreneurial intentions of students have been extensively researched [1–3]. A number of research articles have focused on entrepreneurial intentions of Greek students [4–8]. On the other hand, in the recent years a growing interest in female entrepreneurship is witnessed, given that only since the 1980s consistent research on the issue has emerged [9, 10]. This paper aims at shedding light on female students' entrepreneurial intentions, taking into account the impact of the Greek familial background.

2 Literature Review and Research Hypotheses

In the public sphere the image of business has been shaped typically through the reproduction of predominant gender patterns. Media and the press tend to portray business women as less professional and less career-oriented than men. Media representations shape to a great extent the public image of professional women and their impact on career aspirations of the younger female population is indisputable [11–13]. In this research the impact of the Role Model (RM) on entrepreneurial intentions (EInt) of female youths will be investigated.

Entrepreneurship has been imbued with the male stereotype, as the entrepreneur has been attributed traits pertaining to masculinity including "competitive", "resolute", "strong-willed", "courageous" [14] "the lonely hero, the patriarch" [15].

The aforementioned traits are compatible with the concept of Self-Efficacy or Perceived Behavioral Control (PBC), which indicates an individual's subjective perception whether a task is easy or difficult to perform [16–19]. Research findings converge in that Self-Efficacy or PBC is positively associated with entrepreneurial intentions [20–22].

The impact of family environment on entrepreneurial intentions of students has also been examined. Extant research seems to corroborate that the family exercises a strong influence to offspring with regard to entrepreneurial intentions [23–25]. The family is likely to provide advice, technical support and encouragement to younger members toward the direction of taking up a business. Specifically, mothers may offer a paradigm to daughters in the vocational field. Since entrepreneurship has

often been considered as a gender-related activity, the impact of the mother-entrepreneur to daughter(s) is of particular interest [26, 27].

According to the above, our research hypotheses are formulated as follows:

- H1: PBC and RM as independent variables affect positively EInt of female students.
- H2: PBC and RM as independent variables affect positively EInt of female students who have both parents either entrepreneurs or self-employed.
- H3: PBC and RM as independent variables affect positively EInt of female students who have both parents entrepreneurs.
- H4: PBC and RM as independent variables affect positively EInt of female students whose mother is entrepreneur (but the father is not).

3 Methodology and Empirical Research

A broad interest in examining student's entrepreneurial intentions has been witnessed in the recent years. Students constitute an accessible, concentrated and relatively homogenous population in terms of age and qualifications [28]. Moreover, they are often favorably predisposed toward participating in surveys and scientific research, showing relatively high response rates.

On the other hand, entrepreneurial intentions of professionals and businessmen are likely to be influenced by factors pertaining to working experience. Established business owners have been exposed to management tasks for lengthy periods. Their behavior might have been reshaped due to "experience-based overwriting of individual predispositions" [29: 9]. By contrast, students, generally having scant working experience, may offer a more promising research area in this respect, since the eventuality of endogeneity problems is moderated.

Our research was conducted among 952 female students coming from five Greek higher education institutions during the academic year 2014–2015. The questionnaire was included on the website of TEI of Athens and responses were collected through the platform of Google Docs. Entrepreneurial Intention and PBC have been measured according to the questionnaire elaborated by Liñán and Chen [28]. Role Model was approached through responses to the statement: "Persons very important to me would endorse my decision to initiate a business" at a 7-level Likert scale. Parents' vocational status was classified as "unemployed", "salaried", "self-employed" and "entrepreneur". Data were processed with SPSS by applying multiple regression and main findings are summarized as follows:

Considering Entrepreneurial Intention (EInt) as dependent variable and Role Model (RM) and PBC as independent ones, a positive relationship was found (EInt $= -1.851 + 1.754*RM + 0.852*PBC$, $p < 10\%$, $R^2 = 45.6$). A statistically significant relationship was also found when correlating EInt either with RM or with PBC. Therefore, H1 is confirmed.

Turning now to parents' occupation, considering EInt as dependent variable and RM and PBC as independent ones, women having both parents either entrepreneurs or self-employed did not show statistically significant levels of EInt. Therefore, H2 is not confirmed in our research. An explanation may be provided considering the motivations for becoming self-employed in Greece in the recent years. Greece is the champion among European countries with regard to self-employment, since 29% of the working population is self-employed [30]. Reasons for resorting to self-employment amidst the ongoing economic crisis pertain mostly to necessity, as dismissed persons attempt to sustain their livelihood. Necessity entrepreneurship has also been rising steadily in Greece the recent years, up to 34% in 2016, also the highest in the European Union [31]. Under these circumstances, entrepreneurship may not be particularly appealing to family offspring.

On the other hand, under the previous preconditions women having both parents entrepreneurs (excluding the self-employed) expressed a strong intention to follow an entrepreneurial career: $EInt = -3.953 + 1.820*RM + 0.890*PBC$ ($p < 5\%$, $R^2 = 49.1$). Consequently, H3 is confirmed. A supporting family environment may be quite helpful in this respect. Persons who originate from a family background of entrepreneurial tradition and mentality may inherit the family business without any particular complications. Instead, persons coming from non-entrepreneurial family contexts are likely to face additional difficulties in gaining confidence, scanning opportunities and raising capital [32: 6].

The impact of the mother as a role model for daughters in the vocational field was not corroborated, since students having their mother entrepreneur (but not the father) did not show statistically significant levels of EInt. Therefore, H4 is not confirmed. This finding is in contrast to the respective of many relevant studies, where self-employed mothers served as a paradigm to their daughters [24, 26, 33]. In the Greek context this may be attributed to the nature of female entrepreneurship. Indeed, previous research in Greece has revealed that women's presence in the entrepreneurship arena remains weak due to socio-cultural factors. Even in cases where a woman is characterized as entrepreneur, her role in business may be marginal. Quite often a woman's name on the business is misleading, having been placed in order to promote the household interests (eligibility for subsidies or tax exemption, covering up for a male relative employed in the public sector) [34–36]. Following this trend, the image of female entrepreneurship within the Greek family may be quite less than accurate.

4   Concluding Remarks

Our findings suggest that both RM and PBC contribute significantly to the development of EInt of Greek female students. Having both parents entrepreneurs also proved to enhance EInt, considering RM and PBC as independent variables. On the other hand, considering RM and PBC as independent variables, students having parents either entrepreneurs or self-employed did not demonstrate statistically

significant EInt. Also under the same preconditions, the role of the mother-entrepreneur as a vocational model for daughters was not confirmed by our study. Future research would be helpful to focus more on parents' profile, family status, entrepreneurial experience, and type of family business [37–39].

References

1. Aziz N, Friedman BA, Sayfullin S (2012) Motives and perceived problems of students as aspiring entrepreneurs: differences across the Kyrgyzstan, Georgia, and the United States. Int J Bus Soc Sci 13:102–113
2. Liñán F, Nabi G, Krueger N (2013) British and Spanish entrepreneurial intentions: a comparative study. Revista de Economía Mundial 33:73–103
3. Engle RL, Dimitriadi N, Gavidia JV, Schlaegel C, Delanoe S, Alvarado I, He X, Buane S, Wolff B (2010) Entrepreneurial intent. A twelve-country evaluation of Ajzen's model of planned behavior. Int J Entrep Behav Res 16:35–57
4. Sahinidis AG, Giovanis AN, Sdrolias L (2012) The role of gender on entrepreneurial intention among students: an empirical test of the theory of planned behavior in a Greek University. Int J Integr Inf Manag 1:61–79
5. Sahinidis AG, Vassiliou EE, Hyz AB (2014) Factors affecting entrepreneurs' intention to start a new venture: an empirical study. Int J Strateg Innov Mark 1(3):148–162
6. Kostoglou V, Siakas E (2012) Investigating higher education graduates' entrepreneurship in Greece. Ann Innov Entrep 3:1–7
7. Fafaliou I (2012) Students' propensity to entrepreneurship: an exploratory study from Greece. Int J Innov Reg Dev 4(3/4):293–313
8. Zampetakis LA, Moustakis V (2006) Linking creativity with entrepreneurial intentions: a structural approach. Entrep Manag 2(3):413–428
9. Henry C, Foss L, Fayoll A, Walker E, Duffy S (2015) Entrepreneurial leadership and gender: exploring theory and practice in global contexts. J Small Bus Manag 53(3):581–586
10. Jennings E, Brush C (2013) Research on women entrepreneurs: challenges to (and from) the broader entrepreneurship literature? Acad Manag Ann 7:663–715
11. Klyver K, Hindle K, Schott T (2007) Who will be an entrepreneur? How cultural mechanisms and social network structure together influence entrepreneurial participation. Babson College Entrepreneurship Research Conference (BCERC) 2007. Proceedings of the 27th Babson College Entrepreneurship Research Conference (BCERC 2007), Frontiers of Entrepreneurship Research, Madrid, Spain, 07–09 June 2007
12. Eikhof D, Summers J, Carter S (2013) Women doing their own thing: media representations of female entrepreneurship. Int J Entrep Behav Res 19:547–564
13. Radu M, Redien-Collot R (2008) The social representation of entrepreneurs in the French press desirable and feasible models? Int Small Bus J 26(3):259–298
14. Ahl H (2006) Why research on women entrepreneurs needs new directions. Entrep Theory Pract 30(5):595–621
15. Bruni A, Gherardi S, Poggio B (2004) Entrepreneur-mentality, gender and the study of women entrepreneurs. J Organ Chang Manag 17(3):256–268
16. Bandura A (1997) Self-efficacy: the exercise of control. Freeman & Co, New York
17. Sparks P, Guthrie CA, Shepherd R (1997) The dimensional structure of the perceived behavioral control construct. J Appl Soc Psychol 27:418–438
18. Ajzen I (2005) Attitudes, personality and behavior. Open University Press, New York, p 2e
19. Ajzen I (2002) Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. J Appl Soc Psychol 32:665–683

20. Zhao H, Seibert SE, Hills GE (2005) The mediating role of self-efficacy in the development of entrepreneurial intentions. J Appl Psychol 90:1265–1272
21. Segal G, Borgia D, Schoenfeld J (2005) The motivation to become an entrepreneur. Int J Entrep Behav Res 11:42–57
22. Nwankwo BE, Kanu GC, Marire MI, Balogun SK (2012) Gender-role orientation and self-efficacy as correlates of entrepreneurial intention. Eur J Bus Soc Sci 1(6):9–26
23. Rutgers TS, Rutgers AEO, Rutgers AS (2017) Does family support matter? The influence of support factors on entrepreneurial attitudes and intentions of college students. Acad Entrep J 23 (1):24–43
24. Laspita S, Breugst N, Heblich S, Patzelt H (2012) Intergenerational transmission of entrepreneurial intentions. J Bus Ventur 27(3):414–435
25. Heck RKZ, Hoy F, Poutziouris P, Steier LP (2008) Emerging paths of family entrepreneurship research. J Small Bus Manag 46:317–330
26. Green FJ, Han L, Marlow S (2013) Like mother, like daughter? Analyzing maternal influences upon women's entrepreneurial propensity. Entrep Theory Pract 37(4):687–711
27. Kirkwood J (2007) Igniting the entrepreneurial spirit: is the role parents play gendered? Int J Entrep Behav Res 13(1):39–59
28. Liñán F, Chen YW (2009) Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. Entrep Theory Pract 33:593–617
29. Bönte W, Procher VD, Urbig D (2016) Biology and selection into entrepreneurship: the relevance of prenatal testosterone exposure. Entrep Theory Pract 40:1121–1148
30. Eurostat (2017) Taking a look at self-employed in the EU. http://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20170906-1
31. IOBE-GEM (2017) Annual entrepreneurship report 2016–17. http://iobe.gr/docs/research/RES_02_18122017_REP_GR.pdf (in Greek)
32. Humbert AL, Brindley C (2015) Challenging the concept of risk in relation to women's entrepreneurship. Gen Manag Int J 30:2–25
33. Fairlie RW, Robbs A (2007) Families, human capital, and small business: evidence from the characteristics of business owners survey. Ind Labor Relat Surv 60:225–245
34. Anthopoulou T (2006) Facets and dynamics of entrepreneurship of women of the countryside in the sector of food production: a preliminary approach. Proceedings of the 9th Pan-Hellenic conference on rural economy (ETAGRO), November 2–4, Athens (in Greek)
35. Koutsou S, Partalidou M, Petrou M (2011) Present or absent farm heads? Contemporary reading of family farming in Greece. Sociol Rural 51:404–419
36. Stavroulakis D, Karagiannis S, Mitoula R, Papagrigoriou A (2013) Female entrepreneurship and agritourism cooperatives in the Greek periphery: an overview. Am J Econ Bus Adm 5:129–138
37. Kavoura A, Andersson T (2016) Applying Delphi method for strategic design of social entrepreneurship. Libr Rev 65:185–205
38. Sahinidis A, Kavoura A (2014) Exploring corporate social responsibility practices of Greek companies. Małopolska Sch Econ Tarnów Res Pap Coll 24:185–193
39. Totskaya N (2015) Relational ties in emerging markets: what is their contribution to SME growth? N Engl J Entrep 18:47–60

Satisfaction of Internal Customers in a Public University Hospital

Aspasia Goula, Theodoros Markou, George Pierrakos, Dimitra Latsou, Sofia Dimakou, Aggeliki Stamouli, and Chrysostomos Natsis

Abstract The objective of this study was to assess the internal quality of a university hospital by health professionals and its relation to job satisfaction. The survey was conducted in a university hospital in Attica. The sample was 131 employees consisting of medical, nursing, administrative and paramedical staff, with the method of random sampling. The collection of the data lasted from October to December 2016. The questionnaire used in this survey was the SERVQUAL tool with five dimensions: reliability, responsiveness, tangibles, assurance, and empathy. Additionally, five job satisfaction questions were added, which were set as an external criterion. The answers of the above questionnaires were in the form of 7-point Likert scale. The SERVQUAL questionnaire proved to be very reliable (0.966). All dimensions of the questionnaire evaluating internal quality were rated low by health professionals, with the exception of tangibles. Statistically significant differences were found among some of the dimensions and age of groups, occupation and years of experience. Older and more experienced employees rated internal quality higher. Regarding occupation, differences were found between nursing and administrative staff as well as medical staff. A notable finding is the degree of correlation between all dimensions of internal quality and the job satisfaction questions. As job satisfaction increases, internal quality increases as well and vice versa. Internal quality within an organization and its relationship with job satisfaction, even when it is not the unique requirement for efficient service provision, is a powerful tool for future improvement of health services. Those managers of health care organizations who will be able to identify the factors that determine the welfare and satisfaction of health professionals will derive the best possible performance of hospital staff.

Keywords Internal quality · Job satisfaction · Health professionals

A. Goula (✉) · T. Markou · G. Pierrakos · D. Latsou · S. Dimakou · A. Stamouli · C. Natsis
University of Western Attica, Athens, Greece
e-mail: agoula@uniwa.gr

179

1   Introduction

The concepts of internal marketing and internal quality have been thoroughly examined over the last decades by both the scientific community and the business community [1]. Researchers in the areas of marketing, business management and organizational behavior consider the concept of internal quality as the vehicle for implementing the organization's strategy [2].

The concept of internal quality of services was first proposed in 1976 [3], where employees were described as internal "customers". The satisfaction of external clients depends heavily on the level of employee satisfaction within the organization and therefore the internal quality of services is undoubtedly necessary for modern organizations [4]. The orientation towards the internal customer must be part of the organizational culture and should also guides the attitudes and behaviors of the members of the organization towards the dissemination of quality [5].

Several researchers have contributed to identify the dimensions of service quality in order to make this concept operational. For this reason, various sets of quality dimensions have been created, which are useful for measuring the quality of services [2].

The best known tool is the SERVQUAL scale. Researchers, based on the concept of perceived quality of service, have proposed ten dimensions of quality following a survey of customers of different service [6]. Then they summed up the ten dimensions to five [7]. This scale is designed to study the external environment, but it can also be introduced in an organization's internal environment [2], since internal customers share several features with external customers [8]. To investigate the quality of external customer service several studies have been carried out in Greece [9, 10] and abroad [11–13], as opposed to measuring the internal quality of services, which has been scarcely explored [1]. However, service quality by the employees' perspective in public Greek hospital has not been widely researched.

This study seeks to fill that gap by adapting the SERVQUAL model to assess the internal quality of a university hospital in Attica by health professionals and its relationship with employee satisfaction.

2   Methods

2.1   Study Design and Participants

The research was conducted at a university hospital in Attica, which is one of the main pillars of third level hospital care for the whole Greece. According to the latest available data, 956 health professionals (medical, nursing, administrative and para-medical staff) employed in this hospital. Thus, the representative sample should be 275 health professionals in order to achieve a 95% confidence level, 50% response distribution and 5% margin of error. A random sample was selected among health

professionals. However, of the 153 health professionals who accepted to participate in the survey, 131 health professionals were analyzed for this study, with response rate 47.6%. The data collection lasted from October to December 2016.

The 22 items used to measure the five SERVQUAL dimensions were adapted from the study by Parasuraman et al. [7] and some modifications were made to suit the hospital service setting. The questionnaire illustrates five dimensions, namely: reliability (ability of hospital management to perform reliably and accurately the promised service), assurance (the knowledge and courtesy of hospital management as well as the ability to inspire, tangibles (facilities and equipment of the department but also staff appearance), empathy (care and individual attention of hospital management towards its employees) and responsiveness (willingness of hospital management to help employees and to provide direct service). Each item was reworded to capture internal rather than external service quality. Some modifications were made to the items, in order to suit the service setting resulting in changes to some existing items.

Specifically, the English version of the questionnaire was translated into Greek language and back-translated into English for checking. The forward translators consisted of two independent native-speaking translators. The translators independently translated the original version of the SERVQUAL into Greek language. Both translators were familiar with the SERVQUAL tool. Both translators synthesized their forward translation, where poor wording choices were identified and resolved in order to ensure semantic and conceptual equivalence. The translated questionnaire was discussed with two experts in this field, and minor changes were then made to ensure that the wording was appropriate for the local context. More specific, the questions 10, 11, 12, 13, 18, 19, 20, 21 and 22 were reversed wording from negative to positive questions in order improved the internal consistency (Table 1). The purpose was to ensure the consistency of content and face validity between the original and translated versions of the SERVQUAL which was designed to study the external environment of an organization. The developed questionnaire was pilot tested on a convenience sample of ten health professionals and no major problems were observed, but respondents suggested a few minor changes in the wordings of the instrument.

Respondents are asked to answer to a Likert 7-grade scale, where 1 represents "Totally Disagree" and 7 represents "Totally Agree". The SERVQUAL tool is widely used because it is easy to apply, and it also provides a comparison between the quality level of different businesses or in the same enterprise over different time periods [14].

In addition, five satisfaction questions were added to the questionnaire, which were set as an external criterion for the job satisfaction of health professionals. In particular, the questions concerned satisfaction from earnings, opportunities to develop capabilities and initiatives, recognition of contribution, working conditions, relationship with colleagues and other hospital employees, and overall job satisfaction. The questions were based on the widely used Job Satisfaction Survey—JSS [15]. The above questions were measured in the form of a Likert scale, where 1 represents "Not Satisfied" and 7 "Totally satisfied".

Table 1 Modified SERVQUAL tool to assess the internal quality of a hospital and its management as perceived by health professionals

SERVQUAL tool
Tangibles
1. My department has up-to-date equipment
2. The physical facilities, of my department, are visually appealing
3. The employees, in my department, are well-dressed and appear neat
4. The appearance of the physical facilities is consistent with the type of service provided
Reliability
5. When hospital managers promise to do something by a certain time, they do so
6. When my department has problems, hospital management is sympathetic and reassuring
7. Hospital management is dependable
8. Hospital managers provide their services at the time they promised to do so
9. Hospital management is keeping records accurately
Responsiveness
10. Hospital managers always inform me exactly when the service will be performed to the patients (*Reversion from negative to positive question*)
11. Hospital managers provide to me prompt services (*Reversion from negative to positive question*)
12. Hospital management is always willing to help me (*Reversion from negative to positive question*)
13. The hospital managers are not too busy to respond promptly to my requests (*Reversion from negative to positive question*)
Assurance
14. Hospital management is trustworthy
15. I feel safe when transacting with hospital management
16. Hospital managers are always polite with me
17. I always get adequate support from hospital management to do my job well
Empathy
18. The hospital managers always pay individualized attention to me (*Reversion from negative to positive question*)
19. Hospital management always has the time to pay personal attention to me (*Reversion from negative to positive question*)
20. The hospital managers always understand the needs of my department (*Reversion from negative to positive question*)
21. Hospital management always cares about the best interests of my department (*Reversion from negative to positive question*)
22. The hospital managers work at hours convenient to my department (*Reversion from negative to positive question*)

2.2 Statistical Analysis

The reliability of the questionnaire was assessed with the use of Cronbach's alpha coefficient and the first results of study were presented with frequency tables, graphs and descriptive statistics. The data was normally distributed and there for parametric

tests were used for the analysis. Specifically, for the comparison of the mean values, independent samples *t*-test and one-way ANOVA with Bonferroni correction (Bonferroni Post Hoc Test) was evaluated and also Pearson product-moment correlation coefficient was computed to assess the relationship between the dimensions of internal quality and job satisfaction. The significance level was set to 0.05 and for the statistical analysis SPSS v. 25 was used.

3 Results

The majority of the sample was female (67.2%) due to the large number of female nurses in Greek hospitals [1, 16]. 49.6% of the participants were in the 36–45 age group. 44.3% had completed university education and 26% had a postgraduate degree. With regard to the years of service, 44.3% had less than 10 years of service and 42% from 11 to 20 years. Also, the survey sample consisted of 43.5% nursing staff, 29.8% medical staff, 23.7% administrative staff and 3.1% paramedical staff (Table 2).

The Cronbach's alpha coefficient to investigate the questionnaire's reliability was 0.966, demonstrating very good reliability. Questionnaire questions were estimated from 0.969 to 0.963.

The dimensions of the questionnaire were rated quite low by hospital staff demonstrating modest to low internal quality (Fig. 1). The employees responded

Table 2 Frequency distribution by socio-demographic data

		N	%
Gender	Male	43	32.8
	Female	88	67.2
Age group	25–35	30	22.9
	36–45	65	49.6
	46–55	26	19.8
	56–65	10	7.6
Education level	Compulsory level	5	3.8
	Secondary level	18	13.7
	Bachelor level	58	44.3
	Master level	34	26.0
	PhD level	16	12.2
Years of service	<10	58	44.3
	11–20	55	42.0
	21–30	14	10.7
	31+	4	3.1
Profession	Medical staff	39	29.8
	Nursing staff	57	43.5
	Administrative staff	31	23.7
	Paramedical staff	4	3.1
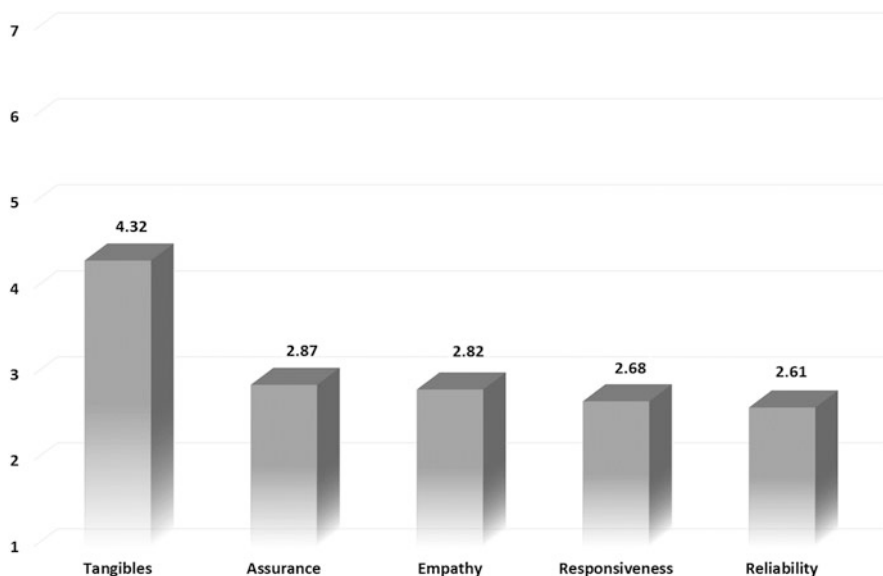
Fig. 1 Dimensions of internal quality—SERVQUAL

that they mostly disagreed with the reliability, response, assurance and empathy of the hospital managers. An exception was the tangibles.

As for the comparison of the socio-demographic characteristics of the sample, statistical analysis did not show a difference between gender and five dimensions of internal quality as well as between education and the five dimensions. However, a statistically significant difference was found between some dimensions of the tool and age groups, occupational category and years of service.

In particular, employees in the 56–65 age group were more satisfied with hospital management reliability (3.7 ± 0.9), compared with employees in the 25–35 age group (2.3 ± 0.8) and 36–45 years (2.5 ± 1.1) ($p = 0.005$ and $p = 0.007$ respectively). Similarly, there were results for management assurance, where a difference was found between employees aged between 56 and 65 (4.3 ± 1) and those aged 26–36 (2.7 ± 1) ($p = 0.010$), but also 36–45 (2.6 ± 1.3) ($p = 0.003$). Also, employees aged 56–65 reported higher satisfaction with the response and empathy of hospital management (3.6 ± 1.1 and 3.8 ± 1.3), relative to the 36–45 age group (2.5 ± 1.3 and 2.6 ± 1.3), ($p = 0.05$ and $p = 0.043$).

With regards to employees profession, nursing staff were more satisfied with the tangibles of the hospital management (4.6 ± 1.2) than the administrative staff (3.7 ± 1.3) ($p = 0.010$). On the other hand, nursing staff reported lower assurance satisfaction (2.5 ± 1.3) and empathy (2.4 ± 1.3) compared to medical staff (3.5 ± 1 and 3.4 ± 1.1), ($p = 0.003$ and $p = 0.003$ respectively).

In addition, years of service have shown a difference between the reliability of hospital management. Employees with fewer years of service, namely <10 years and 11–20 years, reported lower satisfaction with the reliability dimension (2.5 ± 1 and
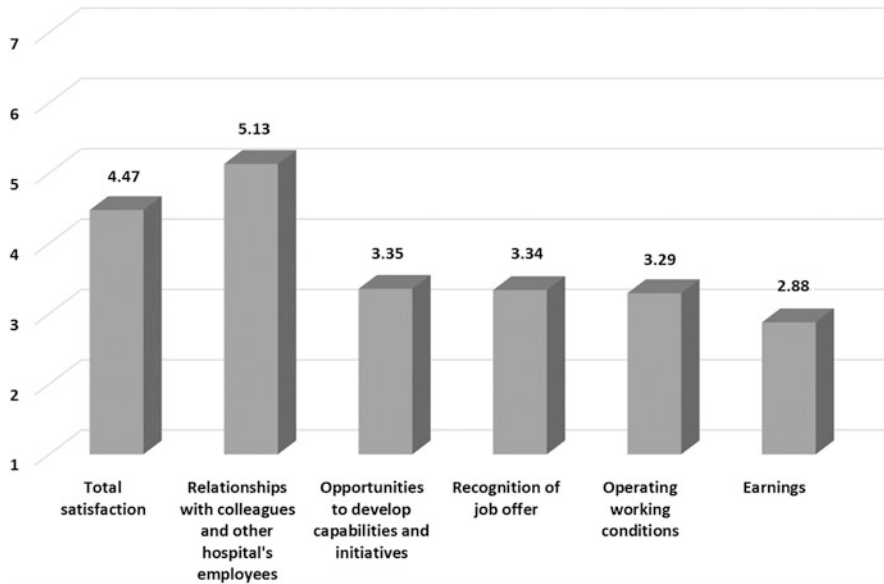
Fig. 2 Job satisfaction

2.4 ± 1.1), as opposed to employees with more than 31 years (4.3 ± 07), ($p = 0.016$ and $p = 0.008$ respectively).

Regarding job satisfaction questions, health professionals seemed to be very pleased with their job as a whole, but also with their relationship with colleagues and other employees in the hospital. However, they claim moderate satisfaction with the rest of the questions (Fig. 2).

Statistically significant positive correlations have been found between all the dimensions of internal quality and the questions of job satisfaction, proving that as the employee satisfaction increases, the internal quality increases and vice versa (Table 3).

4 Discussion

The SERVQUAL scale, which is mostly used for external quality assessment, can be used if it is modified to assess the quality of an organization's internal services, which has been the main investigation of this article.

Despite the rapid development of science and technology, the human factor continues to be the most important when trying to achieve the goals of each organization. The contribution of human resources to a successful management is of utmost importance. Therefore, for the efficient operation of human resources, their job satisfaction is necessary [17, 18].

Table 3 Correlation analysis of internal quality and job satisfaction dimensions

		Tangibles	Reliability	Responsiveness	Assurance	Empathy
Total satisfaction	Pearson correlation	0.418**	0.368**	0.220*	0.227**	0.273**
Earnings	Pearson correlation	0.291**	0.536**	0.467**	0.524**	0.528**
Opportunities to develop capabilities and initiatives	Pearson correlation	0.409**	0.466**	0.404**	0.368**	0.440**
Working conditions	Pearson correlation	0.550**	0.551**	0.404**	0.372**	0.440**
Recognition of job offer	Pearson correlation	0.380**	0.514**	0.480**	0.477**	0.549**
Relationship with colleagues and other hospital's employees	Pearson correlation	0.362**	0.305**	0.297**	0.266**	0.297**

*The correlation is important in 0.05 level (two-tailed)
**The correlation is important in 0.01 level (two-tailed)

According to the results of the survey, the health professionals of the Attica University Hospital claimed low internal quality regarding hospital management. In particular, employees feel that managers are not capable of performing the promised service reliably and accurately, are unwilling to help employees and provide immediate service, are not particularly interested in each individual worker and ultimately do not trust them. Heterogeneous results were presented in several studies, which were done in other workplaces and not in hospital settings [19, 20]. As far as the working conditions and equipment of the departments, our sample rated them relatively high. This finding is in agreement with one related study, in which health professionals rated the level of equipment from medium to high [1]. Also, the reliability dimension was estimated with the lowest score from the survey sample, and this is consistent with a survey [21], which found that reliability is the dimension with the highest negative score.

In addition, the results showed a significant difference between internal quality and age groups, occupation and years of service. In particular, older employees with more years of seniority, ranked higher in scale, compared with younger workers and with fewer years of service. One possible explanation for this is the fact that staff with more years of service and older age is more respect by hospital managers. However, an equally important explanation could be the fact that employees with the above characteristics do not have demands from the hospital managers, so they score the internal quality higher. The above results disagree with similar survey that was done in Greek public hospitals which noted that the older health professionals were less satisfied with their job [22].

Concerning job satisfaction, which is a complex and multidimensional concept, the results of the survey showed that the hospital employees are moderately highly satisfied. Similar research into the international literature agrees with the above findings [23–25]. However, satisfaction from earnings received the lowest score. A corresponding survey found dissatisfaction with the earnings of health professionals in a public hospital abroad [26].

Particularly important are the results of this research on the correlation between internal quality and work satisfaction of health professionals. A lot of studies in the literature prove this relationship. In particular, service studies have shown that quality and service satisfaction are closely related elements [22, 27, 28]. Employee satisfaction is an important factor in determining the quality of service [29]. Satisfied employees are more committed to continuous improvement and quality [30] and are therefore more committed to providing quality services [31]. Satisfied employees are particularly attentive, have a high morale at work and they work more efficiently and efficiently [32, 33]. Employee satisfaction must not be overlooked, but very few companies consider their satisfaction to be important. The most difficult step in improving service quality is the development of consistent service performance by employees who come in direct contact with the client-patient [31].

5 Conclusion

There are some limitations with this study that need to be recognized. The results of the survey refer to a specific university hospital in Attica, so the findings can only be limited to this hospital and may not represent the internal quality of all public hospitals in the country. In addition, the study used the job satisfaction of health professionals as an external evaluation criterion. Taking other elements into account could lead to different results. In this survey, the sample was studied in total and not in subgroups, where there may be discrepancies among health professionals' groups and dimensions of internal quality. Further research may examine these discrepancies as well as other dimensions that can directly affect the opinion of employees about the management of the hospital.

In conclusion, internal quality of an organization and its relation to job satisfaction, even if it is not a unique requirement for efficient service provision, is a powerful tool for the future improvement of services.

Managers of health organizations who will be able to identify the factors that determine the welfare and satisfaction of health professionals will get the best possible performance of hospital staff. As this study indicate, managers should pay attention to their ability to perform reliably and accurately the promised service, have the knowledge as well as the ability to inspire the employees, give individual attention towards them and have the willingness to help employees to provide direct service.

References

1. Gogos C, Itskara K, Itskara E (2015) Internal quality and work commitment: a study on the perceptions of hospital nursing staff. Arch Hellen Med 32:175–181. http://www.mednet.gr/archives/2015-2/pdf/175.pdf
2. Reynoso J, Moores B (1995) Towards the measurement of internal service quality. Int J Serv Ind Manag 6:64–83. https://doi.org/10.1108/09564239510091349
3. Sasser WE, Arbeit SP (1976) Selling jobs in the service sector. Bus Horiz 19:61–65. https://doi.org/10.1016/0007-6813(76)90053-7
4. Jung-Yu L, Chun-Yi C (2008) A strategic approach of internal service quality for improving employees' job satisfaction in e-business. In: SIGMIS CPR conference on computer personnel doctoral consortium and research. ACM, New York, pp 141–150. https://doi.org/10.1145/1355238.1355274
5. Lukas BA, Maigman I (1996) Striving for quality: the key role of internal and external customers. J Mark Focus Manag 1:178–197. https://doi.org/10.1007/BF00128689
6. Parasuraman A, Zeithaml VA, Berry LL (1985) A conceptual model of service quality and its implications for future research. J Mark 49:41–50. https://doi.org/10.2307/1251430
7. Parasuraman A, Zeithaml VA, Berry LL (1988) SERVQUAL: a multi-item scale for measuring consumer perceptions of the service quality. J Retail 64:12–40 (citeulike:1084335)

8. Jun M, Cai S (2010) Examining the relationships between internal service quality and its dimensions, and internal customer satisfaction. Total Qual Manag 21:205–223. https://doi.org/10.1080/14783360903550095

9. Chatzoglou P, Chatzoudes D, Vraimaki E, Leivaditou E (2014) Measuring citizen satisfaction using the SERVQUAL approach: the case of the Hellenic Post. Procedia Econ Finance 9:349–360. https://doi.org/10.1016/S2212-5671(14)00036-7

10. Papanikolaou V, Zygiaris S (2014) Service quality perceptions in primary health care centers in Greece. Health Expect 17:197–207. https://doi.org/10.1111/j.1369-7625.2011.00747.x

11. Peprah AA, Atarah BA (2014) Assessing patient's satisfaction using SERVQUAL model: a case of Sunyani Regional Hospital, Ghana. Int J Bus Soc Res 4:133–143. www.thejournalofbusiness.org/index.php/site/article/view/404/346

12. Butt M, Cyril de Run E (2010) Private healthcare quality: applying a SERVQUAL model. Int J Health Care Qual Assur 23:658–673. https://doi.org/10.1108/09526861011071580

13. Kalaja R, Myshketa R, Scalera F (2016) Service quality assessment in health care sector: the case of Durres public hospital. Procedia-Soc Behav Sci 235:557–565. https://doi.org/10.1016/j.sbspro.2016.11.082

14. Binioris S (2009) Total quality management. Pasxalidis Publications, Athens

15. Spector PE (1985) Measurement of human service staff satisfaction: development of the Job Satisfaction Survey. Am J Community Psychol 13:693–713. PMID: 4083275

16. Kontodimopoulos N, Paleologou V, Niakas D (2009) Identifying important motivational factors for professionals in Greek hospitals. BMC Health Serv Res 9:164. https://doi.org/10.1186/1472-6963-9-164

17. Goula A (2007) Management of public hospital. Papazizis Publications, Athens

18. Lambrou P, Kontodimopoulos N, Niakas D (2010) Motivation and job satisfaction among medical and nursing staff in a Cyprus public general hospital. Hum Resour Health 8:26. https://doi.org/10.1186/1478-4491-8-26

19. Needleman J, Buerhaus P, Mattke S, Stewart M, Zelevinsky K (2002) Nurse-staffing levels and the quality of care in hospitals. N Engl J Med 346:1712–1722. https://doi.org/10.1056/NEJMsa012247

20. Mauno S, Kinnunen U, Makikangas A, Feldt T (2010) Job demands and resources as antecedents of work engagement: a qualitative review and directions for future research. In: Albrecht SL (ed) Handbook of employee engagement: perspectives, issues, research and practice. Edwin Elgar, Northampton, pp 111–128

21. Anderson E, Zwelling L (1996) Measuring service quality at the University of Texas M.D. Anderson Cancer Center. Int J Health Care Qual Assur 9:9–22. https://doi.org/10.1108/09526869610150200

22. Iliopoulos E, Priporas CV (2011) The effect of internal marketing on job satisfaction in health services: a pilot study in public hospitals in Northern Greece. BMC Health Serv Res 11:261. https://doi.org/10.1186/1472-6963-11-261

23. Salam A (2016) Job stress and job satisfaction among health care professionals. In: Qatar foundation annual research conference proceedings. https://doi.org/10.5339/qfarc.2016.HBOP2571

24. Lu Y, Hu XM, Huang XL, Zhuang XD, Guo P, Feng LF, Hao YT (2016) Job satisfaction and associated factors among healthcare staff: a cross-sectional study in Guangdong Province, China. BMJ Open 6(7):e011388. https://doi.org/10.1136/bmjopen-2016-011388

25. Carrillo-García C, Solano-Ruiz MDC, Martínez-Roche ME, Gómez-García CI (2013) Job satisfaction among health care workers: the role of gender and age. Rev Lat-Am Enfermagem 21:1314–1320. https://doi.org/10.1590/0104-1169.3224.2369

26. Khamlub S, Harun-Or-Rashid MD, Sarker MA, Hirosawa T, Outavong P, Sakamoto J (2013) Job satisfaction of health-care workers at health centers in Vientiane Capital and Bolikhamsai Province, Lao PDR. Nagoya J Med Sci 75:233–241. PMID: 24640179

27. Cronin JJ, Taylor SA (1992) Measuring service quality: a re-examination and extension. J Mark 56:55–68. https://doi.org/10.2307/1252296

28. Babakus E, Bienstock CC, Scotter JRV (2004) Linking perceived quality and customer satisfaction to store traffic and revenue growth. Decis Sci 35:713–737. https://doi.org/10.1111/j.1540-5915.2004.02671.x
29. Zeithaml VA, Parasuraman A, Berry LL (1990) Delivering quality services-balancing customer perceptions and expectation. The Free Press, New York
30. Matzler K, Fuchs M, Schubert AK (2004) Employee satisfaction: does Kano's model apply? Total Qual Manag Bus 15:1179–1198. https://doi.org/10.1080/1478336042000255569
31. Allred AT (2001) Employee evaluations of service quality at banks and credit unions. Int J Bank Mark 19:179–185. https://doi.org/10.1108/02652320110695468
32. Eskildsen JK, Dahlgaard JJ (2000) A causal model for employee satisfaction. Total Qual Manag 11:1081–1094. https://doi.org/10.1080/095441200440340
33. Yoon MH, Suh J (2003) Organizational citizenship behaviors and service quality as external effectiveness of contact employees. J Bus Res 56:597–611. https://doi.org/10.1016/S0148-2963(01)00290-9

Facebook Content Strategies: A Case Study of a Subsidiary Company in Greece

Amalia Triantafillidou, Prodromos Yannas, and Georgios Lappas

Abstract The purpose of the present paper is to examine the types of Facebook content strategies used by a well-known brand based on the messages posted on its official Facebook page. Moreover, this study will identify which content strategies impact significantly and can predict users' engagement with posts in terms of likes, shares, and comments. Toward this end, a content analysis was performed on the messages posted on the Greek Facebook page of Starbucks (a well-known coffee-store brand). In total 690 posts were analyzed and the following content strategies were used: product awareness, customer service, sales promotion, public relations, interactivity, and other. Based on the findings, the company mainly used the strategies of product awareness and promotion. The type of strategy used on Facebook posts had a significant impact on all three measures of users' engagement. However, certain strategies proved to be more effective in enhancing users' behaviors compared to others. The results offer important insights on what types of messages brands as well as companies could use in order to drive effectively their users' engagement on Facebook.

Keywords Content strategies · Facebook · Online behavioral engagement · Brands

1 Introduction

Social media have become an integral part of the promotional mix of companies and brands. Corporations are using social media as a communication channel [1] of strategic significance [2] in order to promote their products/services [3], interact with customers [4] and engage them with branded content [5]. The aim of this paper is

A. Triantafillidou (✉) · G. Lappas
Technological Education Institute of Western Macedonia, Kastoria, Greece
e-mail: a.triantafylidou@kastoria.teiwm.gr

P. Yannas
University of West Attica, Egaleo, Greece

twofold: first to examine the types of Facebook content strategies used by a well-known brand based on the messages posted on its official Facebook page; second, to identify which content strategies and message characteristics (such as the use of hashtags, mentions, and emoticons) impact significantly and can predict users' engagement with posts in terms of likes, shares, and comments.

2 The Impact of Content Strategy on Consumers' Engagement with Firm-Created Content on Facebook

A number of studies have pinpointed the crucial role of content for enhancing engagement and interaction of consumers with brand-created posts [4, 6–12]. For example, consumers are more likely to press the like button when the posts are (a) remunerative and inform them about relevant promotional activities of companies such as coupons, trials, offers, redeeming points, gifts, and contests [3, 7–9, 13], (b) informational and offer information about products [8], store locations or new branches [9, 12], and public relations activities (e.g. events, social causes) [10], and (c) interactive, calling consumers to like, share, comment [8], answer questions, and participate in quizzes [13]. Based on the preceding analysis the following hypotheses were developed:

H1. Posts that inform consumers about (a) product, (b) promotion, (c) stores, (d) public relations, and (e) are interactive in nature will be associated with the number of likes.

Commenting on a firm-created post was related to threads characterized by high interactivity [13] that tried to trigger interaction between the firm and consumers by asking them to respond to questions or give feedback [7, 12] as well as asking them to comment, like or share [11], and participate in surveys [6]. Moreover, the number of comments was associated with posts that promoted the brands [4], and were related to sales promotion activities [9], incentives/rewards [8], and public relations efforts [10]. Hence, the following hypotheses were developed:

H2. Posts that inform consumers about (a) product, (b) promotion, (c) stores, (d) public relations, and (e) are interactive in nature will be associated with the number of comments.

Although, it could be expected that sharing, the most active form of engagement compared to liking and commenting, will be influenced by posts that are more interactive in nature, studies suggest that this is not the case. Specifically, the number of shares was associated with informational content that showed product, store and promotion related information [9, 12, 14]. Thus, the following hypotheses were postulated:

H3. Posts that inform consumers about (a) product, (b) promotion, and (c) stores will be associated with the number of shares.

3   Method

In order to achieve the study's objectives as well as test the research hypotheses, we chose to examine the content posted in the official Facebook account of the Starbucks's subsidiary company in Greece. The well-known coffee chain of Starbucks [15] was rated as the third most admired company for the 2017 by the Fortune Magazine. This company was chosen due to its strong presence on social media [16]. We collected all the posts that were published on the company's Facebook account from the first thread (beginning of Facebook account) that were posted from April 3, 2011 until December 2, 2016. This data collection took place from December 2016 to April 2017. Next, a hand-coded content analysis was conducted on the retrieved Facebook posts. The unit of analysis was an individual post. The scheme we classified each post included six broad categories of content strategies: product awareness, customer service, sales promotion, public relations, interactivity, and other. The strategy of product awareness was related to posts that informed users about new products, new/stories related to products, features of products, tips, and reviews of the products. Customer service included posts that provided information about stores. Promotion was mainly related with posts that presented product-related advertisements, customers' testimonials, contests, reward programs, discounts, offers, coupons, free samples, etc. The strategy of public relations included posts that informed followers about company's events, anniversaries, CSR activities, as well as promoted the company's image and provided information about employees. Interactivity refers to posts that called followers to like, share and comment on a post, to answer a question, to press a link, to send an email, to visit an e-store, as well as to participate in offline activities. A similar category that captures the efforts of companies to cultivate two-way communication with users has also been included in a number of relevant classifications of branded content [7, 10, 15, 17]. Finally, the category of other included posts that provided information about the weather as well as tips and photos irrelevant to the company. For each post we also collected information about the total number of likes, shares, and comments as well as whether the post contained a hashtag (#), mentions (@id), and emoticons. All posts were content analyzed by a trained coder. Moreover, 10% of the collected posts were randomly selected and coded by a second researcher. The agreement of the two coders was 98%. The coders discussed the areas of disagreements and adjustments were made until they reached total agreement.

4   Results

In total, 690 Facebook posts were analyzed from the official account of Starbucks. Almost one quarter of posts contained at least one hashtag (25.6%; 246 posts) and 19.6% of posts included at least one emoticon. The use of mentions in Facebook posts was limited (3%; 29 posts). The mean number of likes, shares, and comments

Table 1 Descriptive measures of dependent variables

	Mean	Standard deviation	Variance	Skewness
Likes	405.07	911.52	830,877.38	11.02
Comments	12.72	53.28	2838.92	11.78
Shares	12.19	43.30	1875.46	14.89

Table 2 Results of negative binomial regression for the number of post likes

	β	Exp (B)	Standard error	Significance
Content strategy				
Other	0.400	1.492	0.260	0.125
Interactivity	0.481	1.618	0.171	0.005*
Product awareness	0.526	1.692	0.087	0.000*
Promotion	0.869	2.384	0.101	0.000*
Customer service	0.268	1.307	0.236	0.256
Hashtag (yes)	−0.787	0.455	0.077	0.000*
Mention (yes)	0.556	1.743	0.191	0.004*
Emoticon (yes)	−0.617	0.540	0.082	0.000*
Intercept	5.908	367.840	0.233	0.000*

*Significant at $p = 0.05$ level

per post was 405.07 (SD = 911.52), 12.19 (SD = 43.3), and 12.72 (SD = 53.28) respectively.

Regarding the first research objective, results show that the most frequently used strategy was that of product awareness (42.6%; 476 posts), followed by promotion (22%; 211 posts) and public relations (20.3%; 195 posts). On the contrary, Starbucks made little use of the strategies of interactivity (4.4%; 42 posts) and customer service (2.1%; 20 posts).

In order to answer the second research objective and test the accompanied research hypotheses, we carried out three negative binomial regressions, one for each of the dependent variables (Likes, Comments, Shares). We used this type of regression for the following reasons: the dependent variables are count variables; the distributions of the dependent variables are highly skewed, with skewness indices greater than 1; and the variances of the dependent variables are larger than their means (see Table 1).

It should be noted that besides the content strategies we also tested the impact of several message characteristics (such as the use of hashtags, mentions, and emoticons) as predictors of engagement indicators. Table 2 shows the results of the negative binomial regression for the dependent variable of Facebook post likes.

Before analyzing the results, it should be noted that the significance of β values is based on the baseline category of each variable. Looking at the results, for the number of post likes significant changes were found for the variables of content strategy, hashtag, mention, and emoticon (Table 2). Regarding, the content strategy, compared to the baseline category (public relations), posts that implemented the strategies of promotion (β = 0.869, sig = 0.000), product awareness (β = 0.526,

Table 3 Results of negative binomial regression for the number of post comments

	β	Exp (B)	Standard error	Significance
Content strategy				
Other	−0.467	0.627	0.309	0.132
Interactivity	2.546	12.759	0.176	0.000*
Product awareness	0.606	1.834	0.098	0.000*
Promotion	2.041	7.700	0.107	0.000*
Customer service	0.784	2.190	0.250	0.002*
Hashtag (yes)	0.005	1.005	0.084	0.953
Mention (yes)	0.507	1.660	0.210	0.016*
Emoticon (yes)	0.076	1.079	0.089	0.396
Intercept	0.750	2.117	0.254	0.003*

*Significant at p = 0.05 level

sig = 0.000), and interactivity (β = 0.481, sig = 0.005) were expected to receive significantly (p < 0.05) more post likes. No significant relations (p > 0.05) were found between the number of likes and the strategies of other (β = 0.400, sig = 0.125) and customer service (β = 0.268, p = 0.256). Hence, hypotheses H1a, H1b, and H1e cannot be rejected while H1c and H1d are rejected.

Results suggest that posts with hashtags (β = −0.787, sig = 0.000) and emoticons (β = −0.617, sig = 0.000) were expected to receive significantly (p < 0.05) fewer likes than posts that did not include these features. On the contrary, the use of mention in a Facebook post is significantly (p < 0.05) related with higher number of likes (β = 0.556, sig = 0.004) compared to posts that did not tag a user.

Turning to the number of post comments, Table 3 shows the results of the negative binomial regression.

As the results indicate, the type of content strategy as well as the use of mention in posts is significantly related with the number of Facebook comments. Compared to the strategy of public relations, posts that used the strategies of interactivity (β = 2.546, sig = 0.000), promotion (β = 2.041, sig = 0.000), customer service (β = 0.784, sig = 0.002), and product awareness (β = 0.606, sig = 0.000) were associated with significantly (p < 0.05) higher number of comments. The content strategy of other was not significantly (p < 0.05) associated with the number of comments (β = −0.467, sig = 0.132). Based on the above analysis, hypotheses H2a, H2b, H2c and H2e cannot be rejected while hypothesis H2d was rejected.

Of the three examined message characteristics (hashtags, mention, emoticon) only the use of mention was significantly (p < 0.05) related to higher number of comments (β = 0.507, sig = 0.000).

Table 4 shows the results of the negative binomial regression for the number of post shares.

As findings indicate, only the type of content strategy was significantly (p < 0.05) associated with the number of post shares while the variables of message characteristics such as hashtags (β = 0.057, sig = 0.483), mentions (β = −0.104, sig = 0.597), and emoticons (β = 0.071, sig = 0.409) were not found to significantly (p > 0.05)

Table 4 Results of negative binomial regression for the number of post shares

	β	Exp (B)	Standard error	Significance
Content strategy				
Other	0.239	1.270	0.270	0.377
Interactivity	0.098	1.103	0.178	0.582
Product awareness	0.108	1.114	0.926	0.244
Promotion	0.665	1.945	0.105	0.000*
Customer service	−0.347	0.707	0.251	0.167
Hashtag (yes)	0.057	1.058	0.080	0.483
Mention (yes)	−0.104	0.901	0.197	0.597
Emoticon (yes)	0.071	1.074	0.859	0.409
Intercept	2.266	9.643	0.239	0.000*

*Significant at p = 0.05 level

influence shares. Another interesting finding was the fact that, of the different content strategies examined, only promotion (β = 0.665, sig = 0.000) was expected to receive significantly (p < 0.05) more shares compared to the baseline strategy of public relations. The rest of the content strategies were not significantly (p > 0.05) related with the number of shares. Thus, hypotheses H3b was not rejected while H3a and H3c were rejected.

5   Conclusions and Managerial Implications

The purpose of the present study was to (a) examine which content strategies are frequently used by a widely known brand on Facebook and (b) test which strategies significantly impact engagement indicators (likes, comments, shares). Towards this end a content analysis was performed on posts that were published by the popular coffee chain of Starbucks on the official Greek Facebook page.

Based on the findings, the subsidiary company of Starbucks in Greece mainly uses Facebook in a one-way manner to post general information about their products and to inform their users of promotional activities. Moreover, the company also posted frequently information about anniversaries, events, and corporate social responsibility activities. However, messages that attempted to facilitate bi-directional relationships with fans were few and most of them called users to respond to questions or leave feedback as well as to like, share, and comment on posts. Similar findings were reported in the study of [18] regarding the Facebook posts of luxury hotels which were mainly informational in nature.

The present study sheds light on the relationship between firm-created content strategies on Facebook and online consumers' engagement and addresses the need for more research on the topic [17]. Based on the findings liking a firm-created post was related with content that informed fans about the promotional offers, the products, and entice users to interact with the post by responding to questions or

pressing the like button. Similar findings were reported by [8] who found that liking behavior was associated with promotional, product-related and interactive messages. Moreover, the positive impact of remunerative and interactive posts was also noted by other studies [7, 9, 13].

Commenting behavior of fans was found to be influenced by the content strategies of interactivity, promotion, customer service, and product awareness. It should be noted that, interactivity was found to be the most effective strategy for boosting the number of comments. The important role of interactive messages for the commenting behavior of Facebook fans was also highlighted by existing studies [7, 11, 13].

Advocacy behavior of users (sharing) was affected only by the content strategy of promotion. Reference [12] as well as [14] also noted that posts that publish information about discounts, offers, prizes, and sweepstakes are more likely to induce sharing behavior.

The present study has several practical implications for Facebook marketers wishing to publish content that enhances their engagement behaviors. Specifically, marketers can increase the number of likes by posting information about the sales promotions activities of the company. Moreover, informing online consumers about the company's products and urging them to like posts are also effective ways for boosting the number of likes. Tagging other users (mentioning) can also trigger the liking behavior of fans. In order to enhance the number of comments, marketers could increase the use of interactive posts through which the company would call fans to answer a question, provide feedback and co-create content with the company. The number of comments can also be increased with promotional, product and store-related information as well as through the use of mentions. Sharing could be triggered by posts that are remunerative.

It should be noted that the results of the present study may have been related to the time period that the posts were published. Perhaps different results might have been obtained for posts published in a different time period and during the occurrence of important events such as a crisis.

References

1. Ashley C, Tuten T (2015) Creative strategies in social media marketing: an exploratory study of branded social content and consumer engagement. Psychol Mark 32(1):15–27. https://doi.org/10.1002/mar.20761
2. Brubaker PJ, Wilson C (2018) Let's give them something to talk about: global brands' use of visual content to drive engagement and build relationships. Public Relat Rev 44(3):342–352. https://doi.org/10.1016/j.pubrev.2018.04.010
3. Cervellon MC, Galipienzo D (2015) Facebook pages content, does it really matter? Consumers' responses to luxury hotel posts with emotional and informational content. J Travel Tour Mark 32(4):428–437. https://doi.org/10.1080/10548408.2014.904260
4. Choi YG, Ok CM, Hyun SS (2017) Relationships between brand experiences, personality traits, prestige, relationship quality, and loyalty: an empirical analysis of coffeehouse brands. Int J Contemp Hosp Manag 29(4):1185–1202. https://doi.org/10.1080/10548408.2014.904260

5. Coelho RLF, Oliveira DSD, Almeida MISD (2016) Does social media matter for post typology? Impact of post content on Facebook and Instagram metrics. Online Inf Rev 40(4):458–471. https://doi.org/10.1108/OIR-06-2015-0176

6. De Vries L, Gensler S, Leeflang PS (2012) Popularity of brand posts on brand fan pages: an investigation of the effects of social media marketing. J Interact Mark 26(2):83–91. https://doi.org/10.1016/j.intmar.2012.01.003

7. Dolan R, Conduit J, Fahy J, Goodman S (2017) Social media: communication strategies, engagement and future research directions. Int J Wine Bus Res 29(1):2–19. https://doi.org/10.1108/IJWBR-04-2016-0013

8. Gavilanes JM, Flatten TC, Brettel M (2018) Content strategies for digital consumer engagement in social networks: why advertising is an antecedent of engagement. J Advert 47(1):4–23. https://doi.org/10.1080/00913367.2017.1405751

9. Jeon H, Ahn HJ, Yu GJ (2016) What makes people react to the posts on the brand pages of mobile social network games? Online Inf Rev 40(3):435–448. https://doi.org/10.1108/OIR-07-2015-0236

10. Luarn P, Lin YF, Chiu YP (2015) Influence of Facebook brand-page posts on online engagement. Online Inf Rev 39(4):505–519. https://doi.org/10.1108/OIR-01-2015-0029

11. Pinto MB, Yagnik A (2017) Fit for life: a content analysis of fitness tracker brands use of Facebook in social media marketing. J Brand Manag 24(1):49–67. https://doi.org/10.1057/s41262-016-0014-4

12. Shen B, Bissell K (2013) Social media, social me: a content analysis of beauty companies' use of Facebook in marketing and branding. J Promot Manag 19(5):629–651. https://doi.org/10.1080/10496491.2013.829160

13. Su N, Reynolds D, Sun B (2015) How to make your Facebook posts attractive: a case study of a leading budget hotel brand fan page. Int J Contemp Hosp Manag 27(8):1772–1790. https://doi.org/10.1108/IJCHM-06-2014-0302

14. Taecharungroj V (2017) Starbucks' marketing communications strategy on Twitter. J Mark Commun 23(6):552–571. https://doi.org/10.1080/13527266.2016.1138139

15. Tafesse W, Wien A (2018) Using message strategy to drive consumer behavioral engagement on social media. J Consum Mark 35(3):241–253. https://doi.org/10.1108/JCM-08-2016-1905

16. Tao W, Wilson C (2015) Fortune 1000 communication strategies on Facebook and Twitter. J Commun Manag 19(3):208–223. https://doi.org/10.1108/JCOM-01-2013-0004

17. Wright LT, Gaber H, Robin R, Cai H (2017) Content strategies for Facebook marketing: a case study of a leading fast-food brand page. In: Krey N, Rossi R (eds) Back to the future: using marketing basics to provide customer value. Developments in marketing science. Academy of Marketing Science Annual Conference. Springer, Cham, pp 779–791. https://doi.org/10.1007/978-3-319-66023-3_246

18. Thongmak M (2015) Engaging Facebook users in brand pages: different posts of marketing-mix information. In: Abramowicz W (ed) International conference on business information systems. Springer, Cham, pp 299–308. https://doi.org/10.1007/978-3-319-19027-3_24

Examining Gaps in Business and Logistics Skills and Their Performance Implications in the Agrifood Supply Chain in Greece

Panagiotis Trivellas, Panagiotis Reklitis, Catherine Marinagi, and Giannis T. Tsoulfas

Abstract Although supply chain management acts as a catalyst for national economy predicting sustainable growth and building competitive advantage, little attention has been paid to the necessary specific skills and competencies. This paper aims to investigate which specific skills may improve performance at the organisational and supply chain level. A field research was conducted with personal interviews to employees and managers at the logistics departments of more than 150 firms in the agrifood sector in order to map their skills and competences profile. Furthermore, statistical analysis revealed performance implications of the marketing and logistics skills at the organisational and supply chain level. Those skills need to be addressed in order to boost organisational effectiveness. Firms' effectiveness includes aspects of finance, marketing, natural environment as well as logistics process performance. In addition, this paper contributes to management practice by indicating the critical elements of the successful logistics staff which facilitate business excellence and provide the necessary ground for training development of logistics personnel.

Keywords Marketing · Logistics · Skills and competences · Agrifood · Greece

1   Introduction

An agricultural and food (agrifood) supply chain consists of sequential operations 'from farm to fork' including input supply, production, postharvest, storage, processing, marketing distribution, food services, and consumption [1]. Van de Vorst [2] reports the particular characteristics that differentiate agrifood supply chain from typical supply chains, including raw material shelf-life constraints, product quality changes, production seasonality, long production times, conditioned transportation and storage requirements, quality and quantity variability of supply, high volume and low variety production, etc. Tsolakis et al. [3] have identified a list

P. Trivellas (✉) · P. Reklitis · C. Marinagi · G. T. Tsoulfas
Agricultural University of Athens, Thiva, Greece

of key issues for the design and management of modern agrifood supply chain that need to be addressed: selection of farming technologies, financial planning and investment, supply chain partners' relationships, supply chain network configuration, performance management, risk management, sustainability, quality management, transparency, food safety & traceability, harvest planning, logistics operations, waste management & reverse logistics, as well as fleet management, vehicle planning & scheduling.

Focusing on the issue of sustainability within agrifood supply chain networks, green supply chain practices should be adopted, in order to minimise the factors that threaten a constant supply of agricultural products. Srivastava [4] defines green logistics and supply chain management as "integrating environmental thinking into supply chain management, including product design, material sourcing and selection, manufacturing process, delivery of the final product to the consumers as well as end-of-life management of the product after its useful life". Iakovou et al. [5] propose a methodological framework for the design of green supply chains for the agrifood sector, which encompasses six distinct thematic areas: sustainable farming, supply chain management, marketing, environmental management, reverse logistics, and corporate social responsibility. The implementation of green practices included in these thematic areas has impact on the main echelons encountered in agrifood supply chains. The application of this framework could optimise the farming operations and reduce the operational cost in the farm.

This paper investigates which marketing and logistics skills are related to enhanced performance at the organisational and supply chain level. A field research was conducted in order to map the skills and competences required for logistics and supply chain management (LSCM) employees and managers in the agrifood sector.

2 Skills and Competences Required for Logistics and Supply Chain Management

Managing the supply chain faces many challenges as business environment has been characterised by turbulence, complexity, resource scarcity and volatility. All those factors challenge firms' competence for business continuity and survival highlighting the importance of team collaboration. Thus, partners along the supply chain should act as an integrated ecosystem, constantly interacting questing synergies against other competitive supply chains.

The skills and competences required for LSCM stakeholders have been identified through different studies [6–11]. Recommendations for skills and competency requirements for LSC managers include LSCM specifics knowledge, business skills, management skills, technological skills, and personal qualities. In 1991, Murphy and Poist [8] suggested a framework of three skills categories for LCSM managers: business, logistics and management skills (BLM skills), which has been frequently used by other researchers. They examined 83 skills grouped into those three

categories. Management skills were found to be the most important followed by logistics skills and business skills. Murphy and Poist continued enriching the BLM framework till 2007 [9].

Gammelgaar and Larson [6] identified 45 skills important in LSCM, which were classified into three categories: (a) interpersonal/managerial basic skills, (b) quantitative/technological skills, and (c) LSCM basic skills. Teamwork emerged as the most important skill. Wong et al. [7] conducted a research study in UK, in order to compare the curriculum design of LSCM undergraduate courses with employers' job requirements. The findings indicate that managerial skills and professional skills need more attention when designing LSCM courses. Mangan and Christopher [10] give the key knowledge areas and competencies/skills required by LSC managers: (a) general (finance, information technology and management), (b) LSCM specifics (operations, processes/flows, legal, security and international trade, multimodal logistics, logistics in emerging markets), and (c) competencies/skills (analytical, interpersonal, leadership, change management, project management). Prajogo and Sohal [11] conducted a study in Australia, in order to identify the competencies and skills of LSCM managers, their use of technologies and future challenges. The results indicate that the most important skills for successful supply chain integration are communication and teamwork (management skills). Then, knowledge of a broad range of technologies is appreciated, including WMS, ERP, EDI, transportation management systems, e-procurement, e-CRM, etc. Finally, Prajogo and Sohal [11] reported green supply chain as an important topic, since stakeholders demand firms to minimise the environmental impacts of their activities.

Recent studies propose a different focus on the competency model for different levels of logistics workers [12, 13]. Sangka [12] has proposed a competency model, conducting a survey in Indonesia. Fifteen competencies grouped into four categories (logistics, business, management, technologies) were examined for junior, middle and senior level managers. Among others, the results show that the basic logistics competencies 'transportation and distribution management', 'project management' and 'warehouse and inventory management' are the three top priorities for all levels of managers. Next common priority is 'continuous improvement', which is a business competency. The fifth priority for junior level managers is 'managing results', which is another business competency. However, the fifth priority for middle and senior level managers is 'leadership', which is a main management competency. McKinnon et al. [13] conducted a study of logistics competencies in 38 countries aiming at assessing the lack of logistics competencies, skills and training and analyse the reasons for the shortages. Four levels of logistics employment are considered: operative staff, administrative staff, supervisors and managers. The logistics competencies categories include: effective performance of operational tasks, knowledge and learning, communication, technical skills, personal skills and administrative knowledge. Surprisingly, a comparison of the importance and availability scores shows that there is a serious skills shortage in all four groups of employees and across all competencies categories, although the employees assign a high importance to the majority of the competences.

3   Research Methodology

A field research was conducted with personal interviews to employees and managers at the logistics departments of more than 150 firms in the agrifood sector in order to map their skills and competences profile. Furthermore, statistical analysis revealed performance implications of the marketing and logistics skills at the organisational and supply chain level.

3.1   Questionnaire Design

The research instrument was a structured questionnaire, which was developed to measure logistics and business related competencies of managers, including marketing skills. The research instrument was based on a revised version of BLM framework developed by Murphy and Poist [9], and Thai et al. [14], which was further enriched in order to incorporate recent developments in LSCM field. Furthermore, the research instrument also consists of items measuring green logistics practices and effectiveness along the agrifood supply chain.

The questionnaire was tested twice before it was released by ten executives from different firms across the agrifood supply chain and by five academics. They confirmed the cognitive relevance of the questionnaire to research objectives. To ensure the validity of the translation, an English to Greek translation and back translation procedure was adopted [15, 16]. Respondents were asked to rate the importance and the degree of realisation of each BLM skill on a seven-point scale, which provides increased measurement sensitivity and variance extraction [17].

3.2   Sampling

The field research is based on supervisors, managers or owners in firms along the agrifood supply chain in Greece. In particular, the research took place in 2017 in the neighbouring regions of Attica and Viotia. This fact poses certain limitations but to the writers' opinion the situation is similar across the country. The resulting sample comprised 158 valid questionnaires (response rate ~43%). The 31% of the respondents work in retailers, 15% work in transportation and logistics companies, 13% work in food processing, and 10% are farmers. The 36% of the sample are females. This is representative of the agrifood supply chain, which is dominated by males. The average age of the respondents is almost 42 years with 15 years of working experience.

4   Data Analysis and Results

Principal component analysis (PCA) was performed on the items describing logistics and business related competencies in order to extract groups of competencies, as presented in [18]. Considering logistics competencies, five factors were revealed, as shown in Table 1 (L1, L2, L3, L4, L5). Alike, five principal components were extracted from the business skills scale (B1, B2, B3, B4, B5).

Comparing the current situation and the ideal profile, the widest skills gap appear for logistics competencies, logistics information and integration (18.00%, $p < 0.001$), followed by strategic logistics skills (13.37%, $p < 0.001$) and for business competencies, marketing and communication skills (15.74%, $p < 0.001$), followed by quantitative skills (13.76%, $p < 0.001$). Thus, the importance of

Table 1   Descriptive statistics, reliability analysis of sub-dimensions

	Ideal	Actual	Dif. %	Cronbach's alpha	Organisational performance[*]	Supply chain effectiveness[*]
Logistics skills						
L1. Strategic logistics	5.51	4.86	13.37	0.839	0.609	0.459
L2. Logistics information & integration	5.31	4.50	18.00	0.850	0.507	0.405
L3. Inbound logistics & safety	5.99	5.47	9.51	0.760	0.547	0.453
L4. Warehouse management & ordering	6.02	5.54	8.66	0.772	0.575	0.514
L5. Distribution management	5.71	5.13	11.31	0.753	0.462	0.451
Business skills						
B1. Extrovert business network skills	5.12	4.52	13.27	0.918	0.477	0.379
B2. Human resources skills	5.77	5.20	10.96	0.740	0.515	0.460
B3. Strategic skills	5.80	5.27	10.06	0.834	0.489	0.532
B4. Quantitative skills	5.29	4.65	13.76	0.874	0.547	0.453
B5. Marketing & communication skills	5.44	4.70	15.74	0.821	0.417	0.301
Organisational performance		5.13		0.919		
Supply chain effectiveness		5.51		0.921		

*All correlation coefficients are statistical significant at $p < 0.001$, and all paired t-test analysis results for the ideal and actual skills profile are also statistical significant at $p < 0.001$

marketing and communication skills among business competencies were highlighted. Moreover, t-test analysis confirmed the statistical significance of the differences between ideal and realised skills profile for all factors, as illustrated in Table 1. In order to investigate the association between competencies, and effectiveness at the organisational and supply chain level, Pearson's correlation analysis was conducted. Table 1 also presents the results, where all groups of skills and competencies are strongly related to performance at the organisational and supply chain level.

In particular, strategic logistics skills exhibit the highest correlation coefficient with organisational performance, while warehouse management and order processing the highest association with supply chain effectiveness. Regarding business skills, quantitative and strategic skills are highly related to organisational and supply chain performance respectively.

5   Concluding Remarks

Effective supply chain strategies in the agrifood sector are necessary in order to ensure food security and satisfy stakeholders' needs. Over the years, researchers have shown that the situation concerning the necessary skills and competences of all the partners involved in supply chains evolve over time and may depend on several factors (e.g. sector, nationality, etc.). This study aims to map agrifood supply chain partners' skills profile in Greece. Results reveal the skills gap that has to be addressed in order to boost organisational effectiveness. Towards this objective, it is necessary to develop appropriate training solutions, which will systematically improve the performance of supply chain partners in the agrifood sector and enhance synergies that will contribute to the goals of sustainable development and food security. Several higher education institutions offer courses as well as vocational education and training in all sectors of the economy. This is a way to enhance the contribution of higher education to the economy and society. The agrifood supply chain is no exception.

References

1. Jaffee S, Siegel P, Andrews C (2010) Rapid agricultural supply chain risk assessment: a conceptual framework. Agriculture and Rural Development, Discussion Paper 47. The World Bank, 2010. http://documents.worldbank.org/curated/en/657211468157529181/pdf/565900NWP0ARD01pApRisk1combined1web.pdf
2. van der Vorst JGAJ (2006) Performance measurement in agri-food supply chain networks. In: Ondersteijn CJM, Wijnands JHM, Huirne RBM, van Kooten O (eds) Quantifying the agrifood supply chain. Springer, Dordrecht, pp 13–24
3. Tsolakis N, Keramydas C, Toka A, Aidonis D, Iakovou E (2012) Agrifood supply chain management: a comprehensive hierarchical decision-making framework and a critical taxonomy. In:

Proceedings of the 2nd International Conference on Supply Chains (ICSC 2012), Katerini, Greece, 5–6 October

4. Srivastava SK (2007) Green supply-chain management: a state-of-the-art literature review. Int J Manag Rev 9(1):53–80. https://doi.org/10.1111/j.1468-2370.2007.00202.x

5. Iakovou E, Vlachos D, Achillas C, Anastasiadis F (2014) Design of sustainable supply chains for the agrifood sector: a holistic research framework. Agric Eng Int: CIGR J, Special issue 2014: agri-food and biomass supply chains, pp. 1–10. http://www.cigrjournal.org/index.php/Ejounral/article/download/2325/1874

6. Gammelgaar B, Larson PD (2001) Logistics skills and competencies for supply chain management. J Bus Logist 22:27–50. https://doi.org/10.1002/j.2158-1592.2001.tb00002.x

7. Wong CY, Grant DB, Allan B, Jasiuvian I (2014) Logistics and supply chain education and jobs: a study of UK markets. Int J Logist Manag 25:537–552. https://doi.org/10.1108/IJLM-01-2013-0003

8. Murphy PR, Poist RF (1991) Skill requirements of senior-level logisticians: practitioner perspectives. Int J Phys Distrib Logist Manag 21:3–14. https://doi.org/10.1108/09600039110004025

9. Murphy PR, Poist RF (2007) Skill requirements of senior-level logisticians: a longitudinal assessment. Supply Chain Manag 12(6):423–431. https://doi.org/10.1108/13598540710826353

10. Mangan J, Christopher M (2005) Management development and the supply chain manager of the future. Int J Logist Manag 16:178–191. https://doi.org/10.1108/09574090510634494

11. Prajogo D, Sohal A (2013) Supply chain professionals: a study of competencies, use of technologies, and future challenges. Int J Oper Prod Manag 33:1532–1554. https://doi.org/10.1108/IJOPM-08-2010-0228

12. Sangka KB (2017) A competency model for operations managers in Indonesia Third-Party Logistics (3PL) providers. PhD Thesis, Business IT and Logistics, RMIT University, Melbourne, Australia

13. McKinnon A, Flothmann C, Hoberg K, Busch C (2017) Logistics competencies, skills, and training. International Bank for Reconstruction and Development/The World Bank. https://doi.org/10.1596/978-1-4648-1140-1

14. Thai V, Ibrahim K, Ramani V, Huang H (2012) Competency profile of managers in the Singapore logistics industry. Asian J Shipp Logist 28(2):161–182. https://doi.org/10.1016/j.ajsl.2012.08.002

15. Brislin RW (1970) Back translation for cross-cultural research. J Cross Cult Psychol 1(3): 185–216. https://doi.org/10.1177/135910457000100301

16. Laroche M, Papadopoulos N, Heslop L, Bergeron J (2003) Effects of subcultural differences on country and product evaluations. J Consum Behav 2:232–247. https://doi.org/10.1002/cb.104

17. Cooper DR, Schindler PS (1998) Business research methods, 6th edn. Irwin McGraw-Hill, Boston, MA

18. Marinagi C, Kofakis P, Trivellas P, Reklitis P (2018) Designing an e-training program on green logistics in rice and cereal sector. In: Proceedings of the 10th annual international conference on education and new learning technologies (EDULEARN18), Palma, Mallorca, Spain, pp. 8094–8103, 2–4 July. IATED Publications. https://doi.org/10.21125/edulearn.2018

Understanding Aviation Consumers' Experience at the Time of Their Journeys: The Use of the Denied Boarding Regulations (DBRs) at Chios Airport

Maria Salamoura and Viktoria Voxaki

Abstract In recent years, the volume of passengers and aircraft travelling through airports and airspace has increased dramatically, making aviation a key driver of economic trade, growth and jobs. Although air travel is a very important sector for consumers, it results in increased risk of problems such as flight delays and cancellations. The purpose of this study is to better understand consumers' experiences of disruption to their journeys and to explore the implementation of the regulation associated with air passenger rights, according to the European Commission, in the case of 224 respondents flying from Chios Airport. The results indicated that, despite publicity campaigns and different travel apps by the European Commission, passengers are unaware of their rights and did not receive either much information about their legal rights, or the necessary compensation as foreseen by the Air Passenger Rights Regulation, when their flight was delayed or canceled. In addition, "refund of flight cost", "rescheduling/rebooking (free)", "financial compensation", "information on legal rights" and "flight status information" are critical factors for delayed or cancelled flights, while "transfer to home or hotel", "comfortable waiting area", "overnight accommodation" and "food and drink" also play an important role in the case of flight delay or cancellation.

Keywords Airline passenger satisfaction · Aviation passenger rights · Air transport · Transport marketing · Civil Aviation Authority (CAA)

1 Introduction

The air transport industry has grown significantly over the last 50 years. The increase in passengers was around 15% per year in the 1950s and 1960s, while today the average annual growth rate is about 4–5%. Since the end of World War II, growth in

M. Salamoura (✉) · V. Voxaki
University of the Aegean, Chios, Greece
e-mail: m.salamoura@aegean.gr

air transport has been above that of global GDP [1]. Today, despite the economic crisis, both demand and supply have increased since 2012. In 2014, over 870 million consumers traveled by air [2]. Global aviation is expected to increase about 5% per annum by 2023. According to IATA [3] 7.8 billion passengers will travel in 2036. Increased air passenger movements also increase air traffic resulting in airport congestion, air traffic control constraints and additional airport security measures. These factors, along with the lack of a modern infrastructure, weather phenomena, natural disasters, etc., contribute to an increase in the number of flight interruptions.

More than any means of transport in the aviation sector, time is important, and passengers want to reach their destination as quickly as possible. Flight interruptions are a disaster for passengers, causing anxiety, disappointment and anger. Nowadays, delays, cancellations or overbooked flights cause significant economic and non-financial damage to passengers, such as lack of business meetings or valuable leisure time. Consequently, as the number of people traveling each year is constantly increasing, the protection of the rights of air passengers is of special importance, as it investigates how air passenger rights legislation is being respected by airlines and whether there are problems in the market [4]. In other words, aviation passengers' rights are one of the most important consumer rights, making thus superior quality of service and understanding of customer expectations a key to the success and survival of airlines in a very competitive environment [2]. That is, consumer protection for air passengers has received increased attention in recent years. The EU has enacted many regulations on the rights of air passengers that complement the relevant international conventions and recommendations to address such problems. Nevertheless, in Europe, despite extensive information campaigns and applications on the rights of air passengers, many passengers were aware that they had rights but did not know what those rights were.

The aim of the current research is to better understand and explore the parameters influencing aviation consumers' experiences of disruption at the time of their journeys. More specifically, the main purposes of the study are to investigate the most frequent reasons for flight disruption in the case of 224 respondents flying from Chios Airport "Omiros", their aspects during flight disruptions, as well as the most important parameters concerning their experience with flight delay or cancellation.

Based on the above, in the literature review section, a general overview of customer satisfaction in airline service is provided along with an analysis of air passenger's rights. The research methodology used in this study is then discussed, using quantitative data research and the results are then analyzed, using univariate and multivariate data analysis. Finally, the findings from an academic and managerial perspective are discussed while directions for further research are provided.

2 Literature Review

2.1 Customer Satisfaction in Airline Service

Nowadays customer satisfaction is a crucial element in most organizations, operating in the travel industry. According to Oliver [5, p. 34], "customer satisfaction is defined as pleasurable fulfilment. That is, the consumer senses that consumption fulfils some need, desire, goal, or so forth, and that this fulfilment is pleasurable". Kotler and Keller [6, p. 144] define satisfaction as "a person's feeling of pleasure or disappointment which resulted from comparing a product's perceived performance or outcome against his/her expectations".

Passenger satisfaction is a key performance indicator for the operation of an airport, while at the same time international airports are located at different regions or countries. Behn and Riley [7] by investigating whether nonfinancial information can be used to predict quarterly financial performance in the airline industry, found that on-time performance, mishandled baggage, ticket over sales, and in-flight service were significantly associated with customer satisfaction. Huang [8, p. 12] explored the relationships between airline service quality factors, satisfaction and service value and behavioral intention. According to the findings, "the service value, satisfaction, and perceived sacrifice have positive effects on behavioral intention. Furthermore, service value not only has direct effect on behavioral intention, but also indirect effect on behavioral intention by satisfaction". Also, Yunus, Jamil and Rashid [9] argued that the quality of service delivery by airlines, in terms of reliability, tangibles, responsiveness, assurance and empathy has a significant effect on customer satisfaction, which in turn, affects significantly customer loyalty. Gambo [10] claimed that there is a significant relationship between the four service quality attributes (in-flight services, reliability, responsiveness and baggage handling services) and customer satisfaction in domestic airlines. Also, Boetsch et al. [11] in an effort to analyzing airline services and understanding choice criteria for customers, indicated that the most important parameters among customer-value drivers of airline service quality were "airline brand" "price" and "sleep comfort". Finally, "Research has shown that passengers are more concerned about factors relating to passenger convenience (i.e. the actual performance of the airline for the duration of the flying experience) than access to additional frequent flyer points and expanded route network options" [12, pp. 99–100]. In conclusion, "service is something of an amorphous concept: it can cover everything from the quality of food provided by carriers to the cheerfulness of flight attendants, from ease of check-in to the care taken in baggage handling, from the frequency of flights to how many direct flights are available." [13, p. 20].

2.2 The Air Passenger's Rights Sector

In recent decades, air transport has been at the epicenter of the economic and legal regulations in Europe and worldwide. Due to the increased transportation needs, people depend heavily on air transport, as aircrafts is a daily necessity for many travelers, whose main purpose is leisure or business. From 1991 until today, with the liberalization of air transport, there is an increase in problems currently faced by air passengers. The number of travelers who, despite their will, are not allowed to board in an aircraft, on which they have a confirmed reservation, remains high. The same applies for those affected by flight cancellations or long delays [14].

For this reason, the European Community initially adopted Regulation 295/1991 to strengthen passenger rights and later Regulation 261/2004/EC amending the shortcomings of the original regulation. Regulation 261/2004/EC, known as the Denied Boarding Regulations (DBRs), included the rules for the protection of passengers, in particular in the event of denied boarding due to overbooking, giving information to them for their rights, care and assistance, reimbursement and financial compensation [4]. The European Union also adopted Regulation 889/2002/EC defining the liability of air carriers for passengers and their luggage. An indicative list of passenger's rights according to the Regulation 261/2004/EC and the Regulation 889/2002/EC is given below.

A. Flight Cancellation "In the event of a flight cancellation, the operating air carrier must provide passengers with the following options: 1) your alternative transport, under comparable conditions, to your destination; 2) transferring you under comparable conditions, to your destination another day serving you if there are seats available or 3) refund of your ticket and, if applicable, return flight to the original point of departure".

B. Flight Delay "In the event of a flight being delayed, the carrier must offer free soft drinks, communication, meals and overnight accommodation as well as transfer between airport and accommodation (depending on the delay time). When the delay is at least five hours, you can choose the passenger to receive the ticket and not to fly".

C. Denied Boarding "The carrier is looking for volunteers, in exchange for benefits under conditions. Passengers who resign from their reservations are also provided with assistance in accordance with Article 8, i.e. the right to a refund or transfer by another flight or other means of transport".

D. Loss/Delay/Damage of Luggage "A maximum carrier's liability is limited to 1000 Special Drawing Rights per passenger. After 21 days of delay in receiving the baggage, it is considered as lost" [15, 16].

3   Methodology

Extended bibliographical research led to the questionnaire design. The total sample consisted of 224 respondents, who had experienced disruption in their travel over the last 12 months in the case of Chios Airport "Omiros", for the period from July to September 2017, using convenience sampling [17]. Survey data were collected by questionnaires, through personal interviews with passengers waiting at the airport departure room, travelling at different times or days, using different airlines, at random to minimize bias in a representative sample, indicating thus the different traffic levels of the airport. The questionnaire included forty questions, divided in four parts, and apart from the general information and the demographic profile of the respondents (gender, age, educational level, professional status, personal monthly income, marital status, country of origin, travel frequency, airline company, purpose of trip) respondents were asked to categorize the main sources of their disruption: flight delay or cancellation, denied boarding, and baggage delay, loss, or damage. In addition, questions investigated the importance of the main parameters influencing the above sources of disruption were included (e.g. "What do you think would be most important to you on a flight that was delayed—i.e. over 3 h—or canceled?"), with the use of a five point Likert scale, ranging from 1—"not important" to 5—"very important".

4   Data analysis

4.1   Demographic Profile of the Respondents

To proceed with respondents' answers, SPSS version 23.0.0 was used for statistical analysis of the survey data. Firstly, univariate analysis was used to identify the respondents' profile and problems faced by passengers on their flight. According to the findings, most of the respondents were male, from 37 to 42 years old, with a secondary level of education, private employees, with a monthly income from 501 to 1000 €, married with children, travelling from Greece with Olympic Air/Aegean Airlines from two to four times in the last 12 months, mainly for holidays, having encountered problems with delays or cancellations in their flights and lost/damaged or delayed luggage. The above conclusions are presented analytically in Table 1.

4.2   Multivariate Data Analysis

Then, multivariate data analysis—factor analysis—was conducted to summarize the most important determinants of flight delay or cancellation. First, the suitability of our data was checked by Kaiser-Meyer-Olkin (KMO) measure of sampling

Table 1 Passenger's profile

Demographics (n = 224)	% of respondents	Demographics (n = 224)	% of respondents
Gender: Male	53.13	Marital status: Single	24.55
Female	46.88	Married with children	43.30
Age (years): <24	8.48	Married-without children	26.34
25–30	9.82	Divorced	3.13
31–36	14.28	Widowed	2.68
37–42	20.54	Country of origin: Greece	78.57
43–49	17.86	USA	19.64
50–56	15.18	Canada	1.79
57+	13.84	Times flown last year: Once	25.45
Primary education	12.50	2–4 times	54.02
Secondary education	49.55	>5 times	13.84
Bachelor's degree	33.04	Many times, each month	6.70
Master's degree	4.45	Airline: Olympic Air/Aegean	51.79
Doctorate degree	0.45	Astra Airlines	32.59
Civil servant	20.09	Sky Express	15.63
Private employee	45.98	Purpose of trip: Holidays	42.41
Freelancer	11.61	Professional reasons	29.91
Senior executive	4.91	Health	13.84
Student	4.46	Studies	7.59
Retired	7.14	Army	2.68
Unemployed	5.80	Other (specify)	3.57
Personal Income: <500€	24.45	Problems: Flight delay	41.70
501–1000€	41.07	Fight cancellation	10.03
1001–1500€	20.09	Denied boarding	9.40
1501–2000€	7.14	Baggage delay	35.30
2001–2500€	4.02	Baggage loss	0.60
2501–3000€	1.34	Baggage damage	2.80
>3000€	0.89		

adequacy and Bartlett's test of sphericity. KMO for flight delay was 0.731 and sphericity sig: $0.000 < 0.05$, while KMO for flight cancellation was 0.750 and sphericity sig: $0.000 < 0.05$, both acceptable values. In the second step, the number of factors were determined, by considering those factors that have eigenvalues above 1 (Guttman—Kaiser), with the use of the Scree test (Cattell), where factors interpreting the 70–80% of total variance were included. Factor analysis for flight delay resulted in nine factors, but only for the first two factors—which account for almost 57.95% of the variance of the original items—the eigenvalues were above 1.0. Respectively, factor analysis concerning flight cancellation resulted in nine factors, but only for the first two factors, which explain almost 62.158% of the variance of the original items, the eigenvalues were above 1.0. In the third step, Varimax Rotation Method was used to make factors more meaningful and easier to interpret, resulted thus in two factors for both flight delay and cancellation. The first

Table 2 Rotated component matrix

What is most important on a flight delay or cancellation?	Comp. 1 (delay)	Comp. 2 (delay)	Comp. 1 (cancellation)	Comp. 2 (cancellation)
Refund of flight costs	0.871		0.891	
Rescheduling/rebooking (free)	0.846		0.825	
Financial compensation	0.819		0.83	
Information on legal rights	0.782		0.804	
Flight status information	0.662		0.684	
Comfortable waiting area		0.829		0.816
Transfer to the home or hotel		0.799		0.849
Overnight accommodation		0.568		0.764
Food and drink		0.561		0.556

factor included five variables: "refund of flight cost", "rescheduling/rebooking (free)", "financial compensation", "information on legal rights" and "flight status information" during a delay, all of them critical high value "hard" factors for delayed or cancelled flights. The second factor included four variables: "comfortable waiting area", "transfer to home or hotel", "overnight accommodation" and "food and drink", also play an important role—lower value "soft" factors—for the passenger when there is a delay or cancellation in his flight (Table 2).

Finally, reliability check was performed, using Cronbach α (Alpha) to test the internal consistency of our variables. More specifically, the Alpha coefficient for the five items of "high value factors" for delayed flights was 0.856, for the four items of "lower value factors" for delayed flights was 0.650, for the five items of "hard" factors for cancelled flights was 0.886, and finally for the four items of "soft" factors for delayed flights was 0.745, with values ≥0.70 being acceptable in social sciences. Indeed, flight status information or the ability to rebook flights were identified as the most important variables, while comfortable waiting area or transfer to the home or hotel were identified as the least important variables in similar survey [4].

5   Conclusions, Limitations and Future Research

In an effort to understand the challenge facing international airline industry, the purpose of this study is to better understand consumers' experiences of disruption to their journeys and to explore the implementation of the regulation associated with air passenger rights according to the European Commission, as compared with actual data reported by respondents from the Chios Airport "Omiros". The results have shown that there is a lack of awareness of the rights among passengers and they did not receive either much information about their legal rights, or the necessary compensation as foreseen by the Air Passenger Rights Regulation, regarding delayed or canceled flights. Moreover, factor analysis investigated the parameters that were important for passengers who experience flight delay or cancellation. These factors

could be divided in two main categories, with "refund of flight cost", "rescheduling/rebooking (free)", "financial compensation", "information on legal rights" and "flight status information", critical high value "hard" factors for delayed or cancelled flights and "transfer to home or hotel", "comfortable waiting area", "overnight accommodation" and "food and drink", also play an important role—lower value "soft" factors—in the case of flight delay or cancellation.

Considering that there is room for further research, an indication for this preliminary research would be to extend it to a larger sample from the same or other Greek airports, maybe with frequent flyers with higher level of involvement with the airline, based on the available air traffic statistics. This could identify the differences that may exist between passengers' attitudes towards flight stop issues and the implementation of Regulation 261/2004/EC at these airports. At the same time, it would be interesting to look at the cost of flight interruptions to airlines operating in Greece.

From the above findings it appears that in order to achieve the best possible results for air passenger rights at the time of the interruptions of their journey, annual surveys should be planned concerning the necessary information and the assistance provided, as well as the total experiences and perceptions of passengers. Through these surveys, problem areas should be identified and improved, ensuring consistency between airlines' policies and compliance with European policy and regulations on air passenger rights. It is understood, therefore, for airline managers that dealing with flight delays or cancellations should include all market players so that all can jointly improve their performance. Planning—between airports, airlines, air carriers and governments—is the best way to serve passengers, which in turn will eliminate the obstacles that still discourage some people from traveling. Concluding, "…there is a clear need for improvement concerning the cooperation between consumers and airlines, airlines and the ECC-Net and national consumer protection authorities…", because "Only a coherent system based on all involved parties will guarantee strong air passenger rights and strengthen the trust in EU legislation" [2, p. 77].

References

1. Doganis R (2010) Flying off course, 4th edn. Routledge, London
2. ECC-Net (2016) Air Passenger Rights Report 2015: do consumers get the compensation they are entitled to and at what costs? Co-funded by the European Union. https://ec.europa.eu/info/sites/info/files/eccnet_air_passenger_rights_report_2015.pdf
3. IATA (2017) 2036 forecast reveals air passengers will nearly double to 7.8 billion. https://www.iata.org/pressroom/pr/Pages/2017-10-24-01.aspx
4. Civil Aviation Authority (2014) Passenger experiences during flight disruption. Consumer research report, CAP 1258. https://publicapps.caa.co.uk/docs/33/CAP1258_Disruption_research.pdf
5. Oliver RI (1999) Whence consumer loyalty? J Mark 63:33–44
6. Kotler P, Keller KL (2006) Marketing management, 12th edn. Pearson/Prentice Hall, Upper Saddle River, NJ

7. Behn BR, Riley RA (1999) Using nonfinancial information to predict financial performance: the case of the U.S. airline industry. J Acc Audit Financ:29–55
8. Huang YK (2009) The effect of airline service quality on passengers' behavioural intentions using SERVQUAL scores: a Taiwan case study. J East Asia Soc Transp Stud 7(8):1–14
9. Yunus SNM, Jamil B, Rashid WEW (2013) Service quality towards customer loyalty in Malaysia's domestic low-cost airline services. Int J e-Educ e-Bus e-Manag e-Learn 3(4): 333–336
10. Gambo M (2016) Service quality and customer satisfaction among domestic air passengers in Nigeria. Int J Bus Manag Stud 8(2):32–49. https://dergipark.gov.tr/ijbms/issue/26059/274509
11. Boetsch T, Bieger T, Wittmer A (2011) A customer-value framework for analyzing airline services. Transp J 50(03):251–270
12. Tiernan S, Rhoades DL, Waguespack B Jr (2008) Airline alliance service quality performance – an analysis of US and EU member airlines. J Air Transp Manag 14:99–102
13. Morrison SA, Winston C (1995) The evolution of the airline industry, 1st edn. Brookings Institution Press, Washington, DC. https://www.jstor.org/stable/10.5325/transportationj.50.3.0251
14. Hatzinikolaou-Angelidou P (2005) Air passenger transport. Sakkoula Publications, Athens [in Greek]
15. Official Journal of the European Union L 46 (2004) Regulation (EC) No 261/2004 of the European Parliament and of the Council of 11 February 2004 establishing common rules and the compensation for assistance given to air passengers in the event of denied boarding and of cancellation or long delay of flights and repealing Regulation EEC, No. 295/91. https://eur-lex.europa.eu/resource.html?uri=cellar:439cd3a7-fd3c-4da7-8bf4-b0f60600c1d6.0004.02/DOC_1&format=PDF
16. Official Journal of the European Union L 140 (2002) Regulation (EC) No 889/2002 of the European Parliament and of the Council of 13 May 2002 amending Regulation (EC) No 2027/97 on air carrier liability in the event of accidents. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002R0889&from=en
17. Voxaki V (2017) Investigation of passenger attitudes and behaviour towards flight interruption issues: empirical study of the implementation of Regulation (EC) 261/2004 (Passenger Rights) at Chios Airport. Master Thesis, University of the Aegean, Chios [in Greek]

ICT-Based Participatory Approaches for the Exploitation and Re-use of Intangible Cultural Heritage

Nikos Grammalidis and Ioannis Poulios

Abstract Cultural heritage, in both its tangible and intangible form, is an important factor for social cohesion, tourism and economic development, and ICT technologies can help significantly to this end. The present paper aims at linking the fields of Intangible Cultural Heritage (ICH) and ICT technologies with an emphasis on participatory approaches, using the EU i-Treasures and Terpsichore projects as case studies. The two projects leverage modern ICT technologies to improve the analysis and presentation of ICH, raise public awareness, provide seamless and universal access to cultural resources, support new services for research and education and recommend new development strategies. After a brief review of the state of the art on participatory approaches from both the ICH and the ICT technologies field, the paper proposes a new set of interventions and approaches, based on the experience gained from the two projects, that aim towards innovative participatory applications for the exploitation and re-use of ICH. It is shown that the implementation of such interventions can have significant economic benefits for cultural organisations. It is also suggested that further research is required to enhance the links between the ICH and the ICT technologies field.

Keywords Intangible Cultural Heritage · ICT technologies · Participatory approaches

1 Introduction

Cultural heritage is an important factor for social cohesion, tourism, and economic development. This is evident not only in the UNESCO World Heritage Sites, but also in off-the-beaten-track sites of national or regional significance. The impact of

N. Grammalidis (✉)
Information Technologies Institute, CERTH, Thessaloniki, Greece
e-mail: ngramm@iti.gr

I. Poulios
Hellenic Open University, Patras, Greece

217

the economic crisis, which is more evident in low-income regions in EU, in addition to other (demographic, structural, immigration, etc.) problems creates a strong need to leverage cultural assets for growth and the benefit of the society. At the same time, the wide use of the internet and the rapid advances in ICT technologies make cultural organisations and their funders increasingly appreciate the importance of digital collections. The prospect of making collections available to new and distant audiences is compelling, and ICT technologies offer a significant promise for enhancing and democratising the access to cultural content. For instance, by exploiting crowdsourcing (e.g. through social media platforms), cultural organisations can enhance their collections with additional content and metadata, and make it more appealing to visitors. Furthermore, a broad range of innovative applications can be defined, such as games, thematic searches and digital walks, which can be very appealing to new audiences and special target groups such as young kids, elderly, minorities and immigrants. Additionally, business-oriented applications can create new commercial opportunities and boost local development by linking culture to other economic sectors. Moreover, cultural organisations can augment the presentation of real exhibits with associated information (data or metadata from the digital surrogates or from external sources, such as Europeana) that provide significant added value to the visitors.

In addition to tangible heritage, such as monuments and artefacts, cultural expressions also include intangible live expressions, which involve knowledge and skills, such as music, dance, singing, theatre, human skills and craftsmanship. These manifestations of human intelligence and creativeness constitute the Intangible Cultural Heritage (ICH), and are a key factor of local cultural identity and sustainable development. However, a large number of such expressions are often not sufficiently safeguarded and are in danger, for various reasons: national heritage protection systems often give priority to tangible heritage over intangible heritage; also globalisation leads to the prevalence of more popular global cultural traditions and habits at the expense of local ones. ICT technologies offer new opportunities to deal with this problem, by documenting, recording and thus safeguarding heritage expressions [1]. Such use of ICT can (a) give rise to a deeper understanding of ICH, (b) unveil unknown correlations between kinds of ICH from different time periods or geographical areas, (c) create new ways for cultural expression that connect the past and have relevance in the contemporary world and (d) break new ground in education, knowledge transfer and research of ICH.

The present paper aims at linking the fields of ICH and ICT technologies with an emphasis on participatory approaches, using the EU i-Treasures [2] and Terpsichore [3] projects as case studies. After a brief review of the state of the art on participatory approaches from both the ICH and the ICT technologies field (Sects. 2 and 3 respectively), the paper presents the two projects (Sect. 4), and then proposes, based on the experience gained from them, a new set of interventions and approaches that aim towards innovative participatory applications for the exploitation and re-use of ICH (Sect. 5). Finally some conclusions are drawn (Sect. 6).

2 Intangible Cultural Heritage: Participatory Approaches

2.1 Living Heritage: Continuity and Change

Heritage is seen and safeguarded in a continual process of evolution and creation, in the context of the community's connection with heritage. This emphasis on the creation of heritage is in accordance with recent trends that tend to see people and buildings as crystallisations of persistent processes, which continually carry on, undergoing continuous birth; heritage is continuously growing [4]. The creation of heritage is also advocated by the UNESCO Convention for the Safeguarding of ICH (henceforth cited as UNESCO Intangible Heritage Convention) and the living heritage approach. The Intangible Heritage Convention safeguards exclusively living—and not dead—intangible heritage, i.e. heritage that is "spontaneously transmitted from generation to generation, . . .liable to change at every manifestation and . . . characteristic for the groups and societies for whose sense of identity and continuity is of primary importance" [5, 6]. The concept of "living heritage" embraces tangible and intangible heritage expressions, and is linked to the concepts of "continuity" and "change/evolution" [7, 8].

In the context of continuity and change, the term "authenticity" is not emphasised or even avoided, as in the UNESCO Intangible Heritage Convention (in differentiation from the UNESCO World Heritage Convention), since this term is considered to lead to the freezing of heritage at a certain point in time [9].

2.2 Heritage Practitioners: An Inseparable Part of Living Heritage

The emphasis on the local heritage practitioners is in accordance with a changing "balance of power" in the discipline of heritage studies, with "the expert increasingly seen as the servant of the public, rather than its guide and educator" [10]. In this context, a specific local community group is often linked to the continual evolution and creation of heritage: it is the one that created heritage and sustains its original function, considers heritage an integral part of its contemporary life (in terms of its identity, pride, self-esteem, structure, and well-being), and sees the caring for heritage as its own inherent obligation [7, 8, 11]. This community group is seen as an inseparable part of heritage, and is given priority over other communities operating on a local, national and international level. Conservation professionals and the other communities provide support to this specific community in the context of the continual evolution and creation of heritage. This emphasis on the local heritage practitioners, supported by the professionals, is in accordance with the concept of "Living Human Treasure" of the UNESCO Intangible Heritage Convention [12] and with the concept of "core community" of the living heritage approach.

2.3   Global Digital Users: Experiencing and Further Creating Living Heritage

There is an increasing recognition of "emerging [digital] modes and technologies for accessing and experiencing heritage" and of the global digital/virtual communities as a stakeholder group in the heritage field, as characteristically noted in the influential Nara+20 Document [13]. Furthermore, these digital modes contribute to the enhancement of the experience of heritage by the users. This follows recent approaches that tend to see and offer heritage as a visitor experience [9, 14].

2.4   The Broader Local Community: Achieving Sustainable Development Through Living Heritage

Sustainable development is still seen as rooted primarily in the broader local level. Hence, it is important to link the increasing recognition of the "emerging [digital] modes and technologies for accessing and experiencing heritage" and of the global digital/virtual communities (see above) to the local community concerns and interests [15].

3   ICT Technologies: Participatory Approaches

Cultural organisations, such as GLAMs (Galleries, Libraries, Archives and Museums), become increasingly interested in the monitoring of the participation of visitors in an attempt to increase the number of visits and by extension revenues, especially at the current times of economic instability/crisis in Europe. To this end, there is a considerable number of ongoing experiments and projects on a European level that aim at identifying best practices, relevant to different types of users and museums, segmented by type of visitors (such as young, seniors, families, children, and bikers), also integrating them with ICT-based participatory approaches. For example, cultural organisations increasingly employ games to advertise and familiarise real or potential visitors to their collections [16]. A number of games also exist for smartphones, such as Tate Trumps [17], YouTell TE [18] and Battleship "G. Averof" [19], which allow museum visitors to create and share through smart phones their own media and stories.

The DigiArt project [20] aimed at providing new, costefficient solutions for capturing, processing and displaying cultural artefacts. Besides the innovative 3D capture systems and methodologies, the project developed a robust and user-friendly storytelling engine [21], which is a web-based tool that allows curators to upload 3D assets, assign behaviours into them, and wrap everything in a Unity3D game. This

software allows the virtual museum visitors to view the museum artefacts—and learn about them—in a 3D first-person view game.

Similar ICT-based approaches are adopted in the field of Cultural Heritage Education, while 3D reconstructions are often used to broaden the opportunity to appreciate cultural contents that are remote in space and/or time. Even though they can be very helpful for widening access to cultural contents, they often are not intrinsically engaging and sometimes fail in supporting active learning, just giving the opportunity to access information. Furthermore, most are just for tangible cultural heritage (not for intangible), and only a few define clear educational goals.

In general, ICT-based approaches can be a powerful tool for cultural organisations and can be applied in many different ways, such as: (1) crowdsourcing applications (e.g. inviting users to correct and/or transcribe digitised texts), (2) educational application targeting specific target groups, (e.g. young, mature audiences, immigrants), (3) applications for tourism and related business sectors (e.g. apps for thematic cultural routes, that may also include local tourist service providers and generate new business models), (4) applications for creative industries and professionals from the field of social sciences and humanities (e.g. applications that can perform complex queries and find relationships in large archives of multimodal media or ICH dance performances).

However, research in the area is still fragmented: there is a strong need to identify best practices [22], which directly address specific user needs, and propose new innovative approaches and applications to fill in this gap. Many additional challenges exist: how to handle different groups of users with various educational, professional or national backgrounds and different competency levels, reluctance of some users to participate and negativity/fear towards new technologies, technical difficulties (esp. in human body capture), rapid pace of technological advancements, etc.

In this context, in this paper we propose three types of interventions to maximize the benefits from the use of digitised cultural assets, taking into account the local situation, along with any applicable requirements and constraints.

4   The i-Treasures and Terpsichore Projects: Presentation

i-Treasures project [2] explored the challenges and emerging opportunities when considering the safeguarding of intangible heritage from a technological perspective. i-Treasures developed an open and extendable platform to provide access to digitized ICH resources, which allows both knowledge exchanges among researchers as well as education of new apprentices. The system is based on the identification of specific features or patterns (such as postures and audio patterns) using multi-sensor technology (such as cameras, microphones and EEG) for different ICH types. Subsequently, data fusion is applied to exploit information across different modalities, and probabilistic inference was used to transform the extracted data into a level

of interpretation that is understandable by humans. This information, coupled with other cultural and educational resources, is accessible via the i-Treasures platform, based on an open-source CMS, to enable the wide participation of communities and individuals in the mapping and safeguarding of ICH. Metadata information is (partially) compatible with the Europeana Semantic Element Set, however full integration with Europeana was not possible due to the complex multimodal data/metadata generated from recordings. Furthermore, the project developed—in collaboration with dance experts—a generic framework that provides an easy way to design and develop simple game-like applications for dance or other kind of activities involving human motion. The exploitation opportunities of this tool are numerous, not only in the dance domain (a game for the popular Salsa dance has already been released), but also in other domains such as physical exercise, martial arts, physiotherapy and rehabilitation.

Terpsichore project [3] aims at digitising, modelling, archiving and e-preserving ICH content related to folk dances by integrating the latest innovative results of photogrammetry, computer vision, semantic technologies, time evolved modeling, combined with the story telling and folklore choreography. The proposed framework addresses many different needs of the potential users including dance professionals, dance teachers, creative industries, general public, researchers and media producers.

5 The i-Treasures and Terpsichore Projects: Lessons Learnt

Based on the experience from i-Treasures and Terpsichore projects, three types of interventions are proposed, combining approaches and methodologies from the ICH and the ICT technologies field:

(a) **New crowdsourcing platforms and applications are required to enhance existing cultural collections**. In [23] an excellent review is provided on the use of crowdsourcing in the cultural domain. Crowdsourcing has a most significant potential to enhance the cultural content with involved consumers and providers. This would require, however, a fundamental change in the management of new data and would involve risks that need to be mitigated. Starting from existing best practices and successful examples reported in the literature, further research is required on designing efficient crowdsourcing applications to enhance the existing cultural collections with content and/or metadata.

Some of the challenges in this area include: (1) Giving appropriate incentives to encourage active participation from a critical mass of users. Such incentives can be social motivations—connectedness and membership—along with altruism, fun and competition [24]; (2) Efficiently combining the input from experts (such as researchers and curators) with feedback from amateurs or general public; (3) Collaboratively synthesising interesting stories and experiences and creating new exciting interactive applications. Examples: annotating or

augmenting performances or highlighting their historical or social context or evolution over time.

(b) **Applications targeting special groups (such as children, elderly, minorities and immigrants)**. Nowadays, a significant challenge for cultural organisations is how to engage with new audiences and expand existing ones. Creating applications that target specific groups (e.g. children) can contribute significantly to this goal. For instance, many organisations offer courses on pottery, which can yet create considerable difficulties: the courses might not be popular among children and teenagers; also, there are high costs related to real pottery platforms. Providing e-courses on pottery via a digital platform that supports gamification and is also accessing from distance (e.g. at home) can encourage children and teenagers become more interested in this ICH expression and find additional motivation to learn pottery, and at the same time reduce costs and give them additional motivation to learn pottery. The option to 3D print their work is expected to increase the motivation and creativity of young learners. For this reason, further research is required on approaches and applications, such as gamification, interactive storytelling, thematic searches, and VR/AR visualisation. Such applications can be used either as standalone learning tools, especially in the cases that the access to educational material, resources and real courses about a specific type of ICH is difficult, or as supplementary learning tools that are complementary to the real courses.

(c) **New ICT-based approaches and applications for new business opportunities and benefits to local communities**. New ICT-based approaches and applications can address a wide range of sectors, such as: (1) education: technology enhanced learning approaches, such as e.g. educational game applications; (2) tourism and related business sectors (e.g. mobile applications for thematic cultural tourism) that can involve many tourism actors, boost the local economy and create new business models; (3) creative industries: e.g. gaming applications that combine education and leisure; (4) research in culture and other social sciences: ICT applications to efficiently index, search and interrelate data, addressed to researchers and other professionals from the cultural and other social sciences (e.g. cultural historians).

6 Conclusions

Based on the experience from i-Treasures and Terpsichore projects, a series of remarks of broader applicability can be drawn on linking the ICH and the ICT technologies field, with an emphasis on participatory approaches. First, each type of ICH has different safeguarding needs, which require a different combination of technologies and other safeguarding measures. Thus, it is not useful or productive to apply a single safeguarding model to each case. Second, technologies should not drive the safeguarding projects; instead, the safeguarding projects should be driven by the user needs identified by heritage practitioners and professionals as they are in

a better position to identify the most useful course of action. Therefore, heritage practitioners and professionals should be involved from the very beginning and throughout the ICT-led projects. Third, ICT technologies can offer less expensive, and thus easier to introduce, means that can contribute significantly to ICH safeguarding and transmission: (a) by enhancing of cultural collections with new data and metadata using crowdsourcing, (b) by further encouraging existing audiences e.g. by providing open, distant ways of accessing and exploiting the cultural content, and also through addressing new, specialised audiences (such as children and immigrants) and (c) by creating new business opportunities and benefits to local communities. Thus, using ICT technologies and participatory approaches for the safeguarding of ICH is very relevant, particularly in times of economic instability/ crisis.

References

1. Yang H (2015) The pros and cons about the digital recording of Intangible Cultural Heritage and some strategies. ISPRS: Int Arch Photogramm Remote Sens Spat Inf Sci XL-5/W7:461–464
2. Dimitropoulos K et al (2018) A multimodal approach for the safeguarding and transmission of Intangible Cultural Heritage: the case of i-Treasures. IEEE Intell Syst. https://doi.org/10.1109/MIS.2018.111144858
3. Doulamis A et al (2017) Transforming intangible folkloric performing arts into tangible choreographic digital objects: the Terpsichore approach. VISIGRAPP 2017, pp 451–460
4. Ingold T (2012) No more ancient; no more human: the future past of archaeology and anthropology. In: Shankland D (ed) Archaeology and anthropology: past, present and future. Bloombury, London, pp 77–89
5. Smeets R (2004) Intangible cultural heritage and its link to tangible cultural and natural heritage. In: Okinawa International Forum, pp 137–150
6. Alivizatou M (2016) Intangible heritage and the museum: new perspectives on cultural preservation (University College London Institute of Archaeology Critical Cultural Heritage Series). Routledge, London
7. Poulios I (2014) Discussing strategy in heritage conservation: living heritage approach as an example of strategic innovation. J Cult Herit Manag Sustain Dev 4(1):16–34
8. Poulios I (2014) Past in the present: a living heritage approach—Meteora, Greece. Ubiquity Press, London. https://doi.org/10.5334/bak
9. Poulios I (2015) Gazing at the 'Blue Ocean', and tapping into the mental models of conservation: reflections on the Nara+20 Document. Herit Soc 8(2):158–177
10. Fojut N (2009) The philosophical, political and pragmatic roots of the convention. In: Heritage and beyond. Council of Europe, Strasbourg, pp 13–22
11. Wijesuriya G (2016) Conserving living Taonga: the concept of continuity. In: Sully D (ed) Decolonizing conservation. Routledge, London, pp 59–70
12. UNESCO. Guidelines for the establishment of national 'Living Human Treasures' systems. http://www.unesco.org/culture/ich/doc/src/00031-EN.pdf. Last accessed 29 Aug 2018

13. NARA+20: On heritage practices, cultural values, and the concept of authenticity. http://www.japan-icomos.org/pdf/nara20_final_eng.pdf. Last accessed 29 Aug 2018
14. Holtorf C (2014) Public perceptions of heritage. In: Smith C (ed) The encyclopedia of global archaeology. Springer, New York, pp 3361–3366
15. Poulios I (2018) Envisioning the future of heritage conservation: reflections on the book The Archaeology of Time Travel and the movie Blade Runner 2049. Hist Environ Policy Pract 9 (2):1–8
16. Mortara M, Catalano CE, Bellotti F, Fiucci G, Houry-Panchetti M, Petridis P (2014) Learning cultural heritage by serious games. J Cult Herit 15:318–325
17. Tate Trumps. https://www.tate.org.uk/context-comment/apps/tate-trumps. Last accessed 29 Aug 2018
18. Cao Y, Klamma R, Jarke M (2011) The Hero's Journey—template-based storytelling for ubiquitous multimedia management. J Multimed 6:156–169
19. IKYDA. http://dbis.rwth-aachen.de/cms/projects/IKYDA. Last accessed 29 Aug 2018
20. DigiArt project. http://digiart-project.eu. Last accessed 29 Aug 2018
21. DigiArt Wordpress Unity 3D Editor. https://github.com/DigiArt-project/wordpressunity3deditor. Last accessed 29 Aug 2018
22. Open method of coordination (OMC) Working group of EU Member States' ex-perts on better access to and wider participation in culture (2012) A report on Policies and good practices in the public arts and cultural institutions. http://ec.europa.eu/assets/eac/culture/policy/strategic-framework/documents/omc-report-access-to-culture_en.pdf. Last accessed 29 Aug 2018
23. Oomen J, Aroyo L (2011) Crowdsourcing in the cultural heritage domain: opportunities and challenges. In: Proceedings of the 5th international conference on communities and technologies (C&T '11). ACM, New York, NY, pp 138–149
24. Oomen J, Belice Baltussen L, Limonard S, van Ees A, Brinkerink M, Aroyo L, Gligorov R (2010) Emerging practices in the cultural heritage domain-social tagging of audiovisual heritage. In: Proceedings of the WebSci10: extending the frontiers of society on-line, April 26–27, 2010, Raleigh, NC

Business Students in Mexico Developing Work Skills with Work Integrated Learning

Elsa Patricia Orozco Quijano, Suniti Bandaranaike, Ma. del Sol Orozco Aguirre, and Rana Haq

Abstract This study attempted to understand perceptions on work skill acquisition for business students while they complete Work Integrated Learning (WIL) program. A study was conducted at the Universidad de Guadalajara in the Faculty of Management using a random sample of 48 students who completed a work term (WIL) with an industry partner in the areas of Marketing, Management, Human Resources and overall Business to find out whether there are differences in perceived levels of autonomy in work skills at the beginning and completion of their work term. Business student perceptions are documented through a set of survey questions that identify Levels of Autonomy, for work skills, from highly structured direction and guidance from the industry supervisor to working within self-determined guidelines. The study is a preliminary investigation using basic descriptive statistics to compare before and after (pre-and post) work term performance of Mexican Business students in the workplace. This study is useful in that it highlights the current status of students in industry and their skill development with WIL.

Keywords Work Integrated Learning · Autonomy · Work skills · Work Skills Framework · Mexico · Business student's perceptions · Business students

1 Introduction and Background of Research

Personal beliefs, attitudes, motives, interests, experiences and expectations can influence perceptions. Changing negative perceptions through reflection, motivation, self-awareness and practice is a challenge, yet a necessary pre-requisite for job

E. P. Orozco Quijano (✉) · R. Haq
Laurentian University, Sudbury, ON, Canada
e-mail: porozco@laurentian.ca

S. Bandaranaike
James Cook University, Douglas, QLD, Australia

Ma. del Sol Orozco Aguirre
Universidad de Guadalajara, Guadalajara, Jalisco, Mexico

227

satisfaction. Current literature on perception and the work environment focus mainly on job satisfaction [1, 2]. Perry and Wise [3], Kim [4], Buelens and Van den Broeck [5] found that the level of autonomy and output of an employee is greatly influenced by their motivation to work. In addition, personal characteristics [6], personal relationships [7], work preferences [8], impact of perception [9], socio-economic status [10] also determine levels of autonomy and job satisfaction of an employee. Numerous reports recognize the employer demand for graduates and employees with specific skills and conversely knowledge does not of itself guarantee graduate employment. Graduates recognize the contribution university had made to their knowledge and Work Integrated Learning into their skills [11].

The aim of this study is to understand perceptions on work skills acquisition for business students when they complete Work Integrated Learning programs by using the Work Skills Framework WSF to find out whether there are differences in the perceived levels of autonomy in work skills at the beginning (pre) and completion (post) of a placement. Secondly, the data are analyzed further to account for variations within the group in their levels of autonomy across work skills to monitor progress over time.

2 Methodology

Universidad de Guadalajara at Centro Universitario de Ciencias Económico Administrativas (CUCEA) located in Guadajara Jalisco México is the second oldest and largest public university in Mexico. As of 2013 undergraduate business students at CUCEA must complete a mandatory Work Integrated Learning subject called "Practicas Profesionales" (Professional Practices) in their area of specialization as part of their degree. Work Integrated Learning is a model that integrates academic studies and a workplace setting. It requires a good partnership with local businesses and community organizations. This WIL experience at CUCEA counts as eight credits, the equivalent of one course in the degree. The placement is either a research project or a job assigned with an employer paid or unpaid. The course is available to students in all different disciplines after they complete 70% of their degree. Students work a range of hours between 240 and 300 with an industry partner depending on the program. They are prepared for this course through reflective writing, journal entries and team work. In addition, students are assigned a mentor/professor who will evaluate the student's performance and maintain communication throughout the placement and work term.

Forty-eight CUCEA Students from Marketing, HR, Management, Finance Management and Systems, Accounting, Economy, and International Business were selected randomly. All selected students were expected to complete the WIL com-

ponent and the Work Skills Development Framework (WSD) [12] Survey was translated by one of the Authors from the original English language to Spanish to make sure data was not lost with translation. The survey was validated and translated by one of the author of this paper. The objectives of the survey were defined and individual questions explained in the context of the discipline to each of the students. Each student completed the interview individually in Spanish. These responses were then translated to English for analysis by one of the authors.

3 Results

The WSD makes explicit six facets of Work Skills based on analysis of graduates attributes and employability factors [13]. It defines and provides descriptors of the six work skills used in this study and abbreviated as—Initiative, Technology, Learning, Self-Management, Problem Solving and Communication. Students were briefed in detail what skills constituted each of the broadly defined work skills identified here with one word, for convenience in analysis.

Table 1 gives the generic 'Autonomy' statement for each of the Levels ranked from 1 to 5. The WSD parallels this in a student's progression through five Levels of Autonomy. The shift from highly guided direction where expectations are explained and modelled (Level 1), to high levels of student determination [Level 5] is illustrated in Table 1.

Students engage in reflective practice to identify their status on a scale (via five statements) to locate their Level of Autonomy before (Pre) and after (Post) the placement. These statements are listed in Table 2.

Table 1 Level of student autonomy (based on WSD)

Level of student autonomy	WSD cell description
Level 1 Prescribed direction	Student requires a high degree of structure and guidance
Level 2 Bounded direction	Student works within boundaries set by and limited direction from the supervisor
Level 3 Scaffolded direction	Student works independently and within provided guidelines
Level 4 Self-initiated direction	Student develops own abilities and works innovatively with limited guidance
Level 5 Open direction	Student works within self-determined guidelines to advance understanding within the context

Table 2 Pre and Post levels of autonomy [based on WSD]

Work skill	Assigned levels of autonomy
Initiative	Requires high degree of guidance to adapt to Role
	Identifies Role with some degree of guidance
	Adapts to Role independently, with no guidance
	Adapts to role easily and fulfilled requirements
	Identifies future goals and projects
Technology	Uses basic technology with high degree of guidance
	Uses technology with some degree of guidance
	Uses technology independently to find and generate information
	Shows complete understanding and mastery in technology
	Shows a high degree of sensitivity in the application of technology
Learning	Evaluates information at a minimum level in understanding role
	Evaluates information with some degree of guidance
	Critically evaluates information to match practical knowledge
	Critically evaluates information and fills gaps to generate knowledge
	Critically evaluates and uses knowledge to generate skills
Self-management	Uses simple reflective practices to organise information
	Uses existing structures of reflective practices to master practices
	Uses own reflective practices to evaluate and monitor performance
	Uses reflective practices to deliver clear projects
	Uses reflective practice to articulate vision, goals
Problem solving	Applies a simple structure to understand existing solutions
	Applies a structured format to synthesise and analyse data
	Works independently to synthesise and analyse a range of resources
	Applies critical thinking and worked collaboratively for solutions
	Applies sophisticated critical thinking and analysis to initiate change
Communication	Requires highly structured guidelines to communicate information
	Requires some degree of guidance to communicate with others
	Demonstrates confidence and assertiveness in communicating
	Communicates independently showing high understanding
	Communicates information, negotiates and asserts own values

4 Analysis

4.1 Perceived Group Changes

The overall (group) Pre and Post placement trends in Levels of Autonomy across the six Work Skills are compared for all students in Table 3. The values are calculated to two decimal places since the differences are very small, there being only five Levels of Autonomy (1–5).

Overall trends in changes in student Levels of Autonomy across Work Skills show a remarkable improvement between Pre and Post Levels of Autonomy across all work skills indicating success in WIL pedagogy. The Pre Placement autonomy

Table 3 A comparison of Pre and Post placement perceptions across Work Skill facets

	Initiative	Technology	Learning	Self-management	Problem solving	Communication
Pre	2.25	2.37	2.41	2.25	2.18	2.62
Post	3.66	3.75	3.97	3.68	3.89	4.29
Change	1.41	1.38	1.56	1.43	1.71	1.67

ranges from 2.18 (*Problem Solving*) to 2.62 (*Six Communication*), and Post Placement autonomy from 3.66 (*Initiative*) to 4.29 (*Six Communication*), on a scale of 5.

The least change between Pre and Post placement was in *Technology* (1.38) and the maximum change between Pre and Post placement in *Problem Solving* (1.71). Analysing change between Pre and Post placement is significant since it indicates to educators and students when change is maximised and suggests an improvement in a particular work skill. On the other hand, if change is minimal then it is time to look for reasons why that change is minimal. These perceptions are important to improve WIL delivery.

In Pre Placement most students in Mexico expressed anxiety in settling into their role, with typical comments such as:

"*My boss wanted me to complete tasks fast but I did not have training. . .*"; "*It was difficult to complete school and job, I did not eat so I needed to find time to eat*".

This could have an impact on their initiative to fully understand the placement or it may inhibit the individual's progress. Students responding to a question—"*Was there any time during your placement you felt less motivated than usual. . .?*" said "*Yes, sometimes due to my inexperience*"; "*It was unpaid and lots of work*" or the lack of motivation to fully engage in the placement due to external factors such as "*not receiving remuneration*". This is reflected in the Pre Placement coding for *Initiative* in Mexico as 2.25. Therefore, typically educators need to be aware of student issues in settling into a placement and the reasons for low initiatives to engage in a placement.

In the Mexican study although the Pre Placement autonomy was lowest in *Problem Solving* (2.18), yet the largest Pre and Post Placement difference or improvement in autonomy (1.71, Table 3) was also in *Problem solving*. This suggests that students have very little understanding in *Problem Solving* when they first enter a placement but when they complete their placement their understanding has greatly improved. These trends are reflected in the following student quotes:

it was early in my placement I didn't know how to apply the job process . . . I found it hard; I had a couple of panic attacks specially early during my placement . . . [felt] much better at the end.

The group as a whole recorded the maximum post placement score in *Communication (4.29)* (Table 3). Students were asked to rate themselves on a scale of 5 (5 being Very Good) in the following communication skills. 53.2 % of the students in the current study stated they were Very Good in—'Listening and understanding',
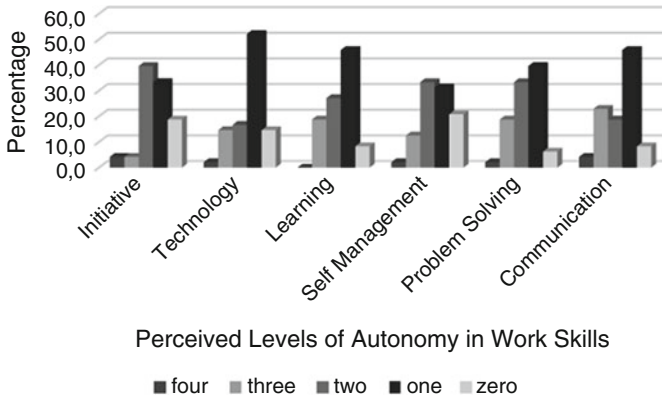
Fig. 1 Differences in levels of perceived autonomy by work skill, Mexico for individual students

and 49% said they were Very Good in 'Speaking clearly and directly' thus indicating a high autonomy in aspects of *Communication*. Typical quotes from the current study to illustrate the Pre and Post engagement in Communication skills were: "*I didn't know how to deal with a strict boss . . . (so) I put a lot of effort*"; "*I made a few mistakes with customers . . . I recognize my mistakes and listen to my supervisor*"; "*My boss wanted me to complete tasks fast but I did not have training . . . I spoke with him and I got more training*" indicating there was a definite effort by the students to improve their communication skills during the placement.

4.2 *Perceived Individual Changes*

Differences in Pre and Post work skills autonomy was also summarised for individual business students and averaged, to examine the variation across work skills (Fig. 1). Most people will argue it is the business student's responsibility to engage themselves in the placement, yet many external factors could impact on the successful undertaking of a placement.

The shifting patterns in the degree of change using Levels of Autonomy and measuring change as 'four', 'three', 'two', 'one' level or no change—zero, is illustrated in Fig. 1. Maximum change between Pre and Post autonomy was 'one' level (e.g. Pre 2 to Post 3) across most of the work skills—*Technology (52.1%), Learning (45.8%), Problem Solving (39.6%) and Communication (45.8%)*. In the work skills, *Initiative (39.6%)* and *Self-Management (33.3%)*—the mode was 'two' levels (e.g. Pre 2 Post 4).

Even though small in number (4.2%), a perceived change in autonomy of 'four' levels was observed in both *Initiative* and *Communication*. This was the maximum change possible between Pre and Post where the Pre autonomy was 'one' and Post autonomy 'five'. These students were typically highly motivated. For example,

when student 34 initially took on the placement she says she was keen to "*apply her knowledge*" in the placement, she stated, but in undertaking her role she said "*I did not know what to do*" and yet with time she admits "*I did not have big problems*" which shows the gradual transition this student had from level 'one' to 'five'.

In contrast students who perceived they had absolutely no change ('zero') in their Pre and Post levels of autonomy said it was so in *Self-management* (20.8%), *Initiative* (18.8%) and *Technology* (14.6%). This could refer to a student's Pre placement autonomy of 'five' remaining at 'five' in Post placement, or a Pre autonomy of 'one' remaining at 'one' at Post placement etc.

Typically, a student (ID 29) who's level of Pre and Post autonomy in *Initiative* remained at 'two' said ". . . *it was difficult to commute because of transportation problems*". Others said

> . . . I did not learn anything; . . . it wasn't a relevant job in my field.

5   Discussion

The success of a placement from the point of a student should be to familiarise oneself with work skills, access proper guidance and locate employability pathways. It is clear that all students recognise the potential for developing a range of skills. While a particular placement may not always be suitable for an individual student, it is important to find out the reason for the noncompliance and then address the issue. For example, the WSD survey asked—*After completing the placement whether they were motivated to work within the same organisation or somewhere else? (Q.12).* Fifty-six percent of the Mexican students responded in the negative referring to the placement as "*boring*", "*too much work*", "*not sufficiently engaging*", "*no guidance*", *and* "*conflict with others*". The issue here is that once the WIL course is completed and marked how much follow up is there with the educator? Often a follow up is not practical (e.g. large class size, non-availability of staff time etc.) and therefore, assessing Pre and Post autonomy during the placement becomes a practical approach.

Perceived Levels of Autonomy provide information on why students undertake a placement. WSD Survey question 8 asked—*What motivated you to take on the placement*? In response, approximately two-thirds of the students (65%) responded "*to receive experience*"; "*learn from others*"; *and* "*apply knowledge*" indicating they were initially motivated to take on the placement. In contrast a fifth (21%) responded they took on the placement because it was "*mandatory to complete the course*".

When asked *What other Challenges they* (students) *confront in a placement*? *(Q.7).* A substantial 83% referred to difficulties in adjusting to the placement—commuting problems, time management, adjusting to technology and other persons in the work place. Some of these challenges may be visible in the work place and others not so easily, but they will all impact on the individual's level of autonomy. For example, when student 23 initially took on the placement she says she was keen

to "*apply her knowledge*" in the placement and at the end she admits "*I like the job but only men will have an opportunity here*". This statement clearly illustrates the cultural challenges faced by women in Mexico and the negative effect on their level of autonomy particularly in *Initiative* and *Learning*.

Are their times when a student may feel "less motivated than usual" during their placement (Q.11)? Thirty-eight percent responded their placements were "*not related to their field/job*" *or* said they were "*asked to do irrelevant tasks*" *or* "*tasks not assigned to original job*".

6   Conclusion

While the current study summarises some important challenges in understanding work skills in terms of Pre and Post Levels of Autonomy, the research can be extended by applying quantitative analysis to examine variance in perceptions of autonomy. For example, Koth et al. [14] successfully applied multivariate analysis in hierarchical linear modelling to identify individual level factors (e.g. gender issues) that may account for the variance in perception.

In summary, this study has highlighted the value of using student perceptions to understand the attitudes, behaviours and relationships with work skills within a WIL environment. This perception can also be used to highlight the strengths and weaknesses of individual students as well as the work skills development. New technologies may also contribute to enhance their capabilities and knowledge [15].

The Work Skills Framework model was most useful in assessing change in before and after business student perceptions in Mexico. From the Faculty member's point of view, the Model provided feedback on the strengths and limitations of business students and the impact on WIL teaching and learning in a business setting. The WSD framework and methodology provided in this study can be used across disciplines and across countries to compare not only business student performances in WIL also to contribute to WIL pedagogy. This study also confirmed the recognition from all business students completing WIL a number of work skills developed within the WIL experience.

References

1. Bojadjiev M, Petkovska MS, Misoska AT, Stojanovska J (2015) Perceived work environment and job satisfaction among public administration employees. Eur J Appl Econ 12:10–18. https://doi.org/10.5937/ejae12-8154
2. Wright BE, Sreedevj BS (2003) Job satisfaction in the public sector. Am Rev Public Adm 33 (1):70–90. https://doi.org/10.1177/0275074002250254
3. Perry JL, Wise LR (1990) The motivation base of public service. Public Adm Rev 50:367–373. https://doi.org/10.2307/976618

4. Kim S (2002) Participative management and job satisfaction: lessons for management leadership. Public Adm Rev 62:231–241. https://doi.org/10.1111/0033-3352.00173

5. Buelens M, Van den Broeck H (2007) An analysis of differences in work motivation between public and private sector organizations. Public Adm Rev 67:65–74. https://doi.org/10.1111/j.1540-6210.2006.00697.x

6. DeHart-Davis I (2007) The unbureaucratic personality. Public Adm Rev 67:892–903. https://doi.org/10.1111/j.1540-6210.2007.00776.x

7. Sreedevi A (2015) A study on employees perception towards work environment and Interpersonal relationships. Int J Manag Inf Technol Eng 3:59–70. https://s3.amazonaws.com/academia.edu.documents/39313829/2-14-1444133519-6._Manage-A_STUDY_ON_EMPLOYEES_PERCEPTION-Sreedevi_A.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1537933876&Signature=1QFAmqW0pMy0NC1FOgyq27aybZk%3D&response-content-disposition=inline%3B%20filename%3DA_Study_on_Employees_Perception_Towards.pdf

8. Bright L (2008) Does public service motivation really make a difference on the job satisfaction and turnover intentions of public employees? Am Rev Public Adm 38(2):149–166. https://doi.org/10.1177/0275074008317248

9. Scott PG, Pandey SK (2005) Red tape and public service motivation findings from a national survey of managers in state health and human services agencies. Rev Public Pers Adm 25:155–180. https://doi.org/10.1177/0734371X04271526

10. Goss KA (1999) Volunteering and long civic generation. Nonprofit Volunt Sect Q 28 (4):378–415. https://doi.org/10.1177/0899764099284002

11. Crebert G, Bates M, Bell B, Patrick CJ, Cragnolini V (2004) Developing generic skills at university, during work placement and in employment: graduates' perceptions. High Educ Res Dev 23:147–165. https://doi.org/10.1080/0729436042000206636

12. Bandaranaike S, Willison J (2009/2016) The work skills development framework. http://www.adelaide.edu.au/rsd/framework/frameworks/

13. Bandaranaike S, Willison J (2010) Work skill development framework: an innovative assessment for work integrated learning. In: Campbell M (ed) Work integrated learning—responding to challenges: Proceedings of the 2010 ACEN national conference, pp 1–18. http://www.acen.edu.au/conferences/archive/ACEN-2010-Proceedings.pdf

14. Koth CW, Bradshaw CP, Leaf PJ (2008) A multilevel study of predictors of student perceptions of school climate: the effect of classroom-level factors. J Educ Psychol 100:96–104. https://doi.org/10.1037/0022-0663.100.1.96

15. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and future outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 3827–3838

Investigating the Adoption of Integrated Marketing Communication Strategies at Institutional Cultural Festivals in Greece. The Case Study of Aeschylia in Elefsina

Lamprini Trivella

Abstract The integrated marketing communication strategies (IMCSs) help institutional festivals not only to keep their audience but also to attract new target groups. These festivals are strongly supported by the local authorities because of the social and economic benefits that outweigh the hurdles of their institutional features. The institutional mixed art festivals are complicated and diverse institutions that have to adopt strategies to promote the intangible cultural products, informing a wide audience. For these reasons, the IMCSs become a powerful tool in the hands of local authorities to adapt to the constantly changing, competitive environment. Furthermore, the qualitative methodology of interviews is adopted and it is supported with the meta-data analysis derived from the annual reports of Aeschylia. In this way, the need to use effectively the IMCSs is highlighted so as the institutional festival can meet the imminent global competitiveness mission of audience attraction and therefore they can be more extrovert to reach the national and international cultural tourism sector, starting being more lucrative.

Keywords Integrated marketing communication strategies (IMCSs) · Cultural communications · Institutional festivals · Local authorities

1 Introduction

In the era of economic and cultural crisis, a declining rate of audience participating in cultural events has been noted through formal European and Greek statistics [1, 2] with the lowest percentage of participation attributed to Greece (5%). Given that, festivals are striving to attract audience by adopting IMCSs. Especially, institutional festivals are at the primary stage of adopting them in order to attract audience as it is the reason of their existence.

L. Trivella (✉)
Independent Researcher, Athens, Greece

So, institutional festivals are defined as single or mixed themed art festivals, which are non-for-profit governmental cultural organizations. They are supported, organized and run by local authorities, thus they depend on these for their economic and social survival and continuity. Their dependence makes it difficult for them to hire the needed staff, to conduct audience surveys in order to be aware of the cultural context of the local society and also from to spend for cultural events' promotion in a holistic way (campaigns).

Unlike them, there are also the private-sector festivals, which are for-profit non-governmental—thus independent-cultural organizations. They create their own economic and in general tangible and intangible assets. They are using IMCSs so as to maintain their audience, attract new and make it loyal as they are oriented to economic benefits.

In this frame, this paper aims at investigating which of the implemented IMCSs are effective (as far as it concerns the audience attraction and maintenance) in the context of the art institutional festival Aeschylia of Elefsina in Greece.

The methodology which has been used, is the survey research [3, 4] which is based on the qualitative methods of data collection. Semi-Structured questionnaire was developed to estimate the effectiveness of the IMCSs used at the institutional festival of Aeschylia. This methodology was chosen because of the intangible nature of the cultural events taking place in the institutional festival of Aeschylia and because of its use for the collection and process of data in other similar cases of institutional festivals (Abu Dhabi 2009, Melbourne 2006) [5, 6] and it is indicated as the most proper for this study. The outcome was supported by data from annual reports. The annual report is released to public view a few months after the end of the festival's program and comprises all the processed data such as expenditure, the sold tickets, data from Google analytics, which indicate the effectiveness of IMCSs.

The findings based on the above methodology, indicated that from the IMCSs that are used in Aeschylia, the price strategy has been used effectively, besides the promotion and the product strategies.

This paper contributes to the field of marketing, revealing the importance of adopting IMCSs, at the institutional festivals of local authorities in order not only to attract a wide audience but also to make it loyal.

It is worth mentioning that IMC strategies are based on the strategies of product (cultural events), price (fares), place (distribution of tickets) and promotion (traditional and modern tools).

2 Literature Review

The festivals that are organized run and supported by the public sector, have been institutionalized and contribute to the innovative promotion of cultural intangible goods to attract cultural tourism [7–9]. Their public feature acts as a facilitator or sometimes as an obstacle because it boosts the notion of them like public goods offered by the State.

Specifically, the institutional feature of the festivals attracts many serious sponsors, volunteers and famous artists. But, its governmental character makes it difficult to deal with the bureaucratic procedures and functions as point of reference for the audience notion for receiving cultural events as public goods' offering, of low quality, poor organization and unprofessional servicing.

In comparison with the private sector festivals, the institutional festivals have to align with the rules and the bureaucratic procedures of the State [9–11]. Consequently, they have to report about their financial status with transparency [11]. Furthermore, institutional festivals are depended mainly on public resources, which assure festivals' economic and social survival [9]. But this dependency imposes limitations on institutional festivals as far as it concerns their organization, philosophy, function and governance (resource and allocation).

Under these circumstances, the institutional festivals often overlook their strategic goals and they avoid the use of the marketing strategies as these are used by profitable organizations that have long-run economic benefits [9].

Greek institutional festivals have all the above mentioned features. Also, Greek local authorities support their festivals, because they facilitate the intercultural exchanges, the inclusion of the marginated citizens, the political reinforcement of the current political party and the development of cultural tourism [12].

Literature review—on institutional festivals' marketing orientation—reveals that many institutional festivals tend to be less oriented towards marketing, which is traditionally connected with the profitable business world. These festivals have adopted the philosophy of public service (community service orientation) [9]. This means that they are focused on producing and offering cultural events (product-centred philosophy) and they do not consider account the needs of the audience (prosumer-centred philosophy) [9]. The audience is their core factor upon which the institutional festivals are depended and base their long-term sustainability and viability. So, most of them have stagnated and failed to maintain the existing audience, to attract new audience and to make it evolve and participate substantially in festival's events.

3   Survey Questions

Given the competitive cultural market, globalization with its implications, the demanding and active audience and the plethora of institutional festivals' cultural events forces local authorities to turn to the adoption of marketing strategies.

In this frame, cultural communication strategies are only one of the marketing mix of 4P's for the cultural events: product (varied cultural events, diversified cultural events), price, promotion (cultural communication) and place (distribution of tickets) [13–15]. The task of attracting new audience and keeping them interested and loyal is the crucial point.

This situation arouses several research questions, but due to limited space this paper focuses on three basic questions based on a research about the festival Aeschylia of Elefsina [16].

- Do institutional festivals need IMCSs to survive socially?
- What are the key factors for the effective use of IMCSs in institutional festivals?
- Which IMCSs are adopted effectively in institutional festivals?

3.1 Do Institutional Festivals Need IMCSs to Survive Socially?

The most important reasons for the adoption of IMCSs are the following [10]:

- The corruptive way of producing and offering cultural events copied and offered by the organisers of institutional festivals.
- The competitive environment of the private sector's cultural events.
- The competitive service provision, which is constantly evolving because of the globalization and the ever changing information and communication technologies (ICTs).
- The deficiencies in managing and organizing the cultural events of these festivals [9]
- The constantly evolving, demanding audience [17]
- The lack of key contacts with the community, of making synergies nationally and internationally [9]
- The need of local authorities to get involved in the cultural life of their community, hoping to strengthen the bonds between them and their citizens [18].

3.2 What Are the Key Elements for the Effective Use of IMCSs in Institutional Festivals?

Local authorities are trying to use IMCSs effectively by dealing with three key elements, the knowledge of audience's trends in cultural events (theatre, music, cinema etc.), the procedures of creating the annual programme of the institutional festivals and the choice of the appropriate strategies to appeal to a wider audience [12–14].

The knowledge of the audience's needs, preferences and demands must derive from audience survey, which is expensive, time-consuming and it needs professionals to accomplish it. Local authorities do not fulfil the aforementioned, so alternatively they turn to performances and events that have been offered previously in other festivals and had an impact on the audience. Also, they try to make deal with

famous singers, or films that had good reviews and nominations for awards so as to guarantee high rates of participants.

The **procedures of managing the institutional festivals' events** should incorporate to smooth management and cooperation of the staff with the providers, the creators and other stakeholders. But local authorities do not achieve efficient management because there is lack of qualified and trained staff. That situation has its managerial implications such as the poor organization, the unprofessionalism, the bureaucratic procedures and the lack of specialized personnel.

The **choice of the appropriate strategies** can boost not only the participation of a wider audience but also their longterm involvement and commitment. Local authorities use all the methods and tools just to inform a wider audience and they do not engage into a strategy for the audience's commitment in the long run as the institutional festivals are non-for-profit governmental organizations.

3.3 Which IMCSs Are Adopted Effectively in Institutional Festivals?

Institutional festivals often use the cultural communication strategies for promoting their cultural events. These are the strategies of Methods and Means, which comprise the printed and the digital tools/channels (**traditional tools**: brochures, posters, banners, announcements to local newspapers, radiostations and others—**modern tools**: media, social media) for the promotion of the festivals and their events. The primary aim is to inform widely for the place and time of every cultural event in order to attract participants.

The utilization of Social Media (SM) through the official site of institutional festivals facilitates the attraction of the younger target-groups. Also, SM provide incentives for visitors to involve actively.

Several case studies in national and international level, reveal that many of the institutional festivals are using more than one factor of IMCSs (marketing mix of 4P's) to deal with the audience in a holistic way and to assure success (impact and consequent commitment of target groups) [19].

Except for the factor of **promotion**, which deals with the cultural communication strategies of Methods and Means, **price strategies** (free tickets, discounts), and **product strategies** (varied and diversified cultural events) are adopted to a lesser degree.

Specifically, mixed themed institutional festivals from Canada, USA, Europe and Greece are chosen in order to compare the adoption of IMCSs in relation with Aeschylia. The comparison reveals that all institutional festivals globally use the cultural communication strategies for their promotion effectively (traditional and modern tools). The second strategy which is almost equally important and effective is the product (hosted or created varied or diversified cultural events). Third in the frequency of adoption and effectiveness is the price strategy. This strategy is adopted

more often at Aeschylia, at institutional festivals of Greece and Canada, less often at the institutional festivals of USA and least at European institutional festivals. So, it is observed that institutional festivals in Canada and Aeschylia tend to communicate with their audience in a more holistic way than institutional festivals of Europe that tend to set aside the price strategy. Democratization policies of fares are used only at the institutional festivals of Canada and Aeschylia-Greece effectively (sold-outs).

4   Methodology and Findings

The festival of Aeschylia at Elefsina is chosen as a case study in order to assess and present the effectiveness of IMCSs.

Findings were based on personal interviews with key stakeholders and decision makers (all the personnel and members of the organising committee and three collaborators (Press and public relations associate, publishing company, social media creators).

20 semi-structured interviews were conducted (441 min, 12,716 words) during April and May of 2017 in Elefsina. The results were supported with the annual report, concerning the impact of every event through the figures of sold tickets, the printed invitations and the data from Google analytics.

Findings revealed that the cultural communication strategies of Methods and Means are used effectively in Aeschylia for the promotion and projection of the annual programme for the cultural events. The tools of the Methods and Means strategy are traditional and digital. The traditional tools are the leaflets, the Press, the Media, the PR and radio broadcasting that have an impact on citizens who are not acquainted with the Information and Communication Technologies (ICTs). The digital tools are the Social Media, which aim at attracting those users-visitors of the formal site of Aeschylia who are acquainted with new technologies and they are also motivated to become loyal followers and urged to be involved.

As far as it concerns the marketing mix, besides the promotional strategy, the product and the price strategies are used effectively. Specifically, the product strategies of the variety of cultural events attracts a wide audience (music: jazz, classic, pop, rock, hip-hop etc.). But, there has not been implemented any strategy of diversified product for the unique tailor-made for Aeschylia art installations. The democratization policy of the lowest fare in comparison with other festivals' fares, is another effective price strategy that has given strong motive for all stakeholders to participate in the cultural events. But, it does not exist a place strategy (ticket distribution)which facilitates the stakeholders to buy tickets (there are only three places in Elefsina and nowhere else, which can provide tickets and only one place for cards). E-ticketing is just beginning to develop. Given that, the internet users are not acquainted with the procedures yet (from the 800 sold tickets for a cultural event only 27 were e-tickets in 2015 and in 2016 raised up to 42 e-tickets). The branding strategy doesnot exist.

5 Conclusion

Institutional festivals are particular, as they are depended governmental cultural organizations offering cultural intangible products just to attract a wide audience. They use some of the IMCSs, which do not help to achieve the goal of having loyal followers who will act as agents of the festival. Their dependency makes it difficult to offer professional, well organized and managed cultural events.

As in most of the institutional festivals in Greece and abroad, the cultural communication strategies are mostly used in an effective way in order to attract wide audience through conventional and digital tools. Digital tools give the opportunity the users-visitors of the site to get involved and react through comments and chats. Also, the strategy of product is used effectively, but the price strategy is mostly used in Canada and Aeschylia.

All are oriented to the product-cultural events they are offering and least to their audience needs, desires and preferences.

Local authorities of Elefsina must boost the diversified art installations as they will give an advantage against their competitors. Also, they must extend the tickets' distribution places. In addition, they must build the brand-name of Aeschylia. In addition they have to acknowledge that the conventional system of management is inadequate and needs improvement in order to make Aeschylia a powerful tool of cultural tourism in national and international level. Aeschylia can also be a tool of local economy reinforcement if the integrated marketing communication strategies are implemented in a holistic and substantial way to satisfy the audience with the quality in service and in the offered events.

References

1. UNESCO (2015) Festival statistics: key concepts and current practices. UNESCO, Montreal
2. Hellenic Statistical Service (2016) Hellas in figures. http://www.statistics.gr/documents/20181/300673/GreeceInFigures_1015_GR.pdf/557c814b-f984-4caa-ad4f-deac8c1dfa55
3. Gall MD, Borg WR, Gall JP (2014) Educational research. Basic principles. Broken Hill Publishers, Nicosia
4. Danos A (2016) Methodology of composing thesis and scientific studies. Contemporary Publishing, Athens
5. Prakash V, Sherma R (2010) Megamarketing an event using integrated marketing communications the success story of TMH
6. Hede A, Kellett P (2011) Marketing communication for special events: analysing managerial practice, consumer perceptions and preferences. Eur J Mark 45:97–104. https://doi.org/10.1108/03090561111119930
7. Kavoura A, Bitsani E (2014) Investing in cultural and intercultural relations for advertising and sustainable development in the contemporary European city within the framework of international city branding and marketing: the case study of the intercultural festival of Trieste. In: Barreau L (ed) Advertising: types of methods, perceptions and impact on consumer behavior. Nova Science, Hauppauge, pp 35–66

8. Bowdin G, Allen J, O'Toole W, Harris R, Mc Donnell A (2012) Events management. Routledge, New York
9. Andersson TD, Getz D (2008) Stakeholder management strategies for festivals. J Conv Event Tour 9:199–220
10. Pugh C, Wood E (2004) The strategic use of events within the Local Government: a study of London Borough Councils. Event Manag 9:61–71
11. Matias A, Nijkamp P, Romao J (2016) Impact assessment in tourism economics. Routledge, Switzerland
12. Psilla M (1992) Communication as a reinforcement of cultural development in the urban environment. The Vima of Social Sciences (9)
13. Hill L, O'Sullivan C, O'Sullivan T (2011) Creative arts marketing. Routledge, New York
14. Finne A, Grönroos C (2009) Rethinking marketing communication: from integrated marketing communication to relationship communication. J Mark Commun 15(2/3):179–195
15. Masterman G, Wood EH (2005) Innovative marketing communications. Strategies for the events industry. Elsevier Butterworth-Heinemann, Oxford
16. Trivella L (2017) Strategies of cultural communications in local authorities. Case study of Aeschylia. Master thesis. EAP
17. Middleton V (1990) Irresistible demand forces. Mus J 90:31–34
18. Snapshot cultural planning (2016) https://www.creativecity.ca/database/files/library/snapshot_cultural_planning.pdf
19. Getz D (2010) The nature and scope of festival studies. Int J Event Manag Res 5(1). www.ijemr.org

Using the Theory of Planned Behavior and the Big Five Personality Trait Model in Predicting Entrepreneurial Intention: A Comparison Study of the Two Models

Alexandros G. Sahinidis, Dimitris Stavroulakis, Evangelia Kossieri, and Labros Sdrolias

Abstract The purpose of this study is to compare the relative efficacy of the Big Five Personality Trait Model to that of the theory of Planned Behavior (TPB), in terms of their predictive ability of Entrepreneurial Intention (EI). Most studies use one of these models or a version of them to predict EI. In this study we asked 1766 university students, from the School of Business to complete both questionnaires. The results from our analysis are quite revealing concerning the explanatory power of the two instruments. Among the Big Five traits, Extraversion, Conscientiousness, Agreeableness and Openness showed a significant relationship to EI while neuroticism did not. When we introduced Risk Taking as an independent variable, we found that it also related to EI significantly, increasing R^2 from 0.126 to 0.151. Using the same sample, we tested the predictive power of TPB. We found a significant relationship of Personal Attitude (PA) and Perceived Behavioral Control (PBC) to EI. The model accounted for 65.7% of the variance in EI. The findings suggest that TPB prevails in predicting EI among university students over the Big Five model. Academics would be better off using the TPB in predicting EI, at least in similar contexts. The contribution of this study lies in that among the two dominant EI prediction models, TPB clearly appears to be more efficacious.

Keywords Theory of Planned Behavior (TPB) · Five factor personality model · Entrepreneurial Intention · Risk-taking

A. G. Sahinidis (✉) · D. Stavroulakis · E. Kossieri
University of West Attica, Athens, Greece
e-mail: asachinidis@teiath.gr

L. Sdrolias
T.E.I. of Thessaly, Larissa, Greece

1   Introduction

Entrepreneurial Intention (EI) has been at the center of Entrepreneurship research for more than three decades [1]. Given the role of new businesses in the economies, through job and wealth creation, economists, with few exceptions, are calling for the need of policies leading to facilitating the entrepreneurial process, identifying and removing obstacles to business creation and paving the way for more and higher-potential new companies [2–4].

The profuse literature with studies examining the entrepreneurial process and its various aspects, is becoming increasingly divergent in terms of the scholar's backgrounds, drawing interest from a wide variety of disciplines, bringing in the field new models, methods and variables, to be considered together with the ones traditionally rooted in psychology, social psychology and economics [5]. In a systematic review of the extant literature [6], identified 409 journal papers published in the decade 2004–2013, studying EI alone. In spite of the extensive attention received by EI, it is still among the "hottest" areas for entrepreneurship related research at University of Hohenheim [7]. The study findings include that entrepreneurial behavior (including EI) ranked the second most promising area in the field, among 14, according to 225 experienced entrepreneurship research experts interviewed. Considering the multitude of EI studies over the years, one would expect that the interest of researchers in the area would be receding and turn towards other aspects of the field. Krueger [8] among others, called for a halt in EI research proposing that it is useless, since no documented evidence is produced by the research outcomes to date. Nevertheless, the argument [8] is rebutted [6, 7], arguing that there is much more to be studied with regard to EI and that academics still see enough value in understanding EI, its antecedents and its outcomes. After all, intention is still the best predictor of behavior [9, 10] proposed and many other scholars, following up with numerous studies, testing his Theory of Planned Behavior (TPB) in a variety of contexts.

Among the paths followed by researchers studying EI, two stand out, one from social psychology tradition and the other from psychology. First, the TPB was proposed [2, 11] in its first version as Theory of Reasoned Action and it was developed further [9, 10] by Krueger and Brazeal [12], who brought together TPB with Shapero and Sokol's Entrepreneurial Event Model (EEM) which is bearing significant resemblance to TPB and found that the two models have approximately the same predictive power [13, 14].

The second major path attempting to explain and predict EI involves Personality traits. A large number of personality traits have been identified by researchers correlating with EI, however the findings are not consistent across the studies. Also, while some studies examined the relationship of EI with lower-order personality traits for example, need for achievement, locus of control, ambition etc. [15], others focused on higher-order traits such as the Big Five Model [16–18].

Given the conflicting findings of the studies above, it is clear that both academics and practitioners are unclear as to the contribution of the personality trait approach in

explaining EI and whether TPB is preferable in investigating EI. The purpose of this study is to compare the relative efficacy of the two models in explaining the variance in EI and make relevant suggestions to researchers and practitioners.

2 Literature Review

Meta-analyses of the TPB and exercise suggest that intention has been empirically validated as the key proximal predictor of behavior, explaining approximately 30% of its variance [7]. In turn, attitude and PBC have been validated as reliable determinants of intention, together explaining 40–60% of its respective variance [6]. Subjective norms, in contrast, have been of less utility in predicting intention, with either a small or non-significant effect across studies [6, 15].

Among the strongest predictors or antecedents of EI, according to most studies, is Personal Attitude, used interchangeably with the term Desirability [6, 8, 19–21]. Perceived Behavioral Control (PBC), which in some studies has been used as a substitute to self-efficacy, or to feasibility, has also been found to be a significant predictor in the majority of the EI studies, influencing EI according to some research findings more than Personal Attitude (PA) and the Subjective Norms (SN) [2, 8, 20, 22, 23].

Based on the consistent research findings we expect that

H1: Personal Attitude affects EI,
H2: Subjective Norms affect EI,
H3: Perceived Behavioral Control affects EI.

The second line of EI research and most extensively studied according to Linán and Fayolle [6], is based on Personality theory and Psychology factors affecting intention. Two landmark studies [4, 16] reported significant relationships between the Big Five personality traits and EI, using meta-analytic methods. Brandstätter led support to the previous findings examining the results of five meta-analyses, corroborating the relationship between some four of the big five factors [4, 16]. Entrepreneurs spend a large amount of their time in communicating with various parties and as a result, they need traits and skills including being sociable, energetic, enthusiastic and dynamic among others [13, 24]. Extraversion as a result is expected to have a positive relationship to EI [16, 17]. In a similar vein, Openness to new experiences, allows the entrepreneur to inquire constantly for more information, search for new methods or ways of doing things, innovate, escaping from conventional thinking and behaviors and being creative. All these are elements deeply embedded to entrepreneurial lives. Thus, in line with previous findings [4, 18], Openness to new experiences is expected to have a positive association with EI. Conscientiousness, the tendency of one to be dependable and achievement oriented, organized and responsible, has been linked to entrepreneurial behavior [23, 25]. These findings concur with those reported by Zhao et al., Murugesan and Jayavelu and Brandstatter, [16–18], leading to the proposition that there is a

significant relationship between conscientiousness and EI. Agreeableness, the tendency of a person to be supportive, altruistic, warm, friendly, has been found to have a negative relationship to EI, in spite of the fact that such traits may be required by the entrepreneur, typically the leader of a small group with a great amount of interpersonal interaction with the other group members [16, 23]. Neuroticism, or (Low) Emotional Stability, is described with adjectives such as, fearful, anxious, sad, depressed, a low self-esteem person. The findings regarding this trait are not consistent, with Zhao et al. and Murugesan and Jayavelu [16, 18], reporting a positive relationship with EI, Brandstatter a negative one [17], and Liang et al. no significant relationship at all [23]. These conflicting findings may be explained by contextual factors or definitional issues or methodological differences. It would seem plausible that entrepreneurs are in general high-energy people, who like interacting with others, they are optimistic and cheerful, characteristics typically absent in Neurotic individuals and therefore a negative relationship between Neuroticism and EI is expected [17]. In addition to the Big five traits, the literature fails to examine in general Risk-taking, a trait that cannot be included in the parsimonious versions of the big five models in the literature [16], is also examined in this study, with the expectation to provide an addition to the EI predictor traits. The literature offers support to this notion, with a number of studies reporting positive relationships between Risk-Propensity or Risk-Taking in this study [16, 17]. Therefore, a positive relationship is expected between Risk-taking and EI. In sum, the personality trait hypotheses formed are:

H4: Extraversion, Openness and Conscientiousness are expected to relate positively with EI

H5: Agreeableness and Neuroticism are expected to have a negative relationship with EI

H6: Risk-Taking is expected to have a positive relationship with EI.

3   Methodology and Empirical Research

The sample in this study comprises of 1764 students from five Greek Universities, specifically from schools of Business. Research was conducted in 2014–2015. Entrepreneurial Intention and PBC were measured according to the questionnaire elaborated by Linan and Chen [20]. To measure Subjective Norms (SN) a three-item scale was used, from the original questionnaire [20]. The big five Personality traits were measured using a 44-item questionnaire developed by Oliver John, used extensively in the relevant literature [14]. Risk-taking was measured with four items drawn from the entrepreneurship literature.

Using SPSS the first three hypotheses, were tested. Table 1 demonstrates the strong predictive power of the TPB, in terms of Entrepreneurial Intention. The $R^2 = 0.657$, is among the highest in the extant literature. Additionally, as expected H1 and H3 are not rejected, in line with the findings of the majority of the related

Table 1 Predicting EI with the use of the theory of planned behavior

Model	R	R^2	Adjusted R^2	Std. error of the estimate
1	0.811	0.657	0.656	5.79971

Table 2 Coefficients

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
Constant	−7.740	0.660		−11.724	0.000
PA	0.944	0.028	0.605	33.360	0.000
SN	0.059	0.042	0.023	1.397	0.163
PBC	0.426	0.027	0.276	15.637	0.000

Table 3 The big five model predicting EI

R^2	Adjusted R^2	Std. error of the estimate
0.151	0.148	9.13211

Table 4 The big five model predicting EI

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
(Constant)	0.242	2.566		0.094	0.925
Agreeableness	−0.118	0.040	−0.069	−2.964	0.003
Conscientiousness	0.293	0.051	0.155	5.727	0.000
Openness	0.111	0.041	0.077	2.673	0.008
Extraversion	0.360	0.056	0.178	6.439	0.000
Neuroticism	0.045	0.046	0.023	0.968	0.333
Risk-taking	0.338	0.047	0.165	7.255	0.000

studies, both PA and PBC are strong predictors of EI (Table 2). Subjective norms on the other hand have no significant relationship with EI, in this study. This is not surprising considering other studies fail to even include them in the questionnaire, given that SN predictive power of EI was frequently not confirmed [6, 26, 27].

In the next step, we tested the Hypotheses related to the big five personality traits. Table 3 shows the predictive ability of the five factors, plus Risk-Taking, concerning EI. With R^2 at 0.151 the model's predictive ability of EI is significantly lagging behind the TPB ability to predict EI. Specifically, in accordance with earlier findings we found support for H4, clearly pointing that Extraversion, Openness and Conscientiousness are significant predictors of EI (Table 4). Also, H5 was partially supported, in terms of demonstrating a negative, yet significant relationship of Agreeableness to EI. All the above findings are to some extent in line with those of the meta-analyses mentioned earlier [16–18]. Agreeableness was found in other studies also to have a negative relationship with EI [16, 23]. Neuroticism was also expected to relate negatively with EI [17], nevertheless in this study it was proven a

non-significant EI predictor. Finally, Risk—taking, as hypothesized in H6, is a significant predictor of EI as expected from the literature earlier findings [16].

4   Discussion and Conclusions

The present study attempted to compare the relative efficacy of the two major models in the EI literature, the TPB and the Big Five Model. The sample used for testing both theories was the same, which has not been done preciously in the literature for these two theories and that is one contribution of this study. The TPB appears to be much more efficacious in predicting EI explaining 66% of the variance in the dependent variable. The Big five model on the contrary, explains only 15% of the corresponding variance, even when including Risk-taking. A separate analysis using only the big five factors, excluding risk-taking, explained only 12% of the variance in EI. The results indicate that Krueger may be correct in his proposal that EI research must come to a halt, or at least it may proceed only after its connection to behavior is better predicted [8]. Also, it becomes evident from the results that the big five factors, although they predict EI, they do so, to a much lesser degree than the predictors of the TPB. This may lead to the conclusion that there may be intervening variables, not included in this study, or, an analysis must be attempted with lower-order personality traits for example, need for achievement, locus of control, ambition etc. [21]. TPB prevailed in terms of its predictive ability of EI, over the big five model, with a significant level of explaining power, above the one expected in the Linán and Fayolle study, in which the authors place the range of TPB explaining power of EI between 40 and 60% [6]. One must bear in mind however that PA, is much more malleable than Personality traits and the implication of this is that PA may be strong in the short-term but not so much in the long run. This means that the predicting ability of TPB is much more time-bound than the one of the big five, or other personality variables. Future studies could investigate the validity of the findings reported here, in different contexts using more variables, not included in this study and inquire the potential existence of latent variables which may be confounding the relationships discussed above.

References

1. Molino M, Dolce V, Cortese CG, Ghislieri C (2018) Personality and social support as determinants of entrepreneurial intention. Gender differences in Italy. PLoS One 13(6): e0199924
2. Fishbein M, Ajzen I (1975) Belief, attitude, intention, and behavior: an introduction to theory and research. Addison-Wesley, Reading, MA
3. Sahinidis AG, Vassiliou EE, Hyz AB (2014) Factors affecting entrepreneurs' intention to start a new venture: an empirical study. Int J Strateg Innov Mark 1(3):148–162

4. Zhao H, Seibert SE (2006) The Big Five personality dimensions and entrepreneurial status: a meta-analytical review. J Appl Psychol 91(2):259–271
5. Al-Jubari I, Hassan A, Hashim J (2017) The role of autonomy as a predictor of entrepreneurial intention among university students in Yemen. Int J Entrep Small Bus 30(3):325–340
6. Linán F, Fayolle A (2015) A systematic literature review on entrepreneurial intentions: citation thematic analyses and research agenda. Entrep Manag J 11:907–933
7. Kuckertz A, Prochotta A (2018) What's hot in entrepreneurship research? Hohenheim Entrepreneurship Research Brief No. 4—February 2018. ISSN 2568-4388. opus.unihohenheim.de/.../1462/pdf/2018_Kuckertz_Prochotta_HERB.pdf
8. Krueger NF (2009) Entrepreneurial intentions are dead: long live entrepreneurial intentions. In: Carsrud AL, Brannback M (eds) Understanding the entrepreneurial mind. Springer, New York, pp 51–72
9. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50 (2):179–211
10. Ajzen I (2011) The theory of planned behaviour: reactions and reflections. Psychol Health 26 (9):1113–1127
11. Ajzen I, Fishbein M (1980) Understanding attitudes and predicting social behavior. Prentice Hall, Englewood Cliffs, NJ
12. Krueger NF, Brazeal DV (1994) Entrepreneurial potential and potential entrepreneurs. Entrep Theory Pract 19(3):91–104
13. Costa PT Jr, McCrae RR (1992) Revised NEO Personality Inventory (NEO-PI-R) and NEO Five Factor Inventory (NEO-FFI) professional manual. PAR, Odessa, FL
14. John OP (1990) The "Big Five" factor taxonomy: dimensions of personality in the natural language and in questionnaires. In: Pervin LA (ed) Handbook of personality: theory and research. Guilford Press, New York, pp 66–100
15. Rhodes RE, Courneya KS, Jones LW (2005) The theory of planned behavior and lower-order personality traits: interaction effects in the exercise domain. Personal Individ Differ 38 (2005):251–265
16. Zhao H, Seibert SE, Lumpkin GT (2010) The relationship of personality to entrepreneurial intentions and performance: a meta-analytic review. J Manag 36(2):381–404
17. Brandstätter H (2011) Personality aspects of entrepreneurship: a look at five meta-analyses. Personal Individ Differ 51(3):222–230
18. Murugesan R, Jayavelu R (2017) The influence of big five personality traits and self-efficacy on entrepreneurial intention the role of gender. J Entrep Innov Emerg Econ 3:41–61
19. Armitage CJ, Conner M (2001) Efficacy of the theory of planned behavior: a meta-analytic review. Br J Soc Psychol 40:471–499
20. Liñán F, Chen YW (2009) Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. Entrep Theory Pract 33(3):593–617
21. Rhodes RE, Courneya KS (2005) Threshold assessment of attitude, subjective norm, and perceived behavioral control for predicting exercise intention and behavior. Psychol Sport Exerc 6(3):349–361
22. Stavroulakis D, Karagiannis S, Mitoula R, Papagrigoriou A (2013) Female entrepreneurship and agritourism cooperatives in the Greek periphery: an overview. Am J Econ Bus Adm 5 (4):129–138
23. Liang C-T, Chia T-L, Liang C (2015) Effect of personality differences in shaping entrepreneurial intention. Int J Bus Soc Sci 6(4.1):166–176
24. Ariani DW (2013) Personality and learning motivation. Eur J Bus Manag 5(10):26–38
25. Rothmann S, Coetzer EP (2003) The Big Five personality dimensions and job performance. SA J Ind Psychol 29(1):68–74
26. Kolvereid L (1996) Organizational employment versus self-employment: Reasons for career intentions. Entrep Theory Pract 20(3):23–31
27. Sahinidis AG, Giovanis AN, Sdrolias L (2012) The role of gender on entrepreneurial intention among students: an empirical test of the theory of planned behavior in a Greek university. Int J Integr Inf Manag 1(1):61–79

Consumers' Attitudes Towards Advertisement in YouTube

Ioannis I. Antoniadis, Vaggelis S. Saprikis, and Eirini E. Karteraki

Abstract Attitudes towards online advertisements has been an important topic of research for academics and practitioners, especially in Social Networking Sites (SNSs). In this paper we examine the effect that YouTube advertisements have in consumers' behavior. Using a structured questionnaire and a sample of 224 respondents, we explore the ways consumers perceive advertisements in YouTube, the effectiveness of this kind of advertisement as well as the engagement levels with consumers. Our results indicate the existence of four main and specific attitudes (factors) of consumers towards advertisement in YouTube namely, entertainment, irritation, information and credibility, and a fifth one indicating a general positive attitude to YouTube advertisements.

Keywords Social Networking Sites · YouTube · Online advertisement · Attitudes · Greece

1 Introduction

Social Media (SM) and Social Networking Sites (SNSs) have dramatically changed marketing interaction and communication during the last decade, as firms and consumers have found a new field of creating and dispersing material and content [1]. The explosive growth of users and new platforms, affected consumer behaviour and the way consumers seek and provide information about brands, displacing traditional channels of marketing communications and advertising [2, 3].

The importance and the increasing growth of adoption of SNSs by firms for marketing and business communication with customers and stakeholders, regardless

I. I. Antoniadis (✉) · V. S. Saprikis
Western Macedonia University of Applied Sciences, Koila Kozani, Greece
e-mail: iantoniadis@teiwm.gr

E. E. Karteraki
Western Macedonia University of Applied Sciences, Kastoria, Greece

of their industry and size, is outlined by a number of studies [4, 5]. Founded in 2005, with more than 1.47 billion users in 2017, YouTube is one of the most important SNSs, as it is the third most visited web site (after Google and Facebook) and the second largest search engine, aggressively replacing traditional media of marketing like radio and TV. This is also true about Greece where [6] found that YouTube is the second most popular SNS in Greece, and most users take advantage of it to listen to music and share videos in Facebook as well.

These characteristic made YouTube an important platform for online advertising with a growing number of firms choosing to advertise in YouTube in video or/and banner form. The effect that online advertisements in SNSs have in brand value and the factors that affect its effectiveness, has been a major trend in the relevant research with a number of studies focusing mainly in Facebooks advertisements [7–11].

In this paper the main attitudes of consumers towards YouTube advertisements, in Greece, are going to be identified and investigated. Factor analysis is performed in 18 questions with the use of a structured online questionnaire, and five main attitudes towards online advertisement were identified. The contribution of this research lies in the further understanding of the ways that online advertisement interacts with SNSs users, and more specifically YouTube, providing insight to academics and practitioners on the formulation of more efficient IMC campaigns in SNSs.

The rest of the paper is structured as follows. The following section reviews the relevant literature concerning SNSs advertisement, focusing on YouTube. Section 3 presents the methodology of our research, the main characteristics of the sample and the method employed. In Sect. 4 the factors affecting consumer behaviour towards advertisements in YouTube are described. Finally, Sect. 5 concludes the paper, by discussing the marketing consequences of its findings for academics and marketers, and by proposing directions for further research on the topic.

2 Literature Review

Since their appearance SNSs have attracted the attention of scholars of various disciplines providing a number of definitions. [12] defined SNS in terms of the ways that their users interact with them as "*a web-based service which is based on certain meaningful and valuable relationships including friendship, kinship, interests, and activities, and which allows individuals to network for a variety of purposes including sharing information, building and exploring relationships, and so on*". YouTube has been one of the early innovators in the field providing an important platform for posting videos. After its acquisition by Google in 2006, it offered opportunities for advertisers, with the introduction of TrueView in-stream advertising [13] that allowed users to skip advertisement after 5 s of viewing.

As outlined in the introduction online advertisement soon found a promising field of application in SNSs. In specific, [14] pointed out its importance in SNSs digital marketing and the ways that IMC planning and implementation are transforming [15].

The effectiveness of advertisement relies on a number of factors. YouTube usage and social interaction has been examined by [16], who found that information seeking, entertainment and social interaction were the most important actors for viewing YouTube videos. These motivations have a significant effect on attitudes towards advertisement as well, and especially online advertising. [17] identified five belief dimensions that affected online advertisement and more, specifically: information, entertainment, credibility, economy and value corruption. The first two attitudes (information and entertainment) were also identified by [8], who found credibility of the advertisement to be an important factor that affects advertisement value as well. [9] have also found that the importance and positive effect of the informational role of advertisement.

Another research [18], added irritation and interactivity as another two main factors for consumers' assessment of SNSs advertisements, to the ones mentioned above. [13] found that the YouTube online video advertisement platform has decreased the negative effects (irritation) it has on advertisement value.

The effect, however, that irritation has on online advertisement value is debatable. In a cross SNSs comparison [19] studied consumers' perception towards advertisements in Facebook, Twitter and YouTube, concluding that online advertisement in all three examined SNSs was considered to be annoying. [20] investigated the attitudes of Italian students towards YouTube advertisements, resulting to similar findings with other researchers regarding online advertisement in other SNSs. They have identified entertainment, informativeness and customization as the main attitudes that have positive effect on advertisement value, while irritation, in terms of video interruption for example, is negatively related to YouTube advertising.

3 Data and Methodology

The research took place from March until May 2018 using a structured online questionnaire. In order to identify the main attitudes of consumers towards advertisements in YouTube we have used a set of 18 questions, as suggested by [8, 9] and also used by [18], measured in a 5-point Likert scale. Questions regarding the content, the frequency and timing of advertisements and the overall opinion of users towards them, were included. The sample examined is a convenience sample with no clear demographic focus and consists of 71 (31.7%) male respondents and 153 (68.3%) female respondents, and the majority of them (52.7%) hold a bachelor degree. As far as the age of the respondents is concerned, 27.7% of them were 18–25 years old, 29.5% were 26–30 years old, 26.3% were 31–40 years old and 16.5% were older than 40 years.

As far as usage of YouTube (Fig. 1b) and the means respondents use to access it (Fig. 1a) are concerned, two out of three (67%) use smartphones to watch videos in YouTube, and 47.3% use YouTube for less than an hour a day. Laptop computers is the second most popular response in video watching question, and 32.4% of them watch videos for 1–3 h. In the following Section the results on the degree of
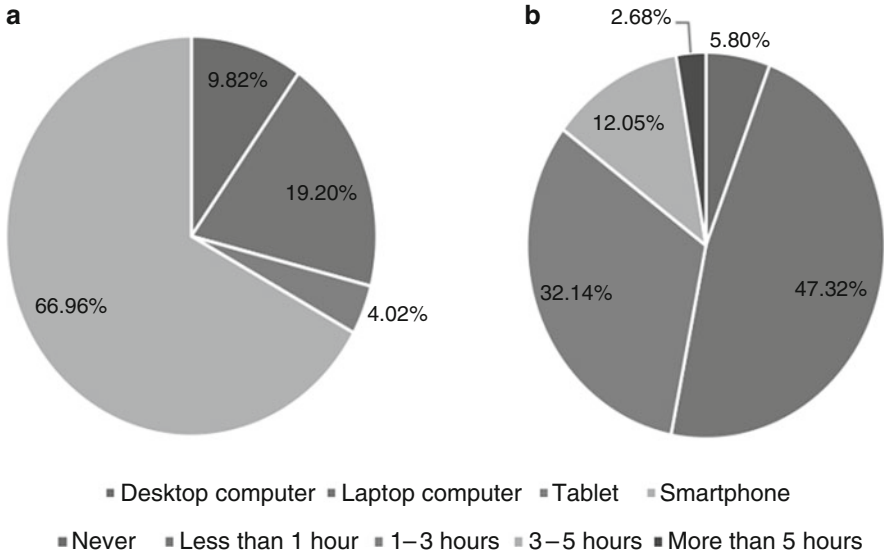
Fig. 1 (**a**) Device used to access YouTube, (**b**) Hours spent in YouTube daily

engagement with YouTube advertisements and the attitudes of consumers towards them will be presented.

4 YouTube Users and Advertisements

YouTube offers six different formats of ads, with three of them appearing as banners, and three of them as videos in the video player. Video advertisements offer three choices to advertisers: skippable ads (which are the most common), non-skippable ads and bumper ads. According to [13], in-stream advertisements improve the viewing experience for users without inflicting losses of advertising value for advertisers or content owners.

However, YouTube advertisements do not seem to attract much of attention in terms of viewability and impressions (clicks). Only 4% of the respondents mentioned that they frequently visit the sites of the product/service advertised, while almost two out of three respondents (66% or 148 out of the 224 respondents) never click on the advertised link and one out of four rarely do it. Similarly, three out of four respondents very frequently or always skip ads whenever the advertisement is shown. Only 8.9% of the respondents said they never or rarely click on the skip add button, while 4.0% of the sample skip ads some times, and 12.1% frequently. These findings are similar to a recent research regarding advertisements engagement and viewability in social media and SNSs Greece and YouTube [4, 6], and pose significant questions about marketers (Fig. 2).
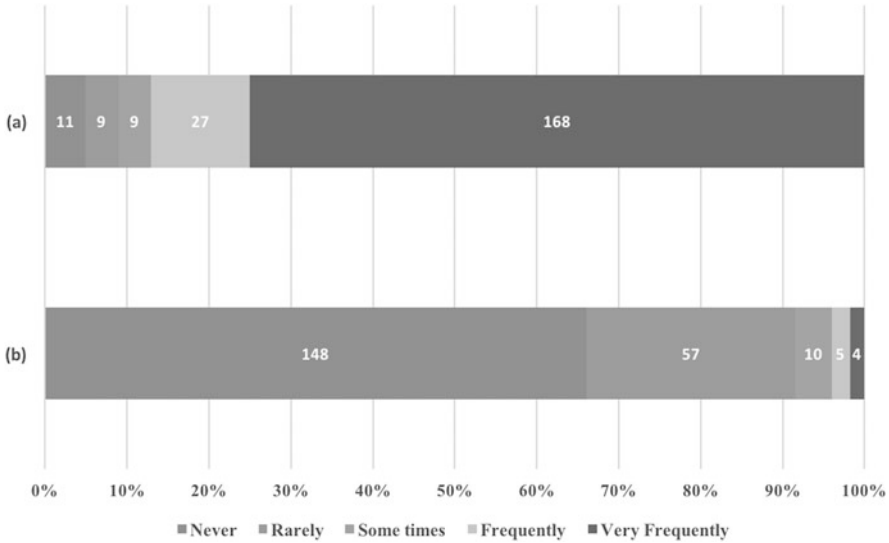
Fig. 2 Users actions towards YouTube Advertisement. (**a**) How often do you skip advertisements in YouTube, (**b**) How often are you visiting the link associated with the advertisement

The same results are also found in other researches [21] where YouTube comes in second place (after Facebook), with 32% of the respondents saying they engage with branded video content. 18 questions were posed to examine respondents' attitudes towards advertisements in YouTube. However, two questions, regarding the inclusion of indecent messages and the effect on kids were omitted by our analysis since they have not provided significant statistical results, leaving us with 16 items. Principal Components analysis was used with Varimax rotation, and the communalities of the used questions are presented in Table 1.

Table 2 demonstrates the loadings of each variable for each one of the five identified factors: irritation (Factor 1), credibility (Factor 2), entertainment (Factor 3), information (Factor 4) and the general attitude towards YouTube online advertisements (Factor 5). The five factors identified, account for a total of 80.95% of the total variance explained. The Kaiser-Meyer-Olkin measure for sampling adequacy was found to be of a very high value (KMO = 0.885) that literature characterizes as "*meritorious*", while the Bartlett's sphericity test provided a value of $\chi^2(120) = 2721.411$, $p < 0.001$.

The identified factors can be described as:

1. *Irritation*: Online advertisements in YouTube are disturbing, misleading, excessive in number and interrupt videos in points of interest.
2. *Credibility*: Online advertisements in YouTube are credible, original and authentic, and they deliver what they are promising.
3. *Entertainment*: Online advertisements in YouTube are entertaining, humorous and interesting.

Table 1 Communalities matrix

YouTube advertisements . . .	Initial	Extraction
. . . provide more information compared to other media	1.000	0.780
. . . provide a new and exciting way of information	1.000	0.833
. . . keep me posted for the available products/services	1.000	0.736
. . . are entertaining	1.000	0.910
. . . are humorous	1.000	0.905
. . . are interesting	1.000	0.875
. . . are annoying	1.000	0.733
. . . are too much	1.000	0.839
. . . interrupt videos in points of interest	1.000	0.820
. . . are misleading	1.000	0.669
. . . are credible	1.000	0.839
. . . are original and authentic	1.000	0.791
. . . keep what they are promising	1.000	0.846
I like YouTube advertisements	1.000	0.753
. . . are necessary	1.000	0.852
My overall attitude towards YouTube advertisements is positive	1.000	0.771

Table 2 Identified factors for YouTube online advertisements (higher loadings in bold)

YouTube advertisements . . .	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
. . . provide more information compared to other media.	−0.016	0.042	0.134	**0.866**	0.101
. . . provide a new and exciting way of information	−0.072	0.187	0.286	**0.821**	0.191
. . . keep me posted for the available products/services	−0.093	0.243	0.347	**0.726**	0.145
. . . are entertaining	−0.255	0.218	**0.804**	0.314	0.226
. . . are humorous	−0.131	0.292	**0.799**	0.348	0.208
. . . are interesting	−0.150	0.319	**0.710**	0.424	0.267
. . . are annoying	**0.815**	−0.004	−0.224	−0.094	−0.103
. . . are too much	**0.887**	0.020	−0.156	−0.044	−0.159
. . . interrupt videos in points of interest	**0.885**	0.046	−0.173	0.004	−0.071
. . . are misleading	**0.765**	−0.244	0.140	−0.065	0.007
. . . are credible	−0.041	**0.851**	0.290	0.139	0.096
. . . are original and authentic	0.000	**0.819**	0.168	0.162	0.257
. . . keep what they are promising	−0.093	**0.849**	0.142	0.131	0.283
I like YouTube advertisements	−0.139	0.270	0.470	0.188	**0.636**
. . . are necessary	−0.108	0.233	0.079	0.127	**0.874**
My overall attitude towards YouTube advertisements is positive	−0.147	0.281	0.347	0.251	**0.696**

4. *Information*: Online advertisements in YouTube give more information on the product/services and its features through a new and exciting way, helping users to be informed about available products/services in the market.
5. *General Attitude on Ads*: Online advertisements in YouTube are necessary, and users like them and think positively for them.

Interestingly and contrary to the literature [8, 9, 11, 20] questions regarding value corruption did not provide significant statistical results and were omitted by the above analysis. This finding, however, can be supported by previous research the authors conducted regarding online advertisement in Facebook, where value corruption was also found to have a negligible effect in the overall attitude of consumers towards online advertisement [11].

5 Conclusions: Suggestions for Further Research

In this paper the attitudes of YouTube users towards online advertisement on the platforms were investigated. Apart from the general attitude factor four more major factors were identified namely: irritation, credibility, entertainment and information. Corruption of values has not been found to be an important attitude towards online advertisement in YouTube.

The above findings are in line with the results of relevant literature [8, 9, 16, 20, 22] and prior research performed by the authors [11] regarding Facebook. These results provide additional insight to the understanding of the ways that SNSs users are affected by online advertisement. A critical discovery on the low levels of engagement, and conversions of advertisements in YouTube by consumers, should be of concern for academics and marketers and provides with some interesting insights for practitioners.

The managerial implications of our findings include the orientation of YouTube advertisements to informational and entertaining content in order to increase brand awareness and increase conversions and the duration YouTube users are exposed to a message, but also in decreasing irritation factor components (such as frequent video interruptions). In that way, YouTube advertisements will have a higher level of influence on consumers and the ROI of a campaign in YouTube can be increased.

Our research comes with some limitations. Specifically, the sample examined is rather small, and does not focus in a specific demographic group of the population. However, this is an ongoing research, extending to other SNSs like YouTube and Instagram. As SNSs are going to continue evolving as an innovative channel of marketing communication and interaction with consumers that affects the performance of firms [23], further research should use broader and more focused samples in specific consumer segments, like the Generation Z [24], exploring the ways that the identified factors and user generated content [25, 26] influence users' behaviour towards SNSs advertisements, providing insight on the mechanisms that drive consumers to interact more actively with ads in YouTube and other SNSs.

References

1. Schivinski B, Dabrowski D (2016) The effect of social media communication on consumer perceptions of brands. J Mark Commun 22(2):189–214. https://doi.org/10.1080/13527266.2013.871323
2. Belch G, Belch M (2014) The role of new and traditional media in the rapidly changing marketing communications environment. Int J Strateg Innov Mark 1(3):130–136. https://doi.org/10.15556/IJSIM.01.03.001
3. Rizavi SS, Ali L, Rizavi SHM (2011) User perceived quality of social networking websites: a study of Lahore region. Interdiscip J Contemp Res Bus 2:902–913
4. Constantinides E, Lorenzo-Romero C (2013) Social networking sites as business tool: a study of user behavior. In: Business process management. Springer, Berlin, pp 221–240. https://doi.org/10.1007/978-3-642-28409-0_9
5. Dahnil MI, Marzuki KM, Langgat J, Fabeil NF (2014) Factors influencing SMEs adoption of social media marketing. Procedia Soc Behav Sci 148:119–126. https://doi.org/10.1016/j.sbspro.2014.07.025
6. ELTRUN (2016) Annual survey for Social Media, Athens, January 2017 (in Greek). http://www.greekecommerce.gr/gr/resources/ereynes-gia-ellada/eltrun-digital-marketing-social-media-2016/
7. Taylor DG, Lewin JE, Strutton D (2011) Friends, fans, and followers: do ads work on social networks? How gender and age shape receptivity. J Advert Res 51:258–275. https://doi.org/10.2501/JAR-51-1-258-275
8. Saxena A, Khanna U (2013) Advertising on social network sites: a structural equation modelling approach. Vision 17:17–25. https://doi.org/10.1177/0972262912469560
9. Vinerean S, Cetina I, Dumitrescu L, Tichindelean M (2013) The effects of social media marketing on online consumer behavior. Int J Bus Manag 8:66–79. https://doi.org/10.5539/ijbm.v8n14p66
10. Wu L (2016) Understanding the impact of media engagement on the perceived value and acceptance of advertising within mobile social networks. J Interact Advert 16:59–73. https://doi.org/10.1080/15252019.2016.1160331
11. Antoniadis I, Assimakopoulos C, Koukoulis I (2019) Attitudes of college students towards online advertisement in social networking sites: a structural equation modeling approach. Int J Internet Mark Advert (forthcoming)
12. Kwon O, Wen Y (2010) An empirical study of the factors affecting social network service use. Comput Hum Behav 26:254–263. https://doi.org/10.1016/j.chb.2009.04.011
13. Pashkevich M, Dorai-Raj S, Kellar M, Zigmond D (2012) Empowering online advertisements by empowering viewers with the right to choose: the relative effectiveness of skippable video advertisements on YouTube. J Advert Res 52:451–457. https://doi.org/10.2501/JAR-52-4-451-457
14. Naini S, Shafia M, Nazari N (2012) Examining different factors in effectiveness of advertisement. Manag Sci Lett 2:811–818
15. Berthon PR, Pitt LF, Plangger K, Shapiro D (2012) Marketing meets Web 2.0, social media, and creative consumers: implications for international marketing strategy. Bus Horiz 55:261–271. https://doi.org/10.1016/j.bushor.2012.01.007
16. Haridakis P, Hanson G (2009) Social interaction and co-viewing with YouTube: blending mass communication reception and social connection. J Broadcast Electron Media 53(2):317–335. https://doi.org/10.1080/08838150902908270
17. Wang Y, Sun S (2010) Assessing beliefs, attitudes, and behavioral responses toward online advertising in three countries. Int Bus Rev 19(4):333–344. https://doi.org/10.1016/j.ibusrev.2010.01.004
18. Deraz H, Awuah G, Gebrekidan D-A (2015) Factors predicting consumers' assessment of advertisements on social networking sites. Int J Digit Inf Wirel Commun 5(2):111–123. https://doi.org/10.17781/P001671

19. Pikas B, Sorrentino G (2014) The effectiveness of online advertising: consumer's perceptions of ads on Facebook, Twitter and YouTube. J Appl Bus Econ 16(4):70–81
20. Dehghani M, Niaki M-K, Ramezani I, Sali R (2016) Evaluating the influence of YouTube advertising for attraction of young customers. Comput Hum Behav 59:165–172. https://doi.org/10.1016/j.chb.2016.01.037
21. Animoto (2017) The state of social video 2017: marketing in a video-first world. https://animoto.com/l/state-of-social-video-2017
22. Sakas DP, Dimitrios N-K, Kavoura A (2015) The development of facebook's competitive advantage for brand awareness. Procedia Econ Financ 24:589–597. https://doi.org/10.1016/S2212-5671(15)00642-5
23. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214. https://doi.org/10.4018/978-1-5225-0843-4.ch007
24. Forer L (2017) Top nine social media trend predictions for 2018. https://www.marketingprofs.com/chirp/2017/33139/top-nine-social-media-trend-predictions-for-2018-infographic
25. Stavrianea A, Kavoura A (2015) Social media's and online user-generated content's role in services advertising. AIP Conf Proc 1644(1):318–324. https://doi.org/10.1063/1.4907853
26. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for Southeastern Rural Transylvania, chapter 3. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66

An Innovative Platform for Creating Audience-Specific Gamified Cultural Tourism Guides Where Art, Tradition and Culture, Technology and Business Converge

Konstantinos I. Kotsopoulos, Pelagia Chourdaki, Rallis Antoniadis, Dimitrios Tsolis, and George Pavlidis

Abstract Digital realities and gaming combined with existing communication technologies offer tremendous opportunities in the development of strategic innovative marketing. In parallel, the cultural and creative industry is in need of new platforms through which museum staff, cultural organizations, tourism and related industry will have access to a set of easy-to-use authoring tools that facilitate the creation and maintenance of personalized gamified cultural travel guides in the form of mobile apps. In this framework, this research paper focuses on the design, implementation and evaluation of a cultural guide authoring platform and applications which offer multilingual, 3D and Augmented Reality (AR) gamified experiences to mobile users. The respective apps developed can be ported on many platforms and with these 3D tools a non-experienced user can in a few minutes easily create a city guide with articles, routes, mini-games and AR content using only drag and drop features. At the same time the mobile applications present city guides and general tourism information and services to the users.

Keywords Innovative platform · Cultural tourism guide · Cultural and creative industry · Gamification · Augmented Reality

K. I. Kotsopoulos (✉) · D. Tsolis · G. Pavlidis
University of Patras, Rio, Achaia, Greece
e-mail: kkotsopoulos@upatras.gr

P. Chourdaki · R. Antoniadis
University of Piraeus, Piraeus, Greece

263

1 Introduction

It is widely accepted that Virtual Reality (VR), Augmented-Mixed Reality (AR-MR), and gamification combined with existing communication technologies (like beacons) offer significant opportunities in the development of strategic innovative marketing. Additionally, the cultural and creative industry, which is traditionally associated with the sectors of tourism, culture, or leisure, is in need of new platforms through which museum staff, cultural organizations, tourism and related industry will have access to a set of easy-to-use authoring tools that facilitate the creation and maintenance of personalized gamified cultural travel guides in the form of mobile apps.

The research conducted resulted in the design, implementation and evaluation of a cultural guide authoring platform and applications which offer multilingual, 3D and AR gamified experiences to mobile users. The respective developed apps can be ported on many platforms (PC, Mac, Android, iOS, Web, game consoles) following the "create once-publish everywhere" (C.O.P.E. principle). With these 3D tools a non-experienced user can in a few minutes easily create a city guide with articles, routes, mini-games and AR content using only drag and drop features. At the same time the mobile applications present city guides and general tourism information and services to the users. The platform's development was based on the study of relevant best practices in gamification frameworks, AR approaches [1], and 3D user interface designs for the creation of mobile tourist guides. After the evaluation of best practice, an adapted framework is created based on the gamification methodologies of Marczewski [2] and Werbach and Hunter [3].

The literature references different types and models of tourist behavior. One of the most important models is the psychographics model of Stanley Plog [4], which links psychological traits and personalities of visitors to the choice of destination that will satisfy their needs. Plog distinguished two basic types of tourists: the Allocentric and the Psychocentric. The Allocentric visitor is the one who likes to try less familiar destinations, is full of confidence and vigor, likes challenges and trusts his own judgment rather than that of experts'. On the other hand, the Psychocentric visitor is considered more conservative and cautious and prefers well-known and safe destinations. Plog's model is simple and offers a satisfactory description of the attitude of different kinds of tourists. Both behaviors types were taken into account in the development of the 3D guide.

This platform is part of the 3DGuides (www.3dguides.eu) research project, partly funded by the ICT4Growth programme of the General Secretariat of Research &Technology of the Greek Ministry of Development and was completed in 2016.

2 Methodology

2.1 3DGuides Authoring Platform: Apps Creation

With 3DGuides authoring platform a non-experienced user can easily and quickly create a guide with articles, routes, mini-games and AR content using drag and drop features. The authoring platform consists of two systems, a centralized Multimedia Document Management and Distribution System (MDMDS) and an easy-to-use 3D App Creation Tool (3DACT). MDMDS is cloud-based and multimedia material is uploaded on it. It is also used for the creation of the tourist guide apps, supports their updates with additional material, provides support for game functions and social media, new point recognition and data availability for the AR system. The content can be translated by other users (translators) online, so the author creates one application in the preferred language and this application is automatically available in all the languages that the content is translated. This feature saves time since design and translation are two separated processes dynamically connected through 3DGuides APIs. The platform is designed to be offered as a service, but an SDK is also available for the developers.

The 3DACT is a management tool and uses Vuforia Engine [6] for the AR based on image recognition. Every app which is produced through its use is automatically linked to the MDMDS. It can create tourist guide apps for iOS and Android operating systems as well as for different capabilities of portable devices (screen resolution, computing power, etc.). It also supports the use of 3D objects, the enhancement of game players and the development of the AR functions.

The users of the Tourist Guide apps can easily change the user interface from 2D to 3D, check for nearby attractions, suggested routes, use AR on selected attractions, interact with 3D representations of entire areas with information points, and maps with 3D objects, create their own routes and complete location-based gamified missions through mini games (Fig. 1).

2.2 Gamification Framework

For our gamification framework we adopted the six-step process of Werbach and Hunter [3]—because of its holistic and business-oriented approach and—supported by the eight questions that must be answered during the gamification development according to Marczewski [2].

First Step Definition of business objectives. The main targets were to differentiate the tourist guide from competition, to create a new brand name, and to increase user engagement by covering most needs.

Second Step Delineation of target behaviors. The activities of the user in the gamification part of the application were evaluated using data acquired by the following algorithms (Table 1):
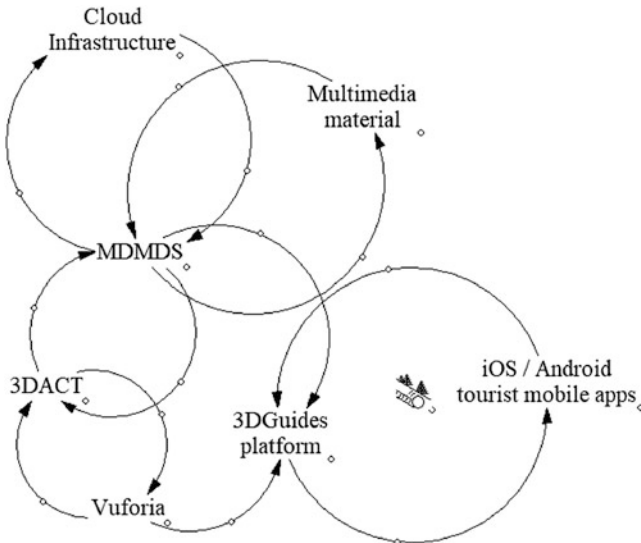
Fig. 1 Causal loop diagram for 3DGuides authoring platform operation

Table 1 User activities—algorithm description

User activities	
Variable	Description
Read articles in the application	The number of articles the user will read in the app corresponds to degree of interest in application content or development (1 article = 1 point) and can change the status of a player
Complete very easily/easy/mid-range difficulty/difficult challenges	When a player reaches a place of interest (GPS Location information is used) connected with a game challenge, then the game becomes available (pop up message) and its completion confers different number of reward points (10/20/30/40) depending on difficulty. The sum of the points collected in a mission corresponds to a badge and can change the status of a player
Sharing the player status	By sharing the completion of a game or a mission (20 points), the player status (40 points), the status of a player can change

Third Step Description of our players according to the user type of Marczewski [2]. The main target was to transform reward-Extrinsic Users (Self-Seeker, Consumer, Networker, Exploiter) to become Intrinsic Users (Socialiser, Free Spirit, Achiever, Philanthropist) because these are the players who will continue to use our application and help improve it.

Fourth Step Devising of activity circles. Specific actions of the users were described which lead to specific results that challenge the user, based on his/her type, to take other actions.

User Activity 1: Reading articles within the application. This action is the ideal approach for the psychocentric tourists which are conservatives and not open to new experiences. The "Achiever" learns new material and becomes better, while the "Free Spirit" has autonomy to choose which article is important for reading. Extrinsic user types like "Consumer" and "Exploiter" are covered by the way of acquiring points since the "Consumer" does everything to be rewarded while the "Exploiter", by seeking the boundaries of the system, collects points in any possible way.

User Activity 2: Carrying out challenges to complete missions. Points are earned mainly from reading articles and this way of obtaining points is the most playful targeted to the users who want to have fun and at the same time be rewarded according to efforts. The "Consumer", "Exploiter", "Successful" and "Free Spirit" are satisfied with the same logic described for obtaining points. Psychocentric and allocentric tourists will take part in the collection of points, since there will be a wide range of well-known and less known destinations to visit and play the related games.

User Activity 3: Sharing achievements through social media. This way of obtaining points satisfies the types of users mentioned above. In addition, the "Socialiser" publishes his achievements and interacts with his "social group", while the "Philanthropist" spreads the system from which not only learning has occurred, but also intangible gains. The "Self-Seeker" anticipates the reward, while the "Networker" observes which other players are capable and can be exploited.

Fifth Step Do not forget the fun. The model of the four types of Fun (People, Easy, Hard, Serious) according to Nicole Lazzaro [5] used to describe Intrinsic users [2] motivation and the type of fun suitables to them:

The "Philanthropist" > Serious Fun (Purpose): The system needs to provide mechanisms for the user to let him help other users by answering questions or finding answers for others.

The "Socializer" > People Fun (Relatedness): Seeks social relationships and ways of life that support the feeling of petition.

The "Achiever" > Hard Fun (Mastery): Wants to feel better and that the "journey" to the system leads to mastery. One way to achieve this is by recognizing the successes through the point/badges system or by using the system for learning purposes. He/she prefers the combination of competition and collaboration.

The "Free Spirit" > Easy Fun (Autonomy): The choice of creation, missions and exploits allows the user to search and includes elements such as imagination, creativity, and exploration.

Sixth Step Deploying the appropriate tools. There were two main choices for the technical implementation of the gamification framework: to build a customized system or to use a software-as-a-service system. There were many companies in

the market that offered patented solutions, but due to the complexity of the solution, the cost of adapting an existing ready-made system would be unprofitable and might not have had the desirable results.

The badges are also an important part of the gamification framework because they reflect the success of users based on specific goals. They can be gained from the collection of a certain amount of points, completing specific actions or completing specific tasks (a set of specific actions), unlocking certain actions with the physical presence of the user.

2.3   AR (Location Based–Recognition Based)

In a tourism application which has points of interest (POIs), it is essential to utilize the capabilities that the Inertial measurement unit (IMU) of modern mobile devices offers. With the use of GPS (coordinates for every inserted POI in the 3DGuides authoring platform), gyroscope, accelerometer and compass magnetometer, the mobile app offers to the users the list of nearby attractions, their distance from the attraction and the direction to the point of interest with the use of an AR tour feature. With AR tour the users can point the camera of their mobile to the POIs to obtain basic information (name, distance). By selecting a POI on the screen, the user gains access to full information. GPS information is also used in activating the location-based gamification features, in finding the nearby location-based mini games and in counting where there are points which have recognition-based AR.

Pre-defined reference images are used for the implementation of recognition-based AR in the apps. Specific good practice is followed for the creation of the appropriate image banks which are later uploaded to the cloud of Vuforia Target Manager [6]. The Vuforia Target Manager analyzes and rates the images based on their unique elements (high-contrast spots, curves, etc.) and only images with the highest rate are chosen for the apps.

2.4   Technologies

The outcomes of the research include a cultural guide authoring platform and the respective players (iOS and Android) that offer multilingual, 3D and AR gamified experiences to mobile users. The platform and the players are built on the Unity game engine and Vuforia AR platform [6]. Unity is a powerful and popular game engine, with a worldwide community of users. Apps developed via Unity engine, can be ported on many platforms (PC, Mac, Android, iOS, Web, game consoles) following the C.O.P.E. principle. Unity3D is fully compatible with Vuforia AR platform. Vuforia supports the broadest range of devices, operating systems and tools, and is supported by the largest AR ecosystem in the world.

3 Results and Discussion

All technologies used in 3DGuides were at least at TRL8 (actual system completed and qualified through test and demonstration.), since all aforementioned tools are complete and qualified through pilots. Nine travel guides for ten Greek Islands (Corfu, Crete, Kefalonia, Kos-Nisyros, Mykonos-Delos, Naxos, Rhodes, Santorini) and Athens were created with the 3DGuides platform, because these regions attract the highest annual tourist traffic from both Greek and foreign tourists based on tourist arrivals and sales of the printed tourist guides. The content of the apps was added by the company "Toubis Editions" [7] (owner of the content) in collaboration with the company "Omega Technology" [8] (developer of the information system). The authoring platform resulted in the rapid creation of the apps and allowed more time for user acceptance testing. The nine travel guides are available in Google Play and Apple stores and an extensive online advertising campaign is planned for launch after a major content update. Additionally, the tourists' destinations and points of interest in the nine travel guides can satisfy both categories of visitors, allocentric and psychocentric according to the literature framework. Our findings from the pilot period revealed that mini games (Quiz Games, Sliding Puzzle, Match the Same) proved to be the most appropriate because the tourist places are crowded and no more than 1–2 min can be spent in gaming activities. Moreover, the majority of users are familiar with well-known mini games and prefer them from new types which require instructions and more attention. The implementation of new technologies can be employed for education and by tourism organizations [9–11].

4 Conclusion

The results of the study show that creative industries are willing to adopt holistic approaches which enable them not only to manage the content of a tourist guide with an easy to use platform, but to create new experiences by combining the content with 3D, AR and gamification features. The rapid creation of interactive content, focusing on selected target groups with different needs, which can be continuously evaluated and improved, is also a key factor for the emerging experience industries. The study showed that when using a mobile app, tourists prefer an interactive cultural tourist guide to a static reference tool. The immediate interaction through location-based AR at a point of interest (e.g., pop-up message informs the user when there) and the freedom to choose which type of "mission" to engage in is an attractive feature of a mobile tourist guide. These findings enhance our understanding of user behavior on audience-specific gamified cultural tourism guide apps and contribute to the current literature. Furthermore, the present study demonstrates the great potential of gamification in the tourism industry, not only in enhancing cultural experience but also in pursuing sustainable economic and social development. Gamification can build an interface between the main players/tourism stakeholders—tourists

(customers), the tourism industry (hotels, restaurants, recreation, tour-operators) and local community (museums, cultural organizations, NGOs, local institutions)—acting in an entertaining, informative, and ethical yet addictive way.

References

1. Kounavis CD, Kasimati AE, Zamani ED (2012) Enhancing the tourism experience through mobile augmented reality: challenges and prospects. Int J Eng Bus Manag 4(1):1–6. https://doi.org/10.5772/51644
2. Marczewski A (2015) User types. Even ninja monkeys like to play: gamification, game thinking and motivational design, vol 5727. CreateSpace Independent Publishing Platform, pp 65–80. https://doi.org/10.1111/j.1537-4726.2004.133_10.x
3. Werbach K, Hunter D (2012) For the win: how game thinking can revolutionize your business. Wharton Digital Press, Philadelphia
4. Plog SC (2002) The power of psychographics and the concept of venturesomeness. J Travel Res 40(3):244–251. https://doi.org/10.1177/004728750204000302
5. Lazzaro N (2004) Why we play games: four keys to more emotion without story. In: Game Developer Conference (GDC), pp 1–8. https://doi.org/10.1111/j.1464-410X.2004.04896.x
6. Vuforia Target Manager. https://developer.vuforia.com/target-manager
7. Toubis Editions. http://www.toubis.gr/
8. Omega Technology. http://site.omegatechnology.gr/
9. Kavoura A, Sylaiou S (2018) Effective cultural communication via information and communication technologies and social media use. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 7002–7013
10. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and future outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 3827–3838
11. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66

The Historic and Monumental Enhancement as a Tool for the Sustainable Development of Cultural Assets of Greece

Evangelos Papoulias and Theoklis-Petros Zounis

Abstract Historic enhancement means safeguarding the existence and appearance of historic elements of the community. Preserving archaeological monuments, sites and historic buildings is vital to understand a nation's culture and to promote its heritage. There are four distinct approaches to the treatment of historic properties—rehabilitation, restoration, marketing and enhancement-that could lead to the sustainable development. The previous four directions can add to a community's understanding and bringing economic and other benefits as well. It preserves the historic, architectural, and aesthetic character of the cultural heritage of a community and provides a sense of place and continuity. How do we encourage sustainable development; (providing incentives, imposing regulations, providing help and support to those engaged in preservation and for promotion itself, educating the public). How international constitutions, as UNESCO and Council of Europe have helped with initiatives (World Heritage List of UNESCO, Funding, Conventions) in order that many countries have obtained added value through their cultural wealth. The best example in practice in Greece that can illustrate the sustainable development of very complicated archaeological project is the unification of archaeological sites of Athens.

Keywords Sustainable development · Cultural assets · Cultural heritage · UNESCO · The unification of archeological sites of Athens

E. Papoulias · T.-P. Zounis (✉)
Department of Museums and National Archive of NKUA, National and Kapodistrian University of Athens, Athens, Greece
e-mail: thzounis@media.uoa.gr

1 Introduction

The origins of the European Cultural Heritage Sustainable Policy for the twenty-first century can be found in the numerous achievements of the Council of Europe which, since the adoption of the European Cultural Convention, have helped shape the heritage policies of most European countries and the resulting co-operation between them. The initiatives also draw on the work carried out by UNESCO and the European Union, and on the discussions that have taken place in the international non-governmental organizations and networks focusing on heritage which have been involved in drawing up this new directions. Interest in cultural heritage [1], on a European and international scale, goes back to the late nineteenth century and is still evolving. In the 1970s, the term "cultural heritage" replaced the expression "historic monument" which was henceforth reserved for legally protected assets. This change, encompassing a significant enlargement of the concept, took place in a socio—economic, political and cultural context which coincided with the 1973 oil crisis and profound changes in lifestyles "historic monument" which was henceforth reserved for legally protected assets. This change, encompassing a significant enlargement of the concept, took place in a socio-economic, political and cultural context which coincided with the 1973 oil crisis and profound changes in lifestyles.

It is expressed in the founding texts and, in particular, in The Hague Conventions with respect to the Laws and Customs of War on Land (1899, 1907), the Convention for the Protection of Cultural Property in the Event of Armed Conflict (1954), and the Athens (1931) and Venice (1964) charters on the conservation and restoration of monuments. The most recent reference texts are the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003), the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005) and the Council of Europe Framework Convention on the Value of Cultural Heritage for Society (2005), which highlights the need for greater citizen participation and the ability of local communities, citizens and civil society to recognize as heritage what is meaningful to them and to respect, preserve, transmit and enrich that heritage.

2 The International Aspect of the Cultural Heritage

The conventions and the other decisions of the international institutions covered the theoretical basis that was necessary for the adoption of the basic principles of protection, restoration, rehabilitation and enhancement protection of cultural heritage [2]. Without loss of generality, these decisions may be characterized as involving investment in projects relating to the creation, preservation, restoration, renovation, classification, maintenance, reuse, interpretation, or whatever else, of cultural capital. It is intended that these criteria should apply equally within economic and cultural discourses and, indeed, that they should provide a bridge between the two.

To illustrate, in 1931, the 1st International Congress of Architects and Technicians of Historic Monuments, held in Athens, adopted a founding charter (the Athens Charter for the Restoration of Historic Monuments), which asserted the principles already set out by Riegl. It recommended that any use of monuments should respect their historic or artistic nature and that special consideration should be given to monuments and their surroundings when any development is planned. It also emphasized the importance of collaboration between curators, architects and scientists and finally called for international co-operation, a first in the field of the "artistic and archaeological heritage". The particular context of the post-war period and the work carried out by UNESCO to save iconic sites throughout the world prompted these specialists and their successors at the 2nd International Congress of Architects and Technicians of Historic Monuments, held in Venice in 1964, to set up, based on a proposal from UNESCO, the International Council on Monuments and Sites (ICOMOS). This 2nd Congress adopted 13 resolutions, the first being the International Charter for the Conservation and Restoration of Monuments and Sites, better known as the Venice Charter.

On the strength of its experience resulting from 40 years of discussions and exchanges between experts and political representatives, the Council of Europe has drawn up and, once adopted, implemented several founding conventions which have been transposed into national legislation of European countries, creating the foundations of a greater Europe of heritage [3]:

- the European Cultural Convention (Paris, 1954—ETS No. 18)
- the Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985—ETS No. 121)
- the European Convention on the Protection of the Archaeological Heritage (revised) (Valletta, 1992—ETS No. 143
- the European Landscape Convention (Florence, 2000—ETS No. 176)
- the Framework Convention on the Value of Cultural Heritage for Society (Faro, 2005—CETS No. 199).

These conventions have become reference texts and have been supplemented by a range of declarations, recommendations and resolutions [4]. They also provided the countries with tools to protect and enhance their tangible and intangible heritage. The conventions open new horizons for measures that should have been taken for the protection of archaeological heritage during the last decades [5]. There was legal gap in many countries regarding the protection of archaeological wealth. We didn't have supporting laws that could protect cultural heritage. The most countries didn't have funding tools to support archaeological works. The scientific community and institutions were awaiting subsidiary budgets only from authorities. In many countries there was a specific policy about the reconstruction of the historical centers (of capital cities, smaller cities, rural regions etc.). Hence, the protection of monuments and the integration of them to the social life of the residents of these historical centers was necessity:

In the early 1990s, the Council of Europe, was called to fill a gap and establish the basic principles for protection and enhance the cultural heritage:

- It reinforces national legislations with initiatives and measures for protection (for example, new archaeological laws, archaeological zones, dissemination of findings, publicity about educational role of protection, etc.).
- It introduces "integrated conservation" and "in situ" protection of monuments.
- It urges governments to finance excavations, archaeological works and cultural projects.

3 Marketing and Cultural Heritage

Marketing is a customer-focused management tool that can be used to help cultural or heritage attractions achieve their wider organizational goals by linking customer desires with appropriate goods and services [6]. Marketing is an integral element in the overall planning and management process adopted for any cultural tourism attraction [7]. Marketing is much more of convincing some people not to use the product as it is about convincing the target audience to enjoy their experiences. Brett [8] states that good marketing can be a useful means of selection of appropriate visitors, which can help with problems of sustainability at high-profile attractions. Good presentation of cultural heritage assets requires that the cultural values of those assets be fully interpreted in a way that visitors of all kinds can understand [9]. Cultural heritage managers increasingly are being urged to plan for presentation to visitors of a heritage asset as an important part of its ongoing conservation and management.

4 The Greek Aspect of Cultural Heritage

4.1 The Greek Framework

Greek culture is facing a transition from being only informal and complex to becoming more formal and professional [10]. In Greece, the ratification process of the International and European Conventions was completed during the last three decades with specific legislation. Analyzing the specific conditions/needs regarding the protection of the Greek cultural wealth we could see:

- There are numerous archaeological sites and monuments across Greece
- There is a huge number of excavations in Greece
- A great number of museums must be constructed or re-constructed in the archaeological regions, towns, cities etc.

All recommendations and provisions of the conventions are being implemented in Greece based on "integrated conservation" and "in situ" protection of archaeological heritage (planning, targeting and the implementation of many public works and programs have adopted these two basic principles). During the last two decades

two major Community Support Frameworks (CSF), concerning the economic and social development of Greece, were planned and implemented: The 2nd CSF (1994–2000), 15 billion euros, and the 3rd CSF (2000–2006), 25 billion euros. In this framework, funding for cultural policy for the 2nd and 3rd Operational Program for Culture (OPC) amounted to 400 million euros and 1.3 billion euros respectively. In other words, 1.7 billion euros in total was spent on culture over the decade. Many actions are being continued to the National Strategic Reference Framework-NSRF. This amounted to an unprecedented investment for culture in Greece.

The Operational Program "Politismos" (which in Greek means "culture") addressed three fields, (a) Archaeological sites and monuments, (b) Museums, (c) Contemporary Art. The main goal of the program was to create infrastructures, for instance:

- Design studies, conservation, restoration, configuration of many archaeological monuments in order for them to be accessible to the public
- Construction or re-construction of Museums near archaeological sites.
- Archaeological heritage has acquired a unifying principle through the combination of: "site—monument—museum".

We must point out that such a major investment could only occur as a result of strong political will to develop the field of culture in the country. This meant, consequently, the development of an operational program for cultural policy provided with the necessary financial means. In this case it is clear that culturally important structures were greatly reinforced in the name of the wider economic development, especially in relation to tourism and regional development. Older structures were renovated and modern ones created. The majority of the projects planned and constructed were museums, archaeological sites, large conference and cultural centres during this decade [11].

As time goes by, the Greek Authorities [12] realize that there are a lot of changes that must be made in the field of "integrated conservation—rehabilitation" and "enhancement" of cultural heritage. More specifically, we need to expand the theoretical basis to include the field of "marketing and sustainable development" of monuments and cultural wealth.

The concept of sustainability is most often invoked in the context of the environment, where the term sustainable is generally linked with the word development. Sustainable development marries the ideas of sustainable economic development, meaning development that will not slow down or wither away but will be, in some sense, self-perpetuating, and ecological sustainability, meaning the preservation and enhancement of a range of environmental values through the maintenance of ecosystems in the natural world. Furthermore, the term sustainable development embraces an interpretation of "economic development" that supersedes former notions of economic growth measured only in terms of increases in per capita income. Thorsby [2] suggests specific criteria that may be interpreted as specifying the requirements to which heritage decisions should conform if they are to lead to sustainable outcomes. The suggested criteria are: (a) Generations of tangible and intangible benefits, (b) Intergenation equity, (c) Maintenance of diversity,

(d) Precautionary principle, (e) Recognition of interdependence. Without loss of generality, these decisions may be characterized as involving investment in projects relating to the creation, preservation, restoration, renovation, classification, maintenance, reuse, interpretation, or whatever else, of cultural capital. It is intended that these criteria should apply equally within economic and cultural discourses and, indeed, that they should provide a bridge between the two.

4.2 The Example of the Unification of Archaeological Sites of Athens

The best example in practice in Greece that can illustrate the sustainable development of very complicated archaeological project is the unification of archaeological sites of Athens. Since 1985 the City-planning Programme of Athens included, in accordance with a proposal by the Ministry of Culture, the unification of the Archaeological sites in the centre of Athens [13]. Subsequently, in 1988, the Ministry of Culture commissioned the drawing up of a Master Plan to further the realisation of Melina Merkouri's splendid vision. Its fulfillment will improve the quality of life in Athens by giving both Athenians and visitors an archaeological park running across the centre of the city, 4 km long and covering an area of 70,00,000 m^2 indeed a cultural, recreative and instructive centre, unique in all the world, and very much needed by Athens to emerge from her present condition. The plan is to include all the archaeological sites and monuments of the area together with the traditional aggregate of the Centre (Plaka, Psyrri, Theseion) and the area comprising the Commercial Triangle and the Historic Centre of Athens. To make this possible requires some other measures, such as replacing a number of streets with pedestrian roadways, for example Vasilissas Olgas, Dionysiou Areopagitou, Apostolos Pavlou, part of Ermou and the Sacred Way. Necessary also is the reconstruction, conservation and display of the monuments, reorganisation of the archaeological sites, and so forth. Within this area the archaeological sites and monuments assume their true importance, dominating the landscape, as they become part of everyday life. The plan offers Athenians an environment that is aesthetically, environmentally and culturally much improved. By incorporating into the life of the city monuments covering the entire historical span, both citizen and visitor can experience the historical continuity of the city in an environment of improved educational and aesthetic value. The area at the same time is to be a centre for relaxation and recreation, linked with daily life and contemporary cultural activity. Thus important archaeological sites (such as those along the national road to Eleusis) and significant cultural institutions are drawn into an overall programme for improving the city. Both inhabitants and visitors see a city worthy of its history.

The common programme of the Ministry of Culture and the Ministry of the Environment, Physical Planning and Public Works comprises in its initial phase 6 areas that are included in the overall programme of study and works [14]. The

purpose is the unification of the cultural inheritance of the Centre and the re-structuring—improvement of areas in the Historic Centre. This is one of the most important parts of Athens and, culturally, the most significant. The cultural, environmental, social and economic results of this program have become of enormous importance for the contemporary life in Athens.

5   Conclusions

Heritage management is certainly equally concerned with managing human behaviour as it is with managing cultural assets, tangible or intangible. The examined example, the Unification of the Archaeological Sites of Athens, represents a serious and basic change in modern Athens. It is cultural, environmental and developmental in purpose and it will contribute greatly to improving the quality of life in Athens. We can mention that the future challenges for Greek Cultural Heritage Management are the following factors:

1. The use of culture for the advancement of local development.
2. The improvement of cultural infrastructures and services.
3. The preservation and valorisation of the archaeological heritage of Athens and other large cities, threatened by rapid urbanisation.

References

1. Recommendation of the Committee of Ministers, CM/Rec (2017)1 to member States on the European Cultural Heritage Strategy for the 21st century (Adopted by the Committee of Ministers on 22 February 2017 at the 1278th meeting of the Ministers' Deputies), p 3
2. Thorsby D (2002) Assessing the values of cultural heritage research report. The Getty Conservation Institute, Los Angeles, pp 101–114
3. Council of Europe, Culture and Cultural Heritage Standards. https://www.coe.int/en/web/culture-and-heritage/standards
4. Herein System, European Heritage Policies. www.herein-system.eu/council-europe
5. Zorba M (2006) Structural funds and their impact on Cultural Policy: the Greek Case 1994–2006. http://mzorba.gr/2005-2006/eu_stractural.htm#_ednref5
6. Kotler P, Turner R (1989) Marketing management. Prentice Hall, Scarborough
7. Mc Kercher B, Du Cros H (2002) Cultural tourism: the partnership between tourism and cultural heritage management. Haworth Hospitality Press, New York
8. Brett RPC (1999) Principles of visitor management and care for historical sites, with special reference to Canterbury Cathedral. Cultural Tourism Session Notes XII Assembly. ICOMOS, Mexico, pp 83–92
9. Shackley M (1998) Visitor management: case studies from World Heritage sites. Butterworth Heinemann, Oxford
10. Fischer H (2012) Culture and the structural funds in Greece. European Expert Network on Culture (EENC)
11. Flew T (2005) Rethinking cultural policy in a global creative economy. Int J Cult Policy 11:229–241

12. Ministry of Culture. The government or state agency responsible for the protection of archaeological monuments (with its central and regional services and the new economic services Managing Authorities). https://www.culture.gr/en/SitePages/default.aspx
13. The unification of the archaeological sites of Athens. Major programs. https://www.culture.gr/en/service/SitePages/view.aspx?iID=2579
14. Papageorgiou Venetas A. The Athenian walk. A new pedestrian approach to the Acropolis of Athens. http://www.papageorgiou-venetas.com/site/contents.html

Internet Services and Social Networks in the Greek Academia

Dionysios Fragkopoulos

Abstract In just a decade social networks and social media have gained considerable stake in the Internet market, with most of the users being online, communicating and creating the user-generated Web. The literature has examined in numerous ways the engagement of the users in those services but only a few large-scale studies have been conducted in Greece. Using a sample of 5922 academicians, personnel and students from all the Greek Universities and Research Institutes, this paper examines the adoption of major social networking sites and internet services in relation with the participants' experience in the Academia in years, level of education, academic knowledge field, gender, internet connection type and electronic device most frequently used. The taxonomy framework of social machines (Smart et al., A taxonomic framework for social machines. In: Social collective intelligence: combining the powers of humans and machines to build a smarter society. Springer International Publishing, Cham, pp 51–85, 2014) is used to organize the discussion about the results. The study shows a strong correlation between the SNSs used simultaneously by the participants, whereas there is also correlation of the years of experience in the Academia with specific SNSs. There is also high level of mobile internet usage in all the groups of the study which is correlated with the usage of specific SNSs.

Keywords Social networking sites · Social machines · Greece · Academia

D. Fragkopoulos (✉)
School of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece
e-mail: dfragos@ee.auth.gr

1 Introduction

1.1 Social Networking Sites (SNSs)

In the past few years, there has been tremendous growth in the use of *social networking sites* (SNSs), where billions of users share their interests through short stories, articles or video clips—Facebook which is notably the most accepted platform worldwide reached 2.2 billion monthly active users the Q1 of 2018 and 1.45 billion daily active users [1]. SNSs are web-based services that allow individuals to construct a public or semi-public profile, articulate a list of other users with whom they share a connection whereas at the same time they can view their list of connections [2]. The term *social media* (SM) is also used referring to a wider range of services which includes blogs and other collaborative platforms that allow the creation and exchange of user-generated content [3].

SMs have attracted considerable attention with business executives and decision makers struggling to understand the factors influencing their adoption. Business communication with customers through those platforms for marketing purposes is another major area of interest (e.g. [4]). Many other studies have also focused on the social uses of SNSs trying to capture the nature and processes of *digital sociability*, analyzing the user habits and the content generated (e.g. [5]). The user habits and interests can also be examined in terms of the patterns and commonalities they form amongst the platforms transforming them into interconnected dynamically changing environments. Part of those patterns are discussed in the rest of this study.

1.2 Present Study

Despite the mass acceptance of SNSs worldwide, little research has been conducted in Greece, especially on a large-scale level. The purpose of this study is to examine patterns in how the users choose specific Internet Services with a focus on SNSs adoption. Therefore, seven well established Internet Services are studied in relation with the internet connection type and the electronic device most frequently used to access the web, gender, education and field of science in the academia. The sample consists of academicians, personnel and students from all the Greek Universities and Research Institutes who participated in a large-scale research project examining the design, implementation and adoption of information systems in the Greek Academia. The preliminary study of the first two sections of the questionnaire presented in this paper shows correlation in specific constructs related with SNSs adoption which are discussed through the lenses of the social machines concept [6].

2 Literature Review

Technological evolution and advances in the services provided through personal computers and mobile devices have changed the personal, social and professional human life. Instead of having the old Turing computational machine today we have connecting services, in other words nowadays computing means connecting [7]. Due to the nature of connectiveness offered, the users can create their own network of interest, formed of other users, transform part of the services provided to them and share easily aspects of their everyday life or knowledge with others. The services used are interconnected by design or the users themselves might enforce the collaboration of the systems through the use patterns they follow. Therefore, all the actors, humans or not, they are correlated, and they influence one another. Berners-Lee [8] has described that interaction between humans and computers using three modes of collaboration and contributions (human-human; human-machine; machine-machine). This is the concept of *social machines*, a biotechnological hybrid "high-level activities, which have occurred just within one human's brain, will occur among even larger more interconnected groups of people acting as if they shared a larger intuitive brain" ([8], pp. 201–202). Every website, along with its users can be understood through the social machines paradigm. The humans' interaction with machines combines demographic characteristics as well as hierarchical elements which form interleaving social and digital processes. Therefore, a social machine is a *socio-technical* system, not a purely technological artefact. In recent years there has been increasing interest in studying web systems as social machines [6, 9–13] whereas there is also interest in constructing a clear definition of what social machines are [6, 14].

Smart et al. [6] created a taxonomy framework based on the work of Shadbolt et al. [15] according to the dimensions a social machine might have. In both papers the repertory grid elicitation technique was used to derive an initial set of elements, which represent instances of social machines, and constructs, capturing the most important characteristics. Smart et al. [6] followed an additional three stage methodology recognizing 33 different dimensions and 106 distinct characteristics. The multi-dimensional design space formed, called *social machine morphospace* charts the space of social machines possibilities according to their common features.

In the rest of this study, each SNS or Internet Service is considered part of an ecosystem of interacting social machines. This holistic approach is better described in the six illustrative points of views of observers or narrators in observing the social machines presented by Roure et al. [16]. This study stands at the position of the ("Observer of multiple social machines") and the participants of the questionnaire are the ("Human participants in multiple Social Machines"). Every modern electronic artefact is included in this holistic approach.

The capabilities of modern electronic means have helped further, as social machines and enablers, in adopting and using SMs offering almost ubiquitous availability of Internet connectivity. The smartphone is the primary platform for the majority of the users worldwide (61.9%) followed by desktop computers

(29.3%) and tablets (8.8%) [17] whereas just three subcategories of online activity seem to capture over the third of the time consumed online, social networking, messaging and multimedia, with the younger (18–24) to use SNSs and online messaging more [17]. According to the most recent available data from ELTRUN (2013) [18] Youtube was the most popular SM platform in Greece (92%), followed by Facebook (82%) and LinkedIn (61%). The 2018 Reuters Institute for the Study of Journalism [19] also shows that 71% of the Greek users use SMs most frequently as a source of news. As such, the literature and the data available show that there are different ways the users choose to access the SMs and important individual differences in how they are used [e.g. 20].

3 Research Methodology

As a means of examining the design, implementation and adoption of information systems in the Greek Academia, contact details and affiliations for academicians, personnel and students were collected from the websites of all the Greek Academic Institutions and Research Institutes. The contact details were used to send 71,151 invitations of participation in an online questionnaire (February–March 2018) receiving 5922 valid responses (52.20% male and 47.80% female).

Part of the large-scale study examined the demographics and special characteristics of the participants. The details gathered were their category according to their position in the academia—seven distinct categories of interest, their gender, years of experience in an academic environment and education level. The special characteristics were the electronic device most frequently used to access the web, the social networks/internet services used (Facebook, Instagram, LinkedIn, Twitter, Youtube, Google+ and Google Mail/Docs or Office 365) and the internet connection types available for personal use. The collaboration platforms Google Mail/Docs and Office 365 (referred as *collaboration platforms* from now on) were added as an indicator of cloud services usage, assuming they should have attracted the users' attention in an academic environment. Furthermore, the department category and the institution type were added for each academician and student participant during the data preparation phase. Those two variables were manually enriched where necessary, using the affiliations available. The department category values used were the four main branches of science (humanities, applied sciences, social sciences, natural sciences).

4 Findings and Discussion

4.1 Preliminary Findings

The basic findings of the study show that 41.42% (2453) of the participants use both ADSL/VDSL internet connection and mobile internet. In general, 47.92% use more

than one internet connection type to access the web. The electronic devices used the most are laptop computers (39.41%) and mobile devices (33.55%) with the younger ages to use mostly their mobile phone to access the web (57.01%). Out of all the participants 5.94% doesn't use any of the SNSs examined whereas 4.71% use all six of them. The collaboration platform indicator used showed that 2.92% doesn't use any of the SNSs included but they still choose to use cloud services.

In order to examine the sample patterns in more detail, Cramer V associations were calculated for all the 25 nominal variables available. The significant associations, concerning this study, are presented in Table 1 considering that the values lower than 0.1 are insignificant, 0.1–0.3 have low and 0.3–0.5 moderate association.

According to the associations presented Facebook, Instagram and Youtube are adopted more by the younger ages—this is captured through the education level, experience in the academia and the category of the participants' indicators. This influences Instagram the most. Instagram is also used more by the female participants who tend to choose their mobile phone as a main device significantly more (44.72%) than the opposite gender who prefer to use a laptop (43.13%) or a desktop computer (30.60%). Mobile devices adoption is related with Instagram as a whole—56.10% of the participants using mostly their mobile phone use it too, while mobile internet adoption is not influencing LinkedIn, Twitter and Google+ despite the female participants use all three less than the male ones.

An interesting finding is the adoption pattern according to the participants' branch of science. The social sciences tend to adopt all the SNSs in a greater extent than the others. In general, in terms of adoption, the branches can be sorted as (1) social sciences, (2) humanities, (3) applied sciences and (4) natural sciences. This is presented through the low associations in Instagram and Linkedin where the adoption difference is substantial. Social sciences and especially the female participants show a tendency in adopting Instagram more, followed by the humanities branch. On the other hand, LinkedIn is adopted more by the social sciences and applied sciences participants on an equal level (~10–15% more compared to the other branches). The sorted branches list doesn't apply for Twitter, Google+ and the collaboration platforms where the adoption percentage levels are almost the same.

The adoption patterns described before are the same for the academicians' category if examined separately.

4.2 Discussion

It is evident from the findings of this study that there are correlations in adopting the social machines examined with specific characteristics of the participants. Considering the biotechnical nature and the interactions between the social machines there are common dimensions described in Smart et al. [6] work, especially in the categories *participation and interaction* and *goal, task and process* that explain part of those relationships. These are the main categories of the framework that the

Table 1 Significant (>0.1) Cramer V associations with moderate associations (>0.3) in bold

	Facebook	Instagram	LinkedIn	Twitter	Youtube	Google+	Collaboration platform	No internet service used	Device used	Science branch
Category	**0.332**	**0.421**	0.256		**0.312**		0.115	0.128	0.203	0.287
Experience	0.298	**0.377**	0.197		0.288			0.121	0.170	0.110
Educ. level	0.282	**0.376**	**0.308**		0.237			0.103	0.181	0.150
Gender		0.125	0.116			0.161			0.249	0.230
Mobile	0.173	0.196			0.158		0.100		0.243	
Facebook		**0.372**	0.140	0.189	**0.365**			0.267	0.211	
Instagram				0.292	0.277		0.101	0.122	**0.332**	0.114
LinkedIn				0.253	0.132		0.160	0.144	0.112	0.144
Twitter					0.152		0.149			
Youtube						0.109	0.175	**0.300**	0.153	
Google+								0.171		
Coll. platform								0.196		

large community base SNSs' users are familiar with, being the *narrators*, in contrast to the others that computer science background users may only understand.

All the examined social machines share some common characteristics, especially high level of sociality, size of user community, low anonymity and the unrestricted visibility of the user contribution within the system. The study shows that there is low association of adoption between Google+ and Youtube. Google+ is not associated with any other SNS. This is probably because it follows a different development path compared to the other machines, being part of Google's services. Its integral machine relationship with Youtube influences its adoption despite being characterized as a ghost town the past years, in terms of user community size [21]. Youtube is associated with all the other machines, especially Facebook, where user contributions are visible and responded by the other connections. In other words, the Youtube user generated content is enriched inside the machine itself and then responded through the sharing user actions in all the others. The other way around, the sociality in the other machines may lead to new content being generated in Youtube. Twitter seems to be influenced by a similar pattern, being associated with all the other machines, having high diversity in user generated content as Youtube, despite not being used for enjoyment and pleasure in the same degree. LinkedIn on the other hand, which is also not used for enjoyment and pleasure shares adoption association with the other machines except for Instagram. This finding fits the framework dimension mentioned because those two machines seem opposite in this manner. Finally, the strongest association amongst the machines is between Facebook and Instagram. This is because of the platform design relationship they have. Instagram belongs to Facebook Inc. after all, so it has changed rapidly the past years integrating usage patterns found in the Facebook platform.

Overall, the unrestricted visibility of the user contribution seems to be the most important dimension influencing most of the associations discussed. It also fits the socializing and debating profile of the social sciences and humanities branches which adopt the large community social machines examined in a greater extent.

5 Conclusions

In this study findings focusing on the SNSs adoption are examined which emerged through a large-scale questionnaire about the design, implementation, and adoption of information systems in the Greek Academia. Despite the considerable attention the SNSs and the social machines paradigm have attracted the past years, only a few large-scale studies have been conducted in Greece. Therefore, two categories of dimensions from the social machines taxonomy framework formed by Smart et al. [6] are used to organize the discussion of the findings. The adoption of seven major SNSs are examined in association with the participants' experience in the academia in years, level of education, academic knowledge field, gender, internet connection type available for personal use and electronic device most frequently used. The results indicate an association between the adoption of mobile devices, the gender,

the age and the academic knowledge field with specific SNSs. The same characteristics are found to be important in other studies but have not been presented in detail through the social machines paradigm and their relationships for many different user groups, with results able to be generalized for the entire population in Greece. The academic knowledge field has also not been found influencing the adoption in many other studies.

A limitation in this paper is that it was part of a larger research project with a broader scope which didn't take into consideration many of the details of the framework used during the design process. Despite that limitation, the framework helped in organizing the results and thus led to the identification of specific common characteristics between the examined SNSs. This provides useful insights for marketers creating common broader strategies for associated social machines.

Further research should focus on the users' perspective including more variables according to the points that emerged through the discussion of this study and the dimensions of the framework in the two categories used. The socio-economic situation in Greece may also be included with additional variables, extending the scope of the present study together with continuous comparable research for longer periods of time depicting the changes in the SNSs as socio-technical systems.

References

1. Facebook Inc. (2018) Facebook reports first quarter 2018 results. https://investor.fb.com/investor-news/press-release-details/2018/Facebook-Reports-First-Quarter-2018-Results/default.aspx
2. Boyd DM, Ellison NB (2007) Social network sites: definition, history, and scholarship. J Comput-Mediat Commun 13(1):210–230. https://doi.org/10.1111/j.1083-6101.2007.00393.x
3. Kaplan AM (2015) Social media, the digital revolution, and the business of media. Int J Media Manag 17(4):197–199. https://doi.org/10.1080/14241277.2015.1120014
4. Androniki K (2014) Social media, online imagined communities and communication research. Libr Rev 63(6/7):490–504. https://doi.org/10.1108/LR-06-2014-0076
5. Lehdonvirta V, Räsänen P (2011) How do young people identify with online and offline peer groups? A comparison between UK, Spain and Japan. J Youth Stud 14(1):91–108. https://doi.org/10.1080/13676261.2010.506530
6. Smart P, Simperl E, Shadbolt N (2014) A taxonomic framework for social machines. In: Miorandi D, Maltese V, Rovatsos M, Nijholt A, Stewart J (eds) Social collective intelligence: combining the powers of humans and machines to build a smarter society. Springer International Publishing, Cham, pp 51–85. https://doi.org/10.1007/978-3-319-08681-1_3
7. Roush W (2005) Social machines: computing means connecting. Technol Rev 108(8):44
8. Berners-Lee T, Fischetti M (2001) Weaving the web: the original design and ultimate destiny of the world wide web by its inventor. DIANE Publishing Company, Collingdale
9. Luczak-Roesch M, Tinati R, Shadbolt N (2015) When resources collide: towards a theory of coincidence in information spaces. Paper presented at the Proceedings of the 24th International Conference on World Wide Web, Florence
10. Kleek MV, Smith DA, Murray-Rust D, Guy A, O'Hara K, Dragan L, Shadbolt NR (2015) Social personal data stores: the nuclei of decentralised social machines. Paper presented at the Proceedings of the 24th International Conference on World Wide Web, Florence
11. Duffy BR (2008) Fundamental issues in affective intelligent social machiness. Open Artif Intell J 2(1):21–34. https://doi.org/10.2174/1874061800802010021

12. Meira SR, Buregio VA, Nascimento LM, Figueiredo E, Neto M, Encarnacao B, Garcia VC (2011) The emerging web of social machines. In: Computer Software and Applications Conference (COMPSAC), 2011 IEEE 35th Annual. IEEE, pp 26–27
13. Vass J, Munson JE (2015) Revisiting the three Rs of social machines: reflexivity, recognition and responsivity. Paper presented at the Proceedings of the 24th International Conference on World Wide Web, Florence
14. Palermos SO (2017) Social machines: a philosophical engineering. Phenomenol Cogn Sci 16 (5):953–978. https://doi.org/10.1007/s11097-016-9489-4
15. Shadbolt NR, Smith DA, Simperl E, Kleek MV, Yang Y, Hall W (2013) Towards a classification framework for social machines. Paper presented at the Proceedings of the 22nd International Conference on World Wide Web, Rio de Janeiro
16. Roure DD, Hooper C, Page K, Tarte S, Willcox P (2015) Observing social machines part 2: how to observe? Paper presented at the Proceedings of the ACM Web Science Conference, Oxford
17. comScore (2018) Global digital future in focus 2018. https://www.comscore.com/Insights/Presentations-and-Whitepapers/2018/Global-Digital-Future-in-Focus-2018.
18. Kathimerini (2014) YouTube is the most popular social network in Greece. http://www.kathimerini.gr/551925/article/texnologia/diadiktyo/to-youtube-dhmofilestero-koinwniko-diktyo-sthn-ellada. Accessed 24 Jul 2018
19. Reuters Institute for the Study of Journalism (2018) Digital news report 2018
20. Sigerson L, Cheng C (2018) Scales for measuring user engagement with social network sites: a systematic review of psychometric properties. Comput Hum Behav 83:87–105. https://doi.org/10.1016/j.chb.2018.01.023
21. The Wall Street Journal (2012) The Mounting Minutes at Google+. https://www.wsj.com/articles/SB10001424052970204653604577249341403742390. Accessed 21 Jul 2018

The Effect of Asymmetrical Image Projections on Online Destination Branding

Flavio Tiago, Teresa Borges-Tiago, Sotirios Varelas,
and Androniki Kavoura

Abstract Destinations are the heart and soul of tourism products. This is why and richness of the destinations. The creation of destination brand images is no longer limited to content shared by DMOs and often depends on the information and contents generated by traders, travelers, and residents. tourism and hospitality firms and DMOs invest heavily in communicating the destination attributes through appealing brand images, reflecting the uniqueness Discovering the alignment between DMO' brand communication and tourists' perceptions shared in digital and social media is an ongoing task for brand managers. To understand the communication alignment, three different archipelagos were chosen due to their tourism maturity levels: Azores, Madeira, and Canary Islands. The official website of each archipelago's DMO and the visitors' contributions on Facebook were analyzed. The results show different levels of content creation between DMOs and visitors and unveil that videos were more engaging, especially those created by visitors.

Keywords Destination · Digital branding · Social media · Image · Brand personality

1 Introduction

Destinations are the heart and soul of tourism products. For this reason, different countries and regions are actively competing to offer appealing brand images, reflecting the uniqueness and richness of their destinations [1, 2]. In this competitive

F. Tiago · T. Borges-Tiago (✉)
University of the Azores, Azores, Portugal
e-mail: flavio.gb.tiago@uac.pt; maria.tp.tiago@uac.pt

S. Varelas
University of Peloponnese, Tripoli, Greece

A. Kavoura
University of West Attica, Attica, Greece

context, although communication efforts on tourist destinations are traditionally relatively high, their results are often extremely weak. In response, destination marketing organizations (DMOs) are focusing their marketing efforts on branding initiatives, such as use logos and taglines, to promote awareness and differentiation [3].

Over the years, information sources have changed, and the Internet has become the main source of information for most tourists. The creation of destination brand images is no longer limited to content shared by DMOs and often depends on the information and content generated by traders, travelers, and residents. Discovering the alignment between DMOs' brand communication and tourists' perceptions shared in digital and social media is an ongoing task for brand managers, especially because these different contents, stored and available online, communicate aspects of the destinations and influence the tourists' perceptions and decision processes. Therefore, it is understandable that destination image, place brand, and branding are getting greater attention from researchers and industry aiming to establish the ideal destination branding process, leaving, however, several unanswered questions. In order to understand communication alignment, three different archipelagos were chosen due to their tourism maturity levels: Azores, Madeira, and Canary Islands. The official website of each archipelago's DMO was analyzed over a 1-year period. Both qualitative (text mining and expert judgment) and quantitative (correspondence analysis) approaches were used to content-analyze the text and photographic information of the sampled websites. To assess the tourist contribution to the formation of destination brand images, the official Facebook pages of these three destinations were also analyzed, as well as the comments, shares, and the likes on those pages. Relying on Aaker's dimensions of brand-personality scale [4], the brand personality traits communicated by the different stakeholders were assessed, assuming that brand personality can be exploited by portraying a brand through images, memories, and narrative stories. The results show that the same brand can be communicated differently depending on the source of communication. The amount of content created and shared online by tourists, regarding their unique perception of brand personality traits, is far greater than that produced by DMOs.

2   Background

Major changes have occurred in the last 20 years in tourism, driven by several factors [5]. Together with technological progress, demand growth, diversification, and competition among destinations, tourism behavior has changed profoundly [6]. Stylidis, and Shani [7] noticed several tourism studies focused on destination image as a key answer to some of these challenges.

In his book *Vacationscape: Designing Tourist Regions*, Gunn [8] theorizes that traveler behavior can be shaped into seven phases, along which the destination imagery framework evolves. The two first stages occur before the travel even begins and consider the accumulation of mental images over the vacation experience and

the modification of these images through additional information gathering. As a result, destination image studies has become a very popular multidisciplinary research topic [8, 9]. From the marketing perspective, the two main streams found are related to the destination positioning and destination selection processes [8, 10, 11]. Despite the importance of this research line, defining the exact meaning of a destination image can be "problematic," since image formation is influenced by a sum of internal and external factors, as well as travelers' image-coding and decoding belief system [12]. The complexity of image formation is reflected in the multiple approaches found in the literature over the years. From one point of view, image formation is established as the level of knowledge about a destination, encompassing the beliefs and attitudes associated with the product and expectations created on the destination [13]. Gunn [8] presented another perspective, identifying three factors associated with image formation: organic images, induced images, and modified-induced images. Phelps [14] suggested that image formation could be classified according to the source of information in primary and secondary images.

Before web 2.0., secondary images were considered as induced images formed by sources directly associated with destination marketing. However, as the web evolved from a read-only to a write-and-right model, the secondary destination image started to include information and content generated by the traveler, other travelers, residents, and other sector players, rather than only from destination marketing content.

From a second perspective, several other authors defend that destination image formation depends on individuals' cognitive and affective evaluations [15–17]. More recently, a third dimension was added to this approach: the conative image, reflecting intentional behavior after initial image formation [18, 19]. The work of Beerli and Martín [20] acknowledge the relevance of destination image on tourist purchase decision process, when combined with tourists' own socio-demographic characteristics adding to the conative image formation.

From a third perspective, brand image formation is linked to the concepts of destination positioning and branding [21]. This approach recognizes that "brand associations (i.e., cognitive, affective, and unique image components), brand image (i.e., the overall image of a destination), and tourists' future behaviors" are all parts of image formation and can be the essence of destination positioning and differentiation of competitors in the minds of consumers [21, 22].

Bearing in mind the symbiotic influence of branding and image, the brand personality model proposed by Jennifer Aaker [4] stands out as a useful tool for understanding image perceptions and projections. The literature review reveals that perceptions of brand personality traits can have more than one origin and outcome [23]. For these authors, brand perceptions can originate in brand communication elements, such as advertisement, endorsement, employees, and present clients, or indirectly through the entire marketing mix of the brand. Within the tourism and hospitality fields, most recent works using BPS recognized that social media is shaping consumers' perceptions of brand personality [24–26]. For this reason, it seems relevant to consider not only the influence of content posted by firms, but also "what" tourists share on social media, as well as how such content influences brand management; the image is quite important and somehow remains poorly understood [27–29].

From the tourist perspective, the decision to travel is complex and involves numerous variables, such as place, travel party, travel mode, and plan of experiences [10]. Today, travelers have a broader choice of experiences and access to countless sources of information. As noticed by Oppewal and Huybers [30], the search for destination attributes, evaluation of alternatives, and final decision generate a substantial information search activity. However, above all, not all tourists search in the same way and use the same sources. In the last two decades, the Internet has become the main source of information used; official destination websites are complemented by social media sites, blogs, and other digital sources [31].

To Kim and Fesenmaier [32] "social media changes how travelers see and experience their trip" [25]. Varkaris and Neuhofer [33] recalled that, with social media, tourists rely on user-generated content to decide where and when to stay. Sedera et al. [34] confirmed that the "wide proliferation and ease of use of social media allow members of a social circle to effectively engage with the potential traveler in relation to what to expect in the holiday destination". Thus, these different contents, stored and available online, communicate aspects of the destinations and influence tourists' perceptions and purchase decision processes.

In this sense, the secondary image of a destination can be composed of organic images, induced images, and modified-induced images, projected and perceived by travelers before visiting the destination. Therefore, it is understandable that destination image, place brand, and branding are getting more attention from researchers and industry aiming to establish the ideal destination branding process.

3   Framework and Results

The matter of the dimensionality of destination images has divided the existing literature. Most studies on destination brand images were conducted from the perspective of the leisure tourist or a single destination. Therefore, it seems important to reflect on the image project of DMOs and other social media sources used by tourists.

With the aim of assessing how different can be the content posted by travelers from those posted by DMOs, this study analyzes how destination identity is projected by local DMOs through the use of photographic imagery and narratives. Three different archipelagos were chosen due to their tourism maturity levels: Azores, Madeira, and Canary Islands. The two first archipelagos are autonomous regions of Portugal, while the last one is an autonomous region of Spain. The official website of each archipelago's DMO was analyzed over a 1-year period. Both qualitative (text mining and expert judgment) and quantitative (correspondence analysis) approaches were used to content-analyze the text and photographic information of the sampled websites. To assess the tourist contribution to the formation of destination brand images, the official Facebook pages of these three destinations were also analyzed, as well as the comments, shares, and likes on those pages (Table 1).

Table 1 Data gathered

	Unit of analysis	Official website			Official Facebook		
		Languages	Links	Contents	Followers	Posts	Rate
AZORES	Azores	5	Social media (4) Bottom	Video, photos and text	78,090	444	–
Discover madeira	Madeira	5	Social media (4) Bottom	Video, photos and text	131,957	524	4.7
(logo)	Canaries	15	Social media (7) Top	Photos, text and booking	179,789	189	–
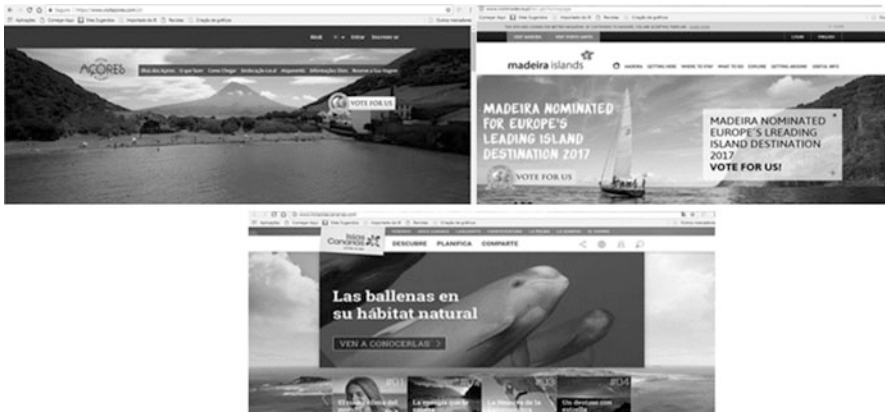
Fig. 1 Landing pages from the DMOs official websites

The projected images of the destinations are dominated by some very popular phrases, although they contain a large number of photos appealing to small niches. Results confirm that there are, as expected, considerable correspondences in the way these entities project their identities online: sea and inland island emphasizing nature tourism (Fig. 1).

However, the main discourse shows considerable differences: Canary Islands is mainly projected as the idyllic destination "Sun of Europe;" Madeira is referred as "islands blessed by the sun but in love with the sea;" and Azores is referred as "remote archipelago with abounds adventures" (Table 2).

In addition, the online effects of the shared content are quite distinctive: Madeira has the highest reaction and sharing rates, followed by Azores. Canary Islands mainly uses photos and text with a perspective of amusement and information. Madeira uses photos and videos with the purpose of creating a narrative; and Azores is adopting all types of contents (text, videos and images) (Fig. 2).

Table 2 Main results obtained

	Total/per post			Post types		
	Reactions	Shares	Comments	Photos	Videos	Links
AZORES	123K/148	17K/20	2.5K/3	444	112	240
madeira	292K/254	69K/59	7.5K/6	524	282	297
	1.9K/10	354/1	88/0	164	11	23
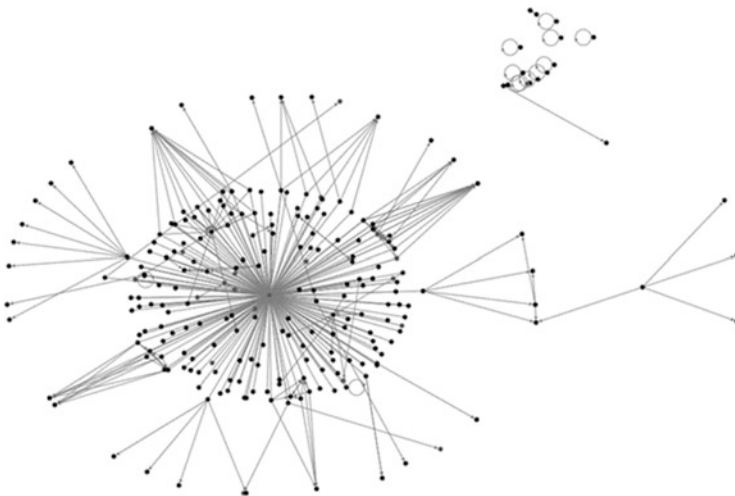
Fig. 2 Network graph for Azores obtained using the Haren-Koren Fast Multiscale layout

For Azores, the location-based node shared with higher intensity the videos related with local landscapes. For Canary Islands, the location-based node that prevalence was on sport detailed images and videos.

4 Final Considerations

Image formation has become a popular topic, more recently in the branding field. The abundant literature found confirmed the growing importance of the area for scholars and practitioners. Recently, researchers have begun to analyze destination branding and unique characteristics, as well as how to communicate them. Many

DMOs turn to websites and social media platforms as relative low-cost and global reach marketing tools.

However, with web 2.0, the creation of destination brand images is no longer limited to content shared by DMOs and often depends on the information and contents generated by traders, travelers, and local residents.

This first phase allows us to uncover a mismatch between the brand personality vectors communicated by DMOs and the elements available from other online sources related to the same destinations, creating a more confusing tourist expectation.

These first results leave more questions than provide answers; leading further research works in unveiling how brand-related user-generated content can differ from destination-brand communication.

References

1. Apostolopoulou A, Papadimitriou D (2015) The role of destination personality in predicting tourist behaviour: implications for branding mid-sized urban destinations. Curr Issue Tour 18 (12):1132–1151. https://doi.org/10.1080/13683500.2013.878319
2. Morgan N, Pritchard A (2004) Meeting the destination branding challenge. In: Destination branding. Butterworth-Heinemann, Oxford, pp 59–79
3. Ekinci Y, Hosany S (2006) Destination personality: an application of brand personality to tourism destinations. J Travel Res 45(2):127–139. https://doi.org/10.1177/0047287506291603
4. Aaker JL (1997) Dimensions of brand personality. J Mark Res 34:347–356
5. Dioko LAN (2017) Conclusion: managing rapid tourism growth. Worldw Hosp Tour Themes 9 (3):361–368. https://doi.org/10.1108/whatt-02-2017-0013
6. Mariani MM et al (2014) Managing change in tourism destinations: key issues and current trends. J Destin Mark Manag 2(4):269–272. https://doi.org/10.1016/j.jdmm.2013.11.003
7. Stylidis D, Shani A, Belhassen Y (2017) Testing an integrated destination image model across residents and tourists. Tour Manag 58:184–195. https://doi.org/10.1016/j.tourman.2016.10.014
8. Gunn CA (1988) Vacationscape: designing tourist regions. Van Nostrand Reinhold, New York
9. Gallarza MG, Saura IG, Garcıa HC (2002) Destination image: towards a conceptual framework. Ann Tour Res 29(1):56–78. https://doi.org/10.1016/S0160-7383(01)00031-7
10. Boavida-Portugal I, Ferreira CC, Rocha J (2015) Where to vacation? An agent-based approach to modelling tourist decision-making process. Curr Issue Tour 20:1–18. https://doi.org/10.1080/13683500.2015.1041880
11. Mansfeld Y (1992) From motivation to actual travel. Ann Tour Res 19(3):399–419. https://doi.org/10.1016/0160-7383(92)90127-B
12. Onder I, Marchiori E (2017) A comparison of pre-visit beliefs and projected visual images of destinations. Tour Manag Perspect 21:42–53. https://doi.org/10.1016/j.tmp.2016.11.003
13. Moutinho L (1987) Consumer behaviour in tourism. Eur J Mark 21(10):5–44. https://doi.org/10.1108/EUM0000000004718
14. Phelps A (1986) Holiday destination image—the problem of assessment: an example developed in Menorca. Tour Manag 7(3):168–180. https://doi.org/10.1016/0261-5177(86)90003-8

15. Pike S (2002) Destination image analysis—a review of 142 papers from 1973 to 2000. Tour Manag 23(5):541–549. https://doi.org/10.1016/S0261-5177(02)00005-5

16. Pike S (2009) Destination brand positions of a competitive set of near-home destinations. Tour Manag 30(6):857–866. https://doi.org/10.1016/j.tourman.2008.12.007

17. San Martín H, Rodríguez del Bosque IA (2008) Exploring the cognitive–affective nature of destination image and the role of psychological factors in its formation. Tour Manag 29:263–277. https://doi.org/10.1016/j.tourman.2007.03.012

18. Pike S, Ryan C (2004) Destination positioning analysis through a comparison of cognitive, affective, and conative perceptions. J Travel Res 42:333–342. https://doi.org/10.1177/0047287504263029

19. Agapito D, Oom do Valle P, da Costa Mendes J (2013) The cognitive-affective-conative model of destination image: a confirmatory analysis. J Travel Tour Mark 30(5):471–481. https://doi.org/10.1080/10548408.2013.803393

20. Beerli A, Martın JD (2004) Tourists' characteristics and the perceived image of tourist destinations: a quantitative analysis—a case study of Lanzarote, Spain. Tour Manag 25:623–636. https://doi.org/10.1016/j.tourman.2003.06.004

21. Qu H, Kim LH, Im HH (2011) A model of destination branding: Integrating the concepts of the branding and destination image. Tour Manag 32(3):465–476. https://doi.org/10.1016/j.tourman.2010.03.014

22. Papadimitriou D, Kaplanidou K, Apostolopoulou A (2018) Destination image components and word-of-mouth intentions in urban tourism: a multigroup approach. J Hosp Tour Res 42 (4):503–527. https://doi.org/10.1177/1096348015584443

23. Su N, Reynolds D (2017) Effects of brand personality dimensions on consumers' perceived self-image congruity and functional congruity with hotel brands. Int J Hosp Manag 66:1–12. https://doi.org/10.1016/j.ijhm.2017.06.006

24. De Moya M, Jain R (2013) When tourists are your "friends": Exploring the brand personality of Mexico and Brazil on Facebook. Public Relat Rev 39:23–29. https://doi.org/10.1016/j.pubrev.2012.09.004

25. Opoku R, Abratt R, Pitt L (2006) Communicating brand personality: are the websites doing the talking for the top South African business schools? J Brand Manag 14(1-2):20–39. https://doi.org/10.1057/palgrave.bm.2550052

26. Zhang XA (2017) Effects of Twitter communication styles on consumers' brand personality perceptions, attitudes and purchase intentions. Int J Internet Mark Advertis 11(2):158–182. https://doi.org/10.1504/IJIMA.2017.084082

27. Sanchez DHM, Fernandez JM (2017) Analysis from reviews in social media to improve hotel's online reputation. Anuario Turismo Y Sociedad 20:169–190. https://doi.org/10.18601/01207555.n20.09

28. Khan I, Rahman Z (2017) Brand Experience Anatomy in Hotels: An Interpretive Structural Modeling Approach. Cornell Hosp Q 58:165–178. https://doi.org/10.1177/1938965516649055

29. Herrero A, Martin HS, Hernandez JM (2015) How online search behavior is influenced by user-generated content on review websites and hotel interactive websites. Int J Contemp Hosp Manag 27(7):1573–1597. https://doi.org/10.1108/ijchm-05-2014-0255

30. Oppewal H, Huybers T, Crouch GI (2015) Tourist destination and experience choice: A choice experimental analysis of decision sequence effects. Tour Manag 48:467–476. https://doi.org/10.1016/j.tourman.2014.12.016

31. Amaral F, Tiago T, Tiago F (2014) User-generated content: tourists' profiles on TripAdvisor. Int J Strateg Innov Mark 1:137–147. https://doi.org/10.15556/IJSIM.01.03.002

32. Kim J, Fesenmaier DR (2017) Sharing tourism experiences: the posttrip experience. J Travel Res 56:28–40. https://doi.org/10.1177/0047287515620491

33. Varkaris E, Neuhofer B (2017) The influence of social media on the consumers' hotel decision journey. J Hosp Tour Technol 8:101–118. https://doi.org/10.1108/jhtt-09-2016-0058

34. Sedera D et al (2017) Likes-the key to my happiness: the moderating effect of social influence on travel experience. Inf Manag 54:825–836. https://doi.org/10.1016/j.im.2017.04.003

Aegina's Pistachio as a Cultural Resource for the Development and Promotion of the Island

Konstantina Chatzina

Abstract The aim of this paper is to examine whether the proper management of cultural resources such as natural food products (based on theoretical principles, practices and methodologies developed currently in the field of place identity and destination branding) can help in the development and promotion of an area. As a case study, the natural foodstuff pistachio and the island of Aegina in Greece will be presented. A small island, such as Aegina, would be expected to willingly use its cultural resources, in an effort towards sustainable socioeconomic development of the local community. Combined use of mainly qualitative research methods and technique was adopted. Additionally, a limited research was conducted, concerning the residents' attitudes in relation to the pistachio as a cultural resource. It was ascertained that the place branding process is not simple at all. As long as Aegina considers pistachio as an ordinary product and not as an industry that involves risks, that also requires promotional processes as well as pioneering initiatives and innovative procedures, the resulting process is inefficient, promotion is fragmentary and does not result in the expected success. Using merely a pistachio logo does not lead to the results of adopting a study of a long-term strategy. It is suggested that the island of Aegina should invest in the creation of a new identity. Priority should be given to an ambience of cooperation and, as the research has shown, an alliance between local businesses would be beneficial.

Keywords Natural food products · Cultural resources · Pistachio · Place identity · Destination branding

K. Chatzina (✉)
Historical and Folklore Museum of Aegina, Aegina, Greece

1 Destination Branding and the Role of Place Identity in Its Configuration

Place branding, and its subcategory destination branding, are considered key points in tourism management. The purpose of place branding is economic growth but at the same time long-term social well-being for residents and local operators [1]. The problem with the different regions is that, due to their complexity, they have to display at the same time multiple aspects and identities [2]. Therefore, creating an image for a destination through the branding tool [3] and bridging the difference between the product provided by a destination and the potential consumer's expectation is not a simple process. As the image is the core of the brand's functions, the academic interest shown in the destination image is great. There are numerous studies that deal with the concept of the image and how it is formed [4, 5]. The image leads the brand to success or failure depending on how it is projected to the minds of the consumers of the tourist product through a system of interconnections [6]. Since regions compete to enhance their image, they need to coordinate their policies and their communicative strategies in the sectors, which promote the unique and competitive advantage that each one wants to bring out [7]. According to the studies that have been conducted, both identity and brand image are the components for a successful destination brand. Because the brand identity comes from the sender while the image of the brand is what the recipient-visitor receives. Visitor recipients perceive the image of a brand as positive when the correlations occurring in their minds includes a benefit. As a result, positive emotions are created. The brand is automatically differentiated and is perceived as unique. Thus, a strong identity emanates from a common code that comprises of the following stages: (1) Identity: knowing who we are. Identity relies on the roots (answers the questions of what place it is, what it makes us feel, which symbols characterize the place). It is driven by feeling (for example what makes the identity special) and it creates feelings (how it makes us feel). (2) Reliability, selection of those qualities that are worthy of attracting visitors. (3) Brand management, to be determined the city, compared with other cities through the right marketing [8]. In practice, however, the creation and support of the place's anticipated competitive identity is not always achieved. This is due to a number of factors, one of which is that the strategic managers are only able to find impressive messages, logos and advertising spots. These elements reinforce the symbolic value of the brand, but are not its essence and have little opportunity to influence the potential public [9]. The importance attached by the logos to the products does not seem to apply to the regions in question [10].

2   The Relation of Local Food Products to the Creation of a Brand Name and the Promotion of an Area

Nowadays, we are increasingly talking about a framework for sustainable development as a result to the conflict between environmental protection and economic development. Thus, food products as cultural resources are involved in the local development process in a variety of ways as they contribute to the creation of an area's identity. This is made possible by creating links between the products, the landscape and the culture of an area, thus preserving the local gastronomic heritage. Technological innovation is the appropriate communication tool for the promotion of low cost food products that have now become competitive on the global market and exploited as cultural resources that yield benefits for the local communities. However, the branding of traditional products or services is different from destination brand. Several peculiarities differentiate these two elements to fulfill all the themes presented in the revised definition of destination branding given by Blain, Levy, and Ritchie. They had a more holistic approach including themes like identification, differentiation, experience, expectations, image, consolidation, and reinforcement [11].

The place product must be marketed through partnerships. These partnerships include public and private sector organizations in order to promote an area through the creation of a brand name for the local food products. In 1992 according to the regulation 2081/92, the European Union first adopted the system for the protection of geographical indications and the designations of origin of agricultural products and foodstuffs and according to the regulation 2082/92, the rules on the certificates of specific character for agricultural products and foodstuffs. In 2006 to improve the system, the above regulations have been replaced by regulations (EC) 510/06 and (EC) 509/06 respectively. By Regulation (EE)1151/2012 of 21 November 2012 on quality schemes for agricultural products and foodstuffs the above mentioned regulations are merged into a single legal framework. This framework includes: Designation of origin, Geographical indication and Traditional Speciality Guaranteed Product [12].

This system combines the geographical origin with the cultural and historical identity of agricultural products. These products are considered sources of resistance to the effects of homogenization of food production systems. The creation and protection of toponyms as brand identities establishes a monopoly on the name, area and land. The place acquires value, while the naming of the sites (and the protection of these names) has become part of the economic landscape of industries such as wine production, dairy products, meat, fruit, olive oil, etc. [13]. Nevertheless, the most important thing that motivates what has already been mentioned is the experience and satisfaction that consumers have. They become advertisers and promote the image, thereby contributing to strengthening the brand name of the product, enhancing it and the place where it is produced [14].

Local varieties and products are related to the nutritional and gastronomic culture of particular regions. We can refer to some well-known examples, where the name of

the place has become synonymous with its product, causing strong associations—such as the Chios mastic, the Corfu kumquat, the Zagora apples, the Kymi figs as well as some other lesser-known varieties. Their special features are: small local production, high quality and special flavor, limited quantitative consumption, small commercialization, distribution in a close circle of special relatives and friendly relationships [15]. One such resource is the pistachio, an authentic and brittle product that if used properly will give a competitive advantage to the island and contribute to the creation of a strong identity.

3   Description of the Area: Case Study of Aegina Island in Greece and Pistacia Vera

The area under study is Aegina, a small island of the Saronic Gulf. The inhabitants of Aegina have, over time, engaged in various types of agricultural work determined by the climate, the available water resources, the composition and formation of the ground and the soil resources, the human needs as well as by other casual or unforeseen situations. The main natural food products produced in Aegina currently are vegetable products (pumpkins, tomatoes, aubergine, peppers, spinach, radishes, cabbage, cauliflower, broccoli, garlic, onions, potatoes, etc.) which are excellent quality products, although they are produced in smaller quantities than in the past. There are also tree crops (almonds, apricots, lemon trees, orange trees, pomegranates, figs), honey and wax products to a limited extent, oil, fishing products, local cheese products (called geremezi, tsigara, etc.) and of course the pistachio. The primary sector of agriculture in Aegina is steadily good, the agricultural products of Aegina are known in the local community. Their excellent quality, however, has not emerged as much as needed. Processing, trade and finding markets will surely increase their market value.

Pistacia Vera is the perennial pistachio cultivated exclusively in Aegina. This variety is grown for commercial purposes (female trees). The pistachio cultivation was developed empirically. Aegina is no longer the main pistachio production area in Greece, but it historically remains the area from which pistachio production has begun [16]. Today on the island, there are about 200,000 pistachio trees with an average annual production of 1300 tons per year, while the cultivation methods are automated. The Aegina pistachio tree, called kilarati, which is considered to be a highly productive variety bearing fruit of high quality, is produced massively in Aegina's seedbeds and is distributed throughout the rest of the country [17]. The fact that the Aegina pistachio trees take advantage of the poor, calcareous of the island combined with its dry environment, the limited irrigation and the proximity of the trees to the sea provides this nut with extra organoleptic characteristics, excellent taste and aroma. Hence, it is considered as the best pistachio internationally. It has been labeled by the European Community as a product with protected designation of origin (PDO) according to Regulation No 1263/96 EC to protect it from unfair

competition and there is high demand for it in and outside Greece (France, Germany, England, etc.).

4 Aims of the Research and Methodology

The purpose of the research is first to study the behavior of the inhabitants in relation to this natural local food product and whether there is the exploitation of the pistachio as a cultural resource for the development and promotion of Aegina. A second point of study is the degree of residents' intention to develop a plan that aims to attract and satisfy creative tourists, how pistachio can therefore be a new source of income inflow in the near future. In the present study of Aegina pistachio as a cultural resource, the basic theoretical question is the following. By accepting that Aegina has a commonly accepted need to become more competitive in the Greek and international environment, can we assume that searching for and displaying natural food products such as pistachio and, by extension, the gastronomic identity of the island will contribute to creating and promoting a new image site for Aegina? And if the question is answered positively, is it possible to set up a branding and marketing strategy for Aegina based on the gastronomic identity of the place? In order to conduct the survey, it was firstly necessary to determine the sample so as to make it as representative and satisfactory as possible.

The sampling method used is related to non-probability samples (the probability of an individual being selected in the sample is unknown). In particular, the sample of simplicity was observed. The data gathering technique for the research was conducted with a questionnaire which was filled in two ways from the period 19 April 2015 to 19 May 2015: (a) with a personal collection of the questionnaires during the above period and (b) with the use of the possibility of creating a form and disseminating it to the interested parties via the Internet of the Google Forms app. The questionnaires concerned 253 respondents who were anonymous and divided into three categories: the first category originated by permanent residents, the second category includes either those who have a holiday home (hence, they visit the site at regular intervals during the year) or their parents' home is on the island. Alternatively, some of the participants spend long periods on the island for business or other reasons, while one more category comprises of simple visitors. However, the sample examined in the present study is 139 individuals belonging to the 18–30 age group.

This research has focused on young people (Generation Y) because it is important to look at what their perception is of the subject we are studying, and what the potentialities for future actions are if there is a need to change something and what scope of action there is for it. Young people perceptions are very important in shaping the future of places [18]. According to the Generational theory of Strauss and Howe, people belong to a particular generation based on their birth year and have specific characteristics [19]. The members of Generation Y (birth year approximately 1980–2000), also called the Millennials or digital natives are very relevant in all fields, tourism included. They are the most inconsistent and disloyal active

consumers, they like to follow new trends and experience new things. They prefer to communicate using information communication technologies (ICTs). As consumers, most of them act responsibly and they are oriented towards sustainability. As tourists, they prefer sustainable products and sustainable destinations, and they value the sustainable behavior of tourism enterprises. Very poor research results were produced until now in the field of destination brand implementation for the members of Generation Y [20]. In this research, data processing and analysis was performed through descriptive statistics. After completing the questionnaire, checking for omissions, we coded the variables and entered the data into the SPSS 22.0 statistical program (Statistical for Social Sciences). The questionnaire consists of 2 units and 30 questions. The first unit of questions is related to three axes in order to study the behavior of the sample: (a) in relation to the pistachio of Aegina as a cultural resource (a natural local food product, an element of the intangible cultural heritage, a PDO product—acknowledged and unique), (b) in relation to local or endogenous development (local pistachio businesses, cooperation of political, administrative and economic factors and socio-cultural institutions such as support for farmers, securing funding resources, e-commerce, alternative forms of tourism, etc.), (c) in relation to place branding (identity of a place, image of someone for a destination, creative economy). The second unit included questions related to demographic and socio-economic characteristics of the sample (sex, age, marital status, educational status, professional activity, reasons and duration of stay in the area, etc.).

5   Results

The empirical analysis was limited to the age group mentioned above. However, we must point out that further research is needed to map the cultural resources and to select the appropriate strategic planning (such as timetables, financial resources, etc.). A sample selection that would cover all age groups on the island would help a lot. The majority of the sample, therefore, knows that the pistachio as natural food product of Aegina is a cultural resource (95.2%) as well as an element of the Intangible Cultural Heritage. The sample is aware that it is a PDO product, hence that it is rare and authentic. However, we must point out that the operators and the services with their actions do not maximally associate the pistachio product with tourism because the result of the research shows that Aegina is known abroad and inside the country firstly for its archaeological sites (27.3%), secondly for its churches and monasteries (i.e. Ag. Nektarios-25.9%) and only thirdly with the pistachio (20.1%). The young people also strongly agree that the Aegina pistachio can contribute to local development (84.2%) and that there are several companies using pistachio as the basis (56.1%), but they are not entirely convinced that as to the best strategic planning to promote it (24.5%). There is ample room for improvement. The pistachio is a product with a unique taste (89.9%) and properties, though an attractive package (52.5%) that would help retain its nutrients (46.8%) would

promote it more successfully. The young also propose to strengthen the pistachio cultivators with funding resources and to promote Aegina with advertising, activities and events where pistachio would have a leading role (innovation, creativity) (23%). It is also positive that almost the whole of the sample (88.92%) maintains that there should be a cooperation between the inhabitants of the island as to the exploitation of this cultural resource.

It is understood that the interest of each individual separately ought to conform to the interest of the whole island, so that the island takes advantage of the competition with other places who have exploited and set out their own comparative advantages. Finally, the young people should be informed and educated on site identity, site image, place branding, because their knowledge regarding these fields is inadequate. Only thus will Aegina appear as a consummate tourist product capable of becoming a dynamic focal point for regional development. Consequently, the working hypothesis is partially verified, as the island is called upon to develop a consummate tourist marketing, propounding the entire island as a tourist product while at the same time reinforcing and strengthening the local brands. It is a process that requires time, planning and collaboration. Through these actions, the region will be carried forward and the development of the optimal alternative sustainable tourism will be promoted.

6   Conclusion

According to the findings so far, young people are aware of the existence and quality of local products and especially of the variety of pistachio nuts of Aegina, but they do not directly link them to the formation of a new identity for the island, nor with the prospect of tourism development. The proposal stemming from this research is that the island of Aegina can invest in creating a new identity based on gastronomy, visibility and growth through local food products as a whole (product basket), integrating infrastructures that will attract new investments and the active involvement of tourism operators and professionals, combined with unique environmental features and privileged geographical location (distance from the capital, easy accessibility). Priority should be given to cooperation and, as the research has shown, a cluster of local businesses would be beneficial. This should equally preoccupy both the local government and the private sector members. This means cooperation and joint actions in the field of marketing to enhance the positive image already enjoyed by Aegina residents and visitors of the place. As an alternative, we propose the transformation of the island into an open museum of culture and the promotion of the Intangible Cultural Heritage. With a valuable PDO product and with crops scattered all over the island, it is easy to create a network of agrotouristic accommodation and expansion of the culture paths that have already been created through pistachio areas. Attracting people who want a tour while also wandering and engaging in alternative entertainment activities is the best advertising for the brand name that the population visualizes. The Pistachio Paths, in the example to the patterns of wine roads already existing in many regions of Greece (e.g. Santorini) are the best way to promote this

natural, rare and authentic food product. The Pistachio Paths could be incorporated into the "Paths of Culture" program that is already being implemented in Aegina in collaboration with the Hellenic Society for the Environment & Cultural Heritage, the Aegina's Active Citizens Association and the Association Anavasi. Yet another suggestion is to link congress tourism to gastronomic tourism. Strengthening existing cooperative enterprises and creating new ones, linked to research centers and laboratories at university institutes could give a boost to so-called conference tourism. The creation of medicinal products from pistachios leaves and fruits and the expansion of the network of innovative cosmetics from existing fruit on the island is another idea for exploitation.

It is worth mentioning that after the completion of our survey, in 2015, individual cases of small family business start with innovative pistachio products that promote their brand in stylish kiosks scattered in the town of Aegina like the Pistacia Natura Cosmetics brand and so on. These are individual cases that are not integrated into a cooperative project which would be desirable. Yet another proposal concerns the creation of a network of cooperation of agricultural enterprises with enterprises producing and distributing similar products or other peasant and farming communities and associations throughout Greece, connection to state institutions as well as the development of e-commerce applications in order to facilitate exports as well. With the aim of preserving the quality of this unique product, environmental protection and endogenous development, the branding process on the island of Aegina must proceed. It only remains to capitalize on the human potential, i.e. on the young people who have the knowledge in this field, the older ones who have the cultivation experience, with the support and contribution of the Local Government. Research in this area should be continued.

References

1. Hankinson G (2015) Rethinking the place branding construct. In: Kavaratzis M, Warnaby G, Ashworth G (eds) Rethinking place branding. Springer, Cham
2. Zenker S, Braun E, Petersen S (2017) Branding the destination versus the place: the effects of brand complexity and identification for residents and visitors. Tour Manag 58:15–27. https://doi.org/10.1016/j.tourman.2016.10.008
3. Kolter P, Keller KL (2016) Marketing management – 15th global edition. Pearson, Boston, MA
4. Tasci A, Gartner W, Cavusgil T (2007) Measurement of destination brand bias using a quasi-experimental design. Tour Manag 28:1529–1540. https://doi.org/10.1016/j.tourman.2007.02.009
5. Kock F, Josiassen A, Assaf G (2016) Advancing destination image: the destination content model. Ann Tour Res 61:28–44. https://doi.org/10.1016/j.annals.2016.07.003
6. Cai L (2002) Cooperative branding for rural destinations. Ann Tour Res 29:720–742. https://doi.org/10.1016/S0160-7383(01)00080-9
7. Kavoura A (2013) Contemporary approaches of the scientific theory of place marketing – place branding in globalized conditions and economic crisis. Nova Science, Hauppauge, NY
8. Tsagarakis M (2010) Building the identity and attractiveness of a city. http://www.citybranding.gr/2010/02/blog-post_18.html. Accessed 2 July 2018

9. Kladou S, Kavaratzis M, Rigopoulou I, Salonika E (2017) The role of brand elements in destination branding. J Destin Mark Manag 6:426–435. https://doi.org/10.1016/j.jdmm.2016.06.011
10. Beritelli P, Laesser C (2018) Destination logo recognition and implications for intentional destination branding by DMOs: a case for saving money. J Destin Mark Manag 8:1–13. https://doi.org/10.1016/j.jdmm.2016.08.010
11. Almeyda M, George B (2017) Place branding in tourism: a review of theoretical approaches and management practices. Tour Manag Stud 13:10–19. https://doi.org/10.18089/tms.2017.13402
12. Hellenic Republic. Ministry of rural development and food. http://www.minagric.gr/index.php/en/farmer-menu-2/pdo-pgi-tsgproducts-menu. Accessed 12 Aug 2018
13. Dawson D et al (2011) Place-based marketing and wine tourism: creating a point of difference and economic sustainability for small wineries. In: 6th AWBR international conference, Bordeaux Management School – BEM-France
14. Bitsani E (2012) Wine tourism and wine culture as a factor of place marketing. Creating a point of difference and economic sustainability for small wineries and the rural areas: the case study of Veneto, Italy
15. Economou A (2012) The cultural dimension of local varieties. In search of the identity of a local dietary culture in the Modern Greek period. J Triptolemos Agric Univ 33:8–11. https://www2.aua.gr/sites/default/files/contentpage_attachedfiles/2012_t._33_0.pdf. Accessed 2 July 2018
16. Chitzanidis A (2010) From Asia to Aigina: the story of the pistachio tree. In: Zakynthinos G (ed) XIV GREMPA meeting on pistachios and almonds. CIHEAM/FAO/AUA/TEI Kalamatas/NAGREF, Zaragoza, pp 299–302 (Options Méditerranéennes: Série A. Séminaires Méditerranéens; n. 94). http://om.ciheam.org/om/pdf/a94/00801318. Accessed 2 July 2018
17. Sfyroera S (2002) Aegina, the first capital of modern Greece. Greek Letters, Athens
18. Hague C, Jenkins P (2005) Place identity, participation and planning. Routledge, London
19. Howe N, Strauss W (2009) Millennials rising: the next great generation. Vintage Books, New York, NY. ISBN 9780307557940
20. Bochert R, Cismaru L, Foris D (2017) Connecting the members of Generation Y to destination brands: a case study of the CUBIS project. Sustainability 9:1197. https://doi.org/10.3390/su9071197

The Cultural, Nutritional and the Socio-Economic Value of Greek Messinian Olive Oil

Eugenia Bitsani, Sofia Agriopoulou, and Christina Athanasopoulou

Abstract The olive tree is heavily associated with human existence in Greece, and especially in the Messinian region. Messinian olive oil is associated with the tradition of the region and can trigger the olive oil–culture–tourism–economy relationship. The purpose of this study is to examine whether a traditional agricultural product, such as olive oil, can contribute significantly to sustainable regional development twofold. On one hand, the cultivation of olive and olive oil is an integral part of the Messinian land. Olive oil is a mix of symbolism, values, faith and traditions, constitutes an invaluable intangible cultural heritage of this region, and on the other hand, this Messinian Olive oil is a high quality agricultural product, famous for his benefits (health, nutrition, well-being). The key point is to link the tradition of olive cultivation with new, innovative ideas that, without neglecting the past, modernize it and link it to other forms of economic activity, adding added value to olive oil and yielding multiplier benefits to the economic and social sector. Also the existence of innovative strategies such as product certification is able to create "identity"-brand name, and promote tourism development specializing in olive cultivation, and it should be it cultural heritage. A brand name is created that harmoniously combines history with tradition, nature and the excellent quality of the Messinian Olive oil. This paper is part of a wider research on the role of cultural heritage in sustainable regional development. Methodologically it is based on the qualitative research, especially on the research technique of "triangulation".

Keywords Sustainable development · Intangible cultural heritage · Health benefits

E. Bitsani (✉) · S. Agriopoulou
Technological Educational Institute of Peloponnese, Kalamata, Greece

C. Athanasopoulou
Municipality of Messene, Kalamata, Greece

1   Introduction: The Theoretical Framework of the Research

In studies on the importance and the role of cultural heritage, discussions about the "development strategy" of a place are becoming more and more frequent, while terms such as "place branding" and "place image" are heard. Interesting discussion is also in progress, on the innovative integration of "nature and the environment" in the field of culture [1–3].

Cultural Environment consists of the institutions, customs and habits, traditions, beliefs and values, in general, of the civilisation of the people of a country. It affects, accordingly, the life and behaviour of consumers towards various agricultural products [4].

Agricultural products are part of the natural and cultural wealth of a country. In particular, traditional agricultural and handicraft products, incorporating traditional values, are an important part of local identity. Foodstuffs are the only consumer products that are in-corporated (in corpus, introduced to the body) [5]. Therefore, in the past few years, consumers seem to turn to local–traditional–unique products, that is to say to products that are considered of higher value than those massively produced [6]. This trend is related to the downgrading of the quality of life in urban centres, and has been increasing in recent years, due to the dietary crisis that leads consumers to search for quality products.

The quality of each product is inextricably woven into its history and, therefore, into the history of the community that contributed to its creation, and passes it on to future generations, adapted, naturally, to any changes in the general framework of knowledge and rules. The relation with the territorial community also concerns aspects of local identity and culture [7]. The relation between a typical product and the place is not derived from soil and climate specificities alone, but also from its links to the unique and place-specific factors involved in the production process, which may be, on one hand, tangible, e.g. specific varieties and, on the other, tacit e.g. specific knowledge of the local actors [8]. At the same time, this relation is derived from the local culture within the framework of which the local product typifies the "historical memory" of the local populations, by being part of its identity [9].

The aim of this paper is to examine whether, within the framework of sound management of cultural goods and sustainable development, a product of high quality, with excellent nutritional value, the capstone, in fact, of Mediterranean diet, a product of Messinia, can contribute to the development process of an area, as well as to the promotion of a place, and, hence, become a brand of the place and a pole of attraction of tourists [10]. In particular, the paper is aimed at highlighting Messinian olive oil and its nutritional and cultural value, and, in doing so, to add multiplier economic potential to the area, by designing appropriate strategies. However, the history and tradition of olive oil is not sufficient in itself, if the high quality level is not constantly maintained through the exploitation of new and innovative technologies at all stages of olive-growing, from production, export and

standardization to the promotion and advertising. In the ancient world, Hippocrates called virgin olive oil "the great healer" and Homer "liquid gold" [11].

In recent years, the consumption of extra virgin olive oil, confirms these beliefs in the best way, because of its high nutritional quality and its particular composition of fatty acids, vitamins and polyphenols, when compared with other edible vegetable oils. Phenols of the olive oil include acids, phenolic alcohols such as tyrosol and hydroxytyrosol, flavonoids, lignans and saccharides (oleuropein, ligand and derivatives thereof), and their bioactive ability is a matter of great importance due to the proven or tested healthy effects attributed to them. The current knowledge available on the beneficial effects of extra virgin olive oil and its phenolic compounds, specifically its biological properties and antioxidant capacity against immune-mediated inflammatory responses (atherosclerosis, rheumatoid arthritis, diabetes, obesity, cancer, inflammatory bowel disease or neurodegenerative disease, among others) in addition to its potential clinical applications [12, 13]. Messinian olive oil can become a tool for development creating new jobs for residents and building infrastructure in the area. Also the existence of innovative strategies such as product certification is able to create "identity"—brand name, and promote tourism development specializing in olive cultivation, and his cultural Heritage [14]. A brand name is created that harmoniously combines history with tradition, nature and the excellent quality of the Messinian olive oil.

In this point of view, the further promotion and promotion of Olive and Olive Oil is the key to sustainable development for sectors such as culture and the economy.

The methodology followed in the present paper is based on the qualitative research method of case study, which investigates contemporary social situations in depth and in a real environment, and is based on primary and secondary sources [15]. Within this framework, we used the research technique of "triangulation" and conducted interviews based on a semi-structured questionnaire given to stakeholders of the area, experts in olives and olive oil, in combination with and parallel to the study of primary sources (legislation, archives, documents), as well as secondary, bibliography sources. The interviews were reinforced by on-site research and participatory observation. Then, SWOT analysis and content analysis were performed as a third methodological tool. The data drawn by means of these different methods were analysed separately, according to the principles applicable to each method [16, 17]. Then, the necessary conceptual correlations were made, so that safe conclusions are drawn [18]. Triangulation assured research objectivity and validity, as it offers a "pluralist" response to quality research requirements, thus ensuring objectivity and validity of findings [16].

2 Nutritional Value of Extra Virgin Olive Oil

The nutritional quality of extra virgin olive oils (EVOOs) makes these oils very healthy foods mainly due to their antioxidant properties. 98–99% of the total weight of the extra virgin olive oil (EVOO) consists of major components (triacylglycerol)

with the concentration of oleic acid to be much higher (55–83%) than the other acids (linoleic, palmitic or stearic acids) ranging from 3% and 21%. Also, minor components that are present in small quantities (about 2% of the weight of the EVOO), contains more than 230 chemicals compounds such as aliphatic and triterpene alcohols, sterols, vitamins (α, β, γ and δ-tocopherols), phytosterols, colorants, volatile compounds, and hydrocarbons (squalene) among others [13].

Chemical compounds such as vitamins, (tocopherols and β-carotene), phytosterols, pigments, terpenic acids, flavonoids such as luteolin and quercetin, squalene, and hydrophilic phenolic compounds are the most abundant natural antioxidants of EVOO [19].

The major polar phenolic compounds identified and quantified in olive oil are the following: (1) benzoic acids and derivatives: 3-hydroxybenzoic acid, p-hydroxybenzoic acid, 3,4-dihydroxybenzoic acid, gentisic acid, vanillic acid, gallic acid, syringic acid; (2) cinnamic acids and derivatives: o-coumaric acid, p-coumaric acid, caffeic acid, ferulic acid; sinapic acid; (3) phenyl ethyl alcohols: tyrosol [(p-hydroxyphenyl)ethanol], hydroxytyrosol ((3,4-dihydroxyphenyl) ethanol); (4) other phenol acids and derivatives: p-hydroxyphenylacetic acid, 3,4-dihydroxyphenylacetic acid, 4-hydroxy-3-methoxyphenylacetic acid, 3-(3,4-dihydroxyphenyl)propanoic acid; (5) dialdehydic forms of secoiridoids: decarboxymethyloleuropein aglycon (oleacin), decarboxymethyl ligstroside aglycon (oleocanthal); (6) secoiridoid aglycons: oleuropein aglycon, ligstroside aglycon, aldehydic form of oleuropein aglycon, aldehydic form of ligstroside aglycon; (7) flavonoids: (+)-taxifolin, apigenin, luteolin; (8) lignans: (+)-pinoresinol, (+)-1-acetoxypinoresinol, (+)-1-hydroxypinoresinol [20, 21].

The main olive biophenols properties (OBP) are related to antioxidant, anti-inflammatory, cardiovascular, immunomodulatory, gastrointestinal, endocrine, respiratory, autonomic, central nervous system, antimicrobial and chemotherapeutic, anticancer and chemopreventive effects. But the nutritional value of EVOO has been particularly related to its composition, with main emphasis to the high content of the monounsaturated fatty acid, the oleic acid [13].

The health claim of polyphenols is another important tool that can add value to virgin olive oil, thus allowing producers, standardizers, merchants and exporters in general to use it to promote their products. In accordance with current EU legislation and EU Regulation 432/2012, the claim for polyphenols of olive oil that may be indicated on the label is "Olive oil polyphenols contribute to the protection of blood lipids from oxidative stress". This claim may be used only for olive oil containing at least 5 mg of hydroxytyrosol and its derivatives (for example, oleuropein and tyrosol) per 20 g of olive oil and is only used when the information given to the consumer is that the beneficial effects are ensured by the daily intake of 20 g of olive oil [22].

2.1 The Messinian Olive Oil in Numbers

The number of olive trees with the principal Greek oil-producing variety, Koroneiki, cv. in the Messinian prefecture is 15,500,000 while the production of Messinian olive oil for the cultivation year 2017–2018 reached 66,000 tons, with more than 30,000 producers. This production corresponds to 20% of total Greek production, and the cultivated area of olive trees corresponds to 12% of the total Greek cultivated area. Of the 29 rural cooperatives in the Prefecture of Messinia the 28 are involved in the production, and marketing of the Messinian olive oil [23]. In this table there is a significant variation in price for the same quality of Messinian extra olive oil and while the price of bulk of Messinian extra virgin olive oil does not exceed 3 euros per liter, packaged Messinian extra virgin olive oil enjoys much higher prices. This happens because there are different packaging materials and different designs, which are very important between the olive oil industries and companies in order to achieve the highest profit. Indeed, competition between industries is increasing every day, and packaging sales in emerging markets are expected to continue to grow strongly [24].

3 The Cultural Value of Olive Oil as Part of the Intangible Cultural Heritage of Messinia

Olive and its product, olive oil, is, first and foremost, a symbol: This ancient cultivation is transmitted not only from one generation to the next, but also from one civilisation to another [25]. Olive cultivation one of the most traditional and widespread cultivations in Greece, and one of great social and economic value. Olive oil is an agricultural product of vital importance, constituting a basic element of our population's diet, a source of income for many families of farmers, in all geographical areas of Greece, while also being a significant factor in ensuring foreign exchange through export [26].

At the same time, olive oil is a cultural good expressing tradition and the identity of the area producing and consuming it. The mythology, religions, cultural identity and dietary identity of the Mediterranean have been closely connected with olive oil production and consumption, for the past 6000 years. In fact, this is precisely why it can be considered an authentic element of both the cultural heritage [25] and the blooming of Mediterranean civilisations [26].

Olive cultivation and olive oil production are an inextricable part of the daily lives of the population of all of Messinia. Olive oil, the "liquid gold" as Homer refers to it, remains, to this day, the most important agricultural product of the area and a key point of reference and element of the identity of its landscape. Messinian olive oil is famous all around the world, occupying one of the top positions in global demand, while Kalamata olives have been the trademark and, in fact, the brand name of the city, same as the Koroneiki variety, which is one of the unique varieties producing

olive oil of bright green to yellow-green colour, intense aroma, fruity taste and particularly low acidity [27]. In the twelfth century (1191), English traveller, abbot Benedict of Peterborough, who, it seems, stayed in the area for a long time and gave a remarkable description of the agricultural economy and olive oil production of Messinia, Koroni in particular, mentions that, in the outskirts of Koroni, "there were so many olive trees that in my opinion in no other part of the world is there such a profusion of oil" [28].

A series of traveller texts are an important, historical source of information on the cultivation of olive trees and the production of olive oil. In particular, the itinerary in the Morea of William Gell, "Narrative of a Journey in the Morea" mentions: "Innumerable olive-trees shaded the little plain of Modon, while a forest of olive trees surrounded Corone, at a distance of 3 miles" [29].

"The archives of Nani inform us that, in 1704, olive oil production in Venetian Messinia, amounted to 16,139 barrels (perhaps around 1000 tons), against a total production of the Peloponnese of 19,159 barrels. What is even more important is that out of the 16,139 barrels, production in Koroni accounted for 8000 barrels, Methoni for 3012 barrels, Navarino for 2007 barrels, Kyparissia for 1820 barrels and Zarnata for 1300 barrels" [27]. Olive picking was a true celebration, involving the mobilisation of all family members and of the animals of the family, the "saisma", a goat-wool cover, the sticks and all equipment needed [30]. Wherever family members' labour was involved, work was distributed by gender and age [30, 31].

4   Research Results

In the present study, as mentioned above, the methodology of semi-structured personal interviews was also applied, using mainly open questions, as well as some closed questions, common for all participants (five in total) allowing interviewees to choose between predetermined answers. In particular, we used: Multiple choice questions, where interviewees could choose between several preselected answers, aimed at eliciting their opinions and positions on specific issues. At this point, it must be mentioned that these questions were also included in the weighted questionnaire of the INHERIT ERASMUS+ project, and were used with the consent of the Maniatakis Foundation, which was a partner in the above project.

The interviews were conducted in Athens, Kalamata and Mani, in the period between January and March 2017. We took into consideration that, in qualitative research, we are often concerned with individual cases that require in depth investigation for small samples that are characterized by certain specificities, which cannot be generalized to cover the entire population of reference [32].

Therefore, in order to determine the size of the population of the research, we chose seven people, due to their long involvement in the subject under study and their recognition in the field or their institutional role, so that they paint as full an image as possible of the issues of concern in this particular study.

Before initiating the interview process, all interviewees were informed by telephone communication. They were first informed on the research in question and then on the framework and subject of the interview; the importance of their participation was also commented on. Moreover, the use of the information and data to be drawn were another point that was clarified.

Seven different questionnaires were created for the interviews. The interviews took place in places familiar to the interviewees. The interviews were recorded by the research team, and the transcripts of the interviews were then indexed and studied. At this point, it must be mentioned that the interview is based on the following position: Knowledge is achieved, to great extent, by good listening and "polite listening" to the worlds of the subjects, who must be encouraged by researchers to express themselves. It is precisely for this reason that the first minutes of an interview are decisive [33].

Interviewees acknowledge the close connection between the cultural heritage of an area and its economic development as well as its dynamic contribution to all sectors of endogenous development of an area. They all insist that cultural goods must become an axis of social and economic development of an area, especially if they are connected to tradition through a new perspective. Cultural heritage is highlighted as the connecting link in the triptych Primary production–Culture–Tourism, which allows the unhindered valorization of all development advantages of an area. They also all agree with the view that, to achieve integrated and balanced development, highlighting the cultural physiognomy is a sine qua non condition. The connection of olive cultivation traditions to new, innovative ideas, without negating the past, will modernize it and relate it with other forms of economic activity. They all, clearly refer to the connection between the cultural value of the two products and Mediterranean diet, gastronomy and, of course, alternative forms of tourism. All interviews support the view that connecting all the above between them can offer added value and yield multiple benefits on an economic and social level.

5 Conclusions

While in the past, the valorization of cultural heritage was based mainly on the way of presenting material elements (e.g. ancient monuments, presentation of finding is museum facilities), contemporary post-modern reality and the economy of services demand a shift in direction, with a focus on the intangible elements and the creation of cultural experiences [33].

Traditional foodstuffs, being considered as distinctive elements of cultural identity, are directed by public policies towards production differentiation and strengthening of local economies [33]. According to [33], their unique character is connected both to raw material (connection to the place of origin and its natural features) and to the recipes, techniques and processing technologies inherited (connection to culture and skills) or are linked to an identifiable geographical origin [6].

It is within this framework that olive oil, as basic traditional food, encompasses the tangible and intangible resources of its place of origin, that is to say agricultural resources, human resources, local tradition and knowledge, traditional production practices and gastronomy cultures. Connecting local agricultural products to cultural symbols or local representations reinforces their symbolic quality: in other words, quality can be connected both to the name or name of place and to the reputation of a product, as well as to the social values it suggests [6]. It contributes to the increase of the end value, which results in higher added value of the product [34]. Messinian virgin olive oil contains major and minor compounds that are of great sensory and biological importance which are important for the nutritional properties and also for the taste quality.

Messinian olive oil, besides its expendable nutritional character, is a carrier of images and representations invested with values that attribute to it the quality of public good, and ensures local supremacy and global promotion of its place of origin. In this light, it can constitute a powerful brand name for the area of origin.

References

1. Bitsani E (2014) Promoting traditions of multicultural communities as a tool for social cohesion in Trieste, Italy. Procedia Soc Behav Sci 148:412–419
2. Bitsani E, Elefteriou A (2014) The management of natural world heritage sites as an essential component of cultural tourism and sustainable development-the Tokaj-Holloko case study in northeastern Hungary: from a national/local past towards an international/global future. In: Schortemeyer R (ed) Tourism development and management, NY Book ID: 6349
3. Vernikos N, Daskalopoulou S, Bantimaroudis P, Boumparis N, Papageorgiou D (2005) Cultural industries procedures, services, goods. Critique SA, Athens. (in Greek)
4. Kamenidis C (2010) Marketing of agricultural products. Kyriakidis Brothers House, Thessaloniki. (in Greek)
5. Anthopoulou T, Muchnik J (2013) Localised agrifood systems. Object, scope and policy for research and rural development. In: Anthopoulou T (ed) Food origin and specificities. A territorial approach to rural development. Papazisi Publisher, Athens, pp 35–53. (in Greek)
6. Kozos T, Vakoufaris C, Koulouri M, Spilanis G (2004) Local products and sustainable local development in less privileged areas: local products of the region of the North Aegean. In: Spylani G, Iosifidis T, Kizos T (eds) Development strategies in less privileged areas. Publishing Houses of Typosito, Athens
7. Govers R (2011) Place Brand Public Dipl 7:227. https://doi.org/10.1057/pb.2011.28
8. Bitsani E (2014) "Intercultural city identity" and "Human intercultural cities" (H.I.C) An ontological/dynamic model for the social cohesion of modern and post-modern cities. The research example of Trieste Italy. (Research monograph). Nova, New York
9. Belletti G, Marescotti A (2017) Geographical indications, public goods, and sustainable development: the roles of actors' strategies and public policies. World Dev 98:45–57
10. Anholt S (2010) Definitions of place branding – working towards a resolution. Place Brand Public Dipl 6:1. https://doi.org/10.1057/pb.2010.3
11. Clodoveo ML, Camposeo S, De Gennaro B, Pascuzzi S, Roselli L (2014) In the ancient world, virgin olive oil was called "liquid gold" by Homer and "the great healer" by Hippocrates. Why has this mythic image been forgotten? Food Res Int 62:1062–1068. https://doi.org/10.1016/j.foodres.2014.05.034

12. Fuentes E, Paucar F, Tapia F, Ortiz J, Jimenez P, Romero N (2018) Effect of the composition of extra virgin olive oils on the differentation and antioxidant capacities of twelve monovarietals. Food Chem 243:285–294. https://doi.org/10.1016/j.foodchem.2017.09.130
13. Casas R, Estruch R, Sacanella E (2018) The protective effects of extra virgin olive oil on immune-mediated inflammatory responses. Endocr Metab Immune Disord Drug Targets 18:23–35. https://doi.org/10.2174/1871530317666171114115632
14. Bitsani E, Kavoura A (2012) Connecting enological and gastronomical tourism at the Wine Roads, Veneto, Italy for the promotion and development of agrotourism. J Vacat Mark 18:301–312
15. Babbie E (2011) Introduction to social research. Wadsworth, p 494
16. Morse J (1991) Approaches to qualitative-quantitative methodological triangulation. Nurs Res 40:120–123
17. Bitsani E, Kavoura A (2011) Organizational networks, migration, and intercultural relations in Trieste, Italy. Int J Adv Cult Tour Hosp Res 4:26–37
18. Evangelou E (2014) The use of methodological triangulation in the research of the quality of life of mentally ill people living in the community. http://e-jst.teiath.gr/issues/issue_35/Euaggelou_35, p 114
19. Servili M (2014) The phenolic compounds: a commercial argument in the economic war to come on the quality of oliveoil? OCL 21(5):D509
20. Kotsiou K, Tasioula-Margari M (2016) Monitoring the phenolic compounds of Greek extra-virgin olive oils during storage. Food Chem 200:255–262. https://doi.org/10.1016/j.foodchem.2015.12.090
21. Kalogeropoulos N, Tsimidou MZ (2014) Antioxidants in Greek virgin olive oils. Antioxidants 3:387–413. https://doi.org/10.3390/antiox3020387
22. EU (2012) Regulation No 432/2012 of 16 May 2012 establishing a list of permitted health claims made on foods, other than those referring to the reduction of disease risk and to children's development and health. Off J Eur Union L 136:1–40
23. http://www.minagric.gr/index.php/el/for-farmer-2/sillogikes-agrotikes-organoseis
24. Kouveli A, Tzetzis D, Kyratsis P (2016) Packaging design for the Greek olive oil industry. IOP Conf Ser Mater Sci Eng 161:012038. https://doi.org/10.1088/1757-899X/161/1/012038
25. Karapodini-Dimitriadis E (2003) Olive oil production and consumption: a contribution to the European cultural heritage of nutrition. In: Proceedings of an international conference on "Olive and olive oil from antiquity to today", 1–2 October 1999, Athens, Academy of Athens, pp 297–319
26. Kyritsakis KA (2007) Olive oil. Conventional & organic edible olive – olive paste. L. Akritidi Brothers, Thessaloniki. (in Greek), p 12
27. Braudel F (1979) La Mediterranée et le monde mediterranée a l'époque de Philippe II, tome premier, tome deuxieme, 4th edn. Librairie Armand Colin, Paris. [Greek translation, 1997]
28. Besnard G, Berville A (2000) Multiple origin for Mediterranean olive (Olea europea L. subsp. europea) based upon mitochodrial DNA polymorphisms. C R Acad Sci III 323:173–181
29. www.minagric.gr
30. Rigatos AG (2015) Folklore. Olive Press Publica. http://www.presspublica.gr/
31. Economou A (2003) The olive and oil in the traditional society of Laconia. In: Proceedings of an international conference on "Olive and olive oil from antiquity to today", 1–2 October 1999, Academy of Athens, Athens, pp 237–249
32. Bitsani E (2016) Migration memory, cultural heritage: a vehicle of the city' intercultural identity. The case study of the Eastern Greek community and the Greek museums in Trieste Italy. Cogents Arts Humanit 3:2–15
33. Anthopoulou T (2010) Rural women in local agrofood production: between entrepreneurial initiatives and family strategies. A case study in Greece. J Rural Stud 26:394–403
34. Ilbery B, Kneafsey M (2000) Producer constructions of quality in regional speciality food production: a case study from west England. J Rural Stud 16:217–230

Enhancing Practice in Continuity with Innovative Thinking: The Primary Task of Higher Education

Marcela Göttlichová

Abstract The Strategic innovation represents a process, whose primary aim is the restoration or revision of the corporate strategy to support the growth of enterprises or organizations with the reflection in a competitive advantage, together in continuity with strengthening the interest in customers, and the increasing orientation towards the establishment of social values. Should we focus our attention to the nonprofit sector, it becomes obvious that the strategic management enables the vision of an organization to be fully developed, and at the same time to assimilate with the competition within the ever-changing economic as well as technological environment. The winners of the growing competition are those who are able to significantly promote their business in the market. To achieve this, they need some well-prepared marketing and promotion professionals and also the development of innovative thinking. Higher education plays the irreplaceable role, and its primary task should be the versatile training of students employable in the contemporary labor market with the orientation to the key competencies development, reflecting in the need to enhance the now insufficient integration of the theory and practice. The study presents both the current condition of the Czech higher education, and the present views of university students from the Faculty of Multimedia Communications at TBU on the necessity of the key competencies development in continuity with the requisites of nonprofit entities with the outcome in a solution proposal interconnecting collaboration of the academia and the nonprofit sector on the practical basis in relation to the regional development.

Keywords First higher education · Key competencies · Non-governmental non-profit organizations · Strategic innovative marketing · Theory and practice

M. Göttlichová (✉)
Tomas Bata University in Zlin, Zlin, Czech Republic
e-mail: gottlichova@utb.cz

1   Introduction

1.1   The Czech Republic and Non-governmental Non-profit Organizations

As well as the increasingly competitive environment of commercial enterprises, competition occurs also in the non-profit sector, particularly in non-governmental non-profit organizations, which is strongly reflected in the growing need for an enhanced professionalization in marketing and promotion, inherently in continuity with innovative thinking. "NGOs often compete for visibility, clients and influence, and representation leaves a lot to be desired. Hence, governments' and intergovernmental institutions' reluctance to accept immediately NGOs as partners, may be necessary for NGOs to become representative and, paradoxically, for strengthening civil society as well [1]."

The fact that the competitive struggle will not be simple and inherently impossible without strategic innovative thinking is shown in the following overview of the number of NGOs in the Czech Republic in the years 2014–2017 (see Table 1). Despite the substantial legislative transformation brought about by the new Civil Code, which entered into force on January 1, 2014 (Act No. 89/2012 Coll.) and thus significantly affected the very existence of NGOs, out of which we may state the following such as: the newly defined private law entities (corporations, law, statute); harmonization of the internal situation in NGOs with new legal regulations (statute, bodies, etc.); defining the so-called public benefit; the impossibility of setting up a public benefit organization (marked as "o.p.s" in the Czech Republic); the automatic transformation of o.p.s. entities into associations, etc.; we can note that the situation will not be easy for NGOs on the competitive battlefield [2].

For the NGOs to prevail, it is also necessary that non-profit entities focus on introducing new marketing methods with a focus on changing the marketing strategy, plan, or marketing tools having been used so far, and focusing on new methods that are reflected, for example, in innovation of advertising, promotion, or communication, but at the same time in the goals and visions of the particular business. Innovative thinking is one of the basic conditions for the success of innovative marketing. "Innovation is the basis of today's competitive strategies [4]."

1.2   The Situation of Higher Education in the Czech Republic

Nevertheless, we can find similar situations in the field of education. It is especially higher education that has seen some significant changes. The end of the state monopoly on the provision of educational services in continuity with the creation of new rules for financing education as well as the possibility of public schools to acquire legal personality and, above all, the creation of new school institutions with the reflection in new approaches to education, all led not only to an unprecedented

Table 1 The statistics on the number of NGOs in 2014–2017

Year	Associations	Foundations	Endowment	Registered		Church	
		Funds	Institutes	Societies	CIO	Associations	Branch
2014/D	**86.956**	508	1.407	123	2.926	4.158	26.118
2015/M	87.698	495	1.442	206	2.912	4.156	26.225
2015/D	89.584	505	1.518	388	2.894	4.166	26.423
2016/J	91.307	510	1.573	557	2.840	4.170	26.583
2016/D	92.878	516	1.635	686	2.792	4.177	26.370
2017/A	93.651	515	1.670	752	2.774	4.171	26.414

D December, *M* May, *J* June, *A* April; *CIO* community interest organizations; Source: CZOS [3]

extension of the structure of the provided educational services, but also to the development of new possibilities both in selecting the educational way and in selecting individual school types. The time when the demand for educational services markedly exceeded the supply was definitively discontinued. A distinctive feature of Czech education is a marked increase in competition among individual educational institutions. It has become necessary to cease the mass character of higher education and to focus the attention of the higher education policy on the improvement of quality in order to reach the European level.

In the academic year 2016/2017, 3,11,367 students attended Czech universities, out of which 2,36,994 were students in full-time form of study, 76,851 students in the distance and combined form. Out of the total number of university students, 2,80,340 students attended public universities × 31,484 students attending private institutions [5].

1.2.1 Primary Objective of Universities

The previous lines explicitly indicate that it may appear that the goal of Czech higher education is to reduce the number of university-educated citizens. However, the situation is the opposite. The primary objective is to achieve the highest possible number of graduates with a university education based on its high quality. So where is the quality of the education system? It is especially the preparation of university students leading to their full integration into the work process, and at the same time also the sufficient motivation for further education. However, this cannot do without graduates with the necessary skills, abilities, and competencies that best match the requirements of employers themselves. As speaking of the educational system, we talk about the role of a factor in determining the future employability of university graduates with the ability to respond flexibly to both current and future labor market needs.

The employability of university graduates in the labor market thus becomes an important indicator of university quality.

In spite of the fact that the higher education policy focuses primarily on quality, we can see relatively significant differences in the unemployment rate of graduates. A significant indicator of the success of graduates in the labor market is then the share of success by type of faculty (see Table 2).

The comparison of the results for 2010 and 2016 clearly shows that the medical faculty graduates find very good employment, markedly as compared to graduates of faculties of art, where we observe an increase of unemployment up to 8.5% compared to 2010. It is, therefore, necessary to look for new and innovative paths to employability and to respond flexibly to market demands.

Table 2 Unemployment of university graduates according to the type faculty

Unemployment of university graduates in %[a]	2010	2016
Faculty of Medicine	1.5	1.0
Faculty of Law	3.7	3.4
Technical Faculty	5.0	3.5
Pedagogical Faculty and Faculty of Physical Education	3.6	4.2
Philosophical, Theological, and Social Studies Faculty	6.1	5.2
Faculty of Agriculture	10.9	5.4
Faculty of Natural Science	8.0	6.0
Faculty of Economics	7.4	6.9
Faculty of Fine Arts	4.8	13.3

[a]Data update in June; Source: MEYS [6]

2 Methodology

2.1 Problem Formulation

2.1.1 Problem of Higher Education

So what is the main problem and what are the ways to solve it? An important aspect for the successful integration of graduates into the labor market is that the preparation of students sufficiently takes into account the demands and requirements of employers on the key competencies graduates should be equipped with when embarking into the work process in continuity with the level of education they have attained. However, we still encounter situations where there are frequent disparities between the knowledge, skills, and competencies they come with to the labor market and those that employers do require. The persisting problem, however, still lies in the alienation of the theory away from the practice, and the elimination of professional practice, which results in insufficient practical preparedness of university students for the labor market. And we repeatedly come to the many times mentioned fact that the achievement of an increase in the quality of higher education is not feasible without a close connection with both the field of scientific research and with economic practice where the priority in making the educational process more effective is the inseparable interconnection of the theory (represented by the academic sphere) and the practice (represented by commercial and non-commercial entities).

2.1.2 Problem of Non-governmental Non-profit Organizations

We have already met with the outline of the NGOs problem in the introductory part of the paper. Competitive struggle is increasingly affecting the environment of the non-profit sector, especially the NGOs environment, where the situation is more complicated, that in addition to the primary task, with which it is increasingly

demanding to fulfill the vision and the mission realization, the responsibility for placement of own market organization and incorporate it into such relationships with its surroundings that will help ensure its constant success becomes an increasingly important aspect. Nevertheless, in order to ensure sufficient efficiency, NGOs cannot do without professional marketing experts, the absence of who remains an endless issue reflecting the lack of effective communication of missions and activities, whether to prospective clients, potential workers, volunteers, donors, or the general public, etc. The lack of funding is also related, because "a competitive environment, including non-governmental non-profit organizations, enforces the search for new routes due to limited financial resources" [7].

2.2   Problem Solution

Despite the fact that we can be positive about the current situation of university graduates in the labor market in a confrontation with other European countries, we still have to regard the group as risky from the point of view of employability. This also relates to the necessity of a focus of the attention of universities even more significantly on the development of key competencies, namely in continuity with the requirements of both commercial and non-commercial employers, with a reflection on the innovation of teaching leading to the enrichment of an educational program aimed at improving the quality of vocational training, professional practice, or internships directly in companies, public institutions, or NGOs; the participation of practitioners directly in teaching, or through the direct participation of students in real projects with a comprehensive knowledge of project management methods. And it is just a non-commercial sector which increasingly represents a significant potential in the employability of university graduates.

2.2.1   Objectives and Methodology

As early as 2012, the Institute of Marketing Communications of the Faculty of Multimedia Communications of Tomas Bata University (IMC FMC TBU) in Zlin established a cooperation within the project called *Cooperation of Higher Education, Public Administration, Business and nonprofit Sector for Socio-economic Development of the Zlin Region* with the representatives of the nonprofit sector (the Association of nonprofit NGOs), the Town of Zlin, the Chamber of Commerce, and the Labor Office whose primary objective is a constructive solution of current issues of the region with the priority of cooperation between the academic sphere and the nonprofit sector under the significant support of the Zlin Region; there are regular analyses aimed at focusing on regional NGOs both from the point of view of their marketing activities and from the continuity of cooperation with the academic sphere [8].

In 2017, the attention of research was directed not only to NGOs but also to the students of the Institute in order to find answers to questions as to what are their views of the NGOs needs, possible opportunities for cooperation, or future profiling of non-commercial marketing activities. These included also the requirements for key competencies preferred by NGOs as seen by the students. The research was conducted in the form of a survey questionnaire based on open-ended and closed-ended questions. The questions related to the Projects of Nonprofit Organizations course were complemented by interviews with the attending students. The research was attended by 120 students of IMC FMC TBU. The research continued in the set line in 2018 when 102 students were actively involved.

3 Results and Interpretation

3.1 Comparison of the Resulting Values

In 2017 as well as in 2018 (see Table 3), students preferred the same key competencies, such as communication skills, managing problems, and working in a team, and we can even see a greater percentage increase. Another competence came to the forefront, however, and it was the ability to bear responsibility, and adaptability and flexibility; there has been a slight increase in the willingness to learn. Looking at the preferred competencies, we can see that they all correspond to the NGOs needs and missions, as well as the distinctive image of NGOs evoking in students the primary missionary task to provide help to those in need.

Table 3 Preference of key competencies in terms of university students

Key competencies/preference	2017 (A)		2018 (B)	
	% Ranting		% Ranting	
Communication skills	77.5	1	80.4	1
Capability of problem-solving	55.0	2	54.9	2
Team working skills	37.5	3	52.9	3
Taking responsibility	30.0	4	37.3	4
Mastering information processing	22.5	5/6	12.8	7
Adaptability and flexibility	22.5	5/6	24.5	5
Willingness to learn	12.5	7/8	14.7	6
Ability to make decisions	12.5	7/8	7.8	8
Reading and comprehension to work instructions	7.5	9	2.9	10
IT skills	2.5	10–13	1.0	12/13
Leadership skills	2.5	10–13	6.9	9
Foreign language knowledge	2.5	10–13	2.0	11
Work with numbers in the working process	2.5	10–13	1.0	12/3

Source: Göttlichová

Other resulting values that were part of the research may be perceived as favorable findings. Out of the range of responses, the attention will be focused primarily on the relationship of students to NGOs, as well as on the established forms of cooperation both in NGOs and within the educational process. Here again, the responses to the two surveys almost coincide (A/B). The students positively evaluate the cooperation with NGOs also with the continuity with their own initiative involvement. Within the Institute they primarily prefer the collaboration in promotion and marketing during the preparation and implementation of projects in continuity with creativity reflected in marketing innovations of organizations (80%, 76%). In the area of interest, there is also the cooperation in the form of analyses within the final theses (15%, 10%). The students themselves realize that the communication of NGOs is not yet sufficiently effective, whether it is shortcomings in the communication of greater (47.5%/32.5%) or lesser nature (42.5%, 47.1%). We see more positive perceptions under a critical assessment of effective communication (2.5%/8.8%) within 1 year, and the percentage of those who are not certain (7.5%/11.6%). Even though the regional NGOs (2017, N = 232, Göttlichová) consider the lack of finance (44.9%), and human resources (14.3%) to be the issue of poor communication, the students see the problem in the absence of a marketing expert, and in the lack of finance for their evaluation. However, the persistent problem is that 30.6% of NGOs still consider the position of a marketing specialist to be "unnecessary".

As apparent from what has previously been said, the students had not questioned the importance of marketing and promotion for NGOs (99.0%), and in the same way they are convinced of what advantages innovative marketing (88.2%, 66.7%), i.e. "how to win customers with the use of creative thinking" [9], as well as strategic marketing (90%, 83.3%), i.e. "the new approach to already known objects" [10] have for NGOs. "It is no coincidence that implementation of innovation into business is put to the forefront more often in continuity with marketing, thus representing a major rival in the competitive battlefield, in both the profit sector as well as more prominently in the non-profit sector [11]."

3.2 Where to Find a Way to Victory Within the Competition?

An option was proposed by the FMC TBU by means of a course called *Projects of Non-profit Organizations* (PRON), which fully meets the necessary requirement of the integration of theory and practice in continuity with the requirements on key competencies primarily preferred by NGOs, this being in accordance with the feedback from the students of the Institute (see Table 3). The attention is focused on the systemic theoretical solution for all phases of the marketing process with a direct application into practice. Students get into the secrets of project management in their entirety. "They are aware of the necessity of professional communication based on the accurate definition of communication goals based on marketing goals [12]." The attention is also paid to methodological and procedural aspects of project

management and project planning as well as to the system of controlled communication and management of project documentation. However, it is not only the expertise in project management and marketing communications applied to practice, but also the great contribution of invention and creative thinking with which students contribute significantly to NGOs for them to discover new ways of how to effectively reach the general public with the offer of their activities or fundraising, as well as of workers, volunteers, etc.

One of the projects is for example the realization of an exhibition of non-governmental organizations in the Zlin Region called *Život není zebra (Life is not a Zebra)*, which enables NGOs not only to present their diverse activities and missions directly but also to establish contacts and to network, to extend cooperation, but especially to address the young generation through a number of interesting workshops and lectures [13].

4 Conclusion

What to conclude with? As the results of the study have shown, there is no possible way in the field of higher education how to do business without any connection with the economic sphere reflected in the integration of theory and practice. Equally, NGOs, in consolidating their position within the competitive struggle, threaten their existence by persistently avoiding employing enough marketing and promotional professionals. It is, therefore, important to combine both paths to achieve the goal. Inventions and creative thinking such as the driving force at the beginning of the innovation process, however, will not suffice for its own fulfillment. The innovation policy must, therefore, be based on such an education that will lead to the development of competencies that can be used both for life and for work. 98.0% of students understand the importance of implementing the PRON course—and one of the students added: "The PRON is a course with an overlap, teaches students about the co-existence, teamwork, experience in practice, and help where help is needed—from A to Z." The constructive integration of the theory and practice may allow students to get an insight into the real conditions of employment, to be provided with some practical knowledge and skills which then can become the basis of their future career orientation.

References

1. Holmén H, Jirström M (2009) Look who's talking! Second thoughts about NGOs as representing civil society. J Asian Afr Stud 44(4):429–448. https://doi.org/10.1177/0021909609105093
2. Typologie NNO v ČR podle Státní politiky vůči NNO v letech 2015–2020. https://www.neziskovky.cz/clanky/511_692/fakta_typy-neziskovych-organizaci/

3. Statistika počtu NNO v letech 2014–2017 podle údajů ČSÚ. https://www.neziskovky.cz/clanky/511_695/fakta_statistika-postu-nno/
4. Bočková K (2010) Inovativní marketing. Econ Rev 39/2010(3):131–139. ISSN 0323-262X. https://euba.sk/www_write/files/SK/
5. University Education – Students. CZSO. https://vdb.czso.cz/
6. Monitoring indicators. The Ministry of Education, Youth and Sports (MEYS). http://www.msmt.cz/vzdelavani/vysoke-skolstvi/monitorovaci-ukazatele?lang=1
7. Kavoura A, Andersson T (2016) Applying Delphi method for strategic design of social entrepreneurship. Libr Rev 65:185–205. https://doi.org/10.1108/LR-06-2015-0062
8. Göttlichová M (2012) Co-operation of higher education, public administration, business and non-profit sector for the socio-economic development of the region
9. Kotler P, Trias de Bes F (2005) Inovativní marketing: Jak kreativním myšlením vítězit u zákazníků. Grada, Praha
10. Horáková H (1997) Strategický marketing. VŠE, Praha
11. Juříková M (2013) Marketing services. VeRBum, Zlín
12. Šula T (2017) Ambientní média v reklamě. UTB, Zlín
13. Göttlichová M (2015) Proceedings of non-profit projects. UTB, Zlín

Engaging New Museum Audience Through Art Workshops: The Case of "Adult Art" at Macedonian Museum of Contemporary Art

Christina Mavini

Abstract Based on its experience on educational programs and acting as a contemporary institution that responses to social changes, Macedonian Museum of Contemporary Art, a private, non-profit institution in Thessaloniki, has organized and implemented in the past, large-scale art workshops for immigrants and unemployed people, in the framework of co-funded programs by the European Integration Fund and by the Stavros Niarchos Foundation, respectively. The precious experience from the programs, as well as from the museum's multidimensional educational activity, determined the mapping process of the audience's learning needs and led to the realization of "Adult Art", a financially self-supporting and sustainable workshop addressed exclusively to adults. Adopting an innovative combination of the theoretical presentation with the experiential process of artistic creation, the workshop offers new museum experiences to the attendants, which promote a better understanding on contemporary art and the familiarization with the museum space. Being implemented for three consecutive years with a constantly increasing number of participants, Adult Art manages to fulfill MMCA's mission statement for being an "engaging museum" while responding to the museum's current needs. In terms of "audience development", it reflects an initiative that creates new perspectives for the further integration of adult education in museum sites.

Keywords Contemporary art · Museum · Audience · Education · Workshops · Adults

1 Introduction

The initiative of an art museum to organize a series of workshops for adults could be examined in terms of museum management, museology, museum education, adult education, art education, lifelong learning as well as a part of the museum's

C. Mavini (✉)
Macedonian Museum of Contemporary Art, Thessaloniki, Greece

interpretive planning [1]. An action like this obtains even more interesting dimensions when it concerns a private museum which struggles to fulfill its mission objectives under conditions of deep and ongoing socio-economic crisis, as the one that occurs in Greece.

Questions as whether educational policy and museum management can be effectively combined, have been already posed by museum professionals. "Audience development", a term that describes the marketing and programming needed to achieve a "broad audience", is at the same time a political activity for the greater good, and for most museums, a type of marketing activity of critical importance to some of its funding bodies [2]. Commenting on some examples of adult education in museums of USA, Elian Hooper-Greenhill mentions that "not only are visitors offered a new relationship with the collections, but these educational activities are also substantial income generators" [3]. Furthermore, Claude Fourteau notices that, despite the fact that the "marketing approach" of a museum which is often orientated to the promotion of its events to adult visitors, seem far away from the "educational approach", focused mainly on children's familiarity with the permanent collections, this "distribution of the roles and responsibilities does not represent a satisfactory solution of the museum" [4].

The Adult Art workshop of Macedonian Museum of Contemporary Art consist an excellent case of an audience development action, establishes closer links with the local community and in parallel, creates access to, and encourages greater use of its collection and services by identified groups of people, almost in terms that are described at "Building Bridges", the fundamental museum guidance in UK in 1998 [5].

2 Brief Presentation of MMCA's Profile

Situated in the center of Thessaloniki and being absolutely inclusive in terms of physical accessibility, Macedonian Museum of Contemporary Art, (hereinafter MMCA) is the first museum institution of contemporary art in Greece, founded by art lovers and prominent citizens of Thessaloniki. A decisive component for its establishment was the support of the internationally famous collector Alexander Iolas who, believing that an art-center was really missing from the city's cultural structures, supported it with a donation of 47 artworks, actually the only unit from Iola's huge collection ever donated to a foundation or museum.

Today, with a collection of almost 2000 artworks and an exhibition space of 4500 m^2, MMCA is being supervised and merely financially supported by the Ministry of Culture of Greece. From 2010 and on though, its annual subsidiary financing is dramatically restricted. As others nonprofit art museums, MMCA belongs to a genre of institutions that typically depend on a mix of funding sources for survival [6].

3 The Educational Role of MMCA

Considering the need for a constant and essential interaction between contemporary art museums and their audience, as well as with the local community, MMCA, has tried, even in times when terms such as "audience development" and "engaging museums" were still in their infancy, to consist an active and audience-centered contemporary museum with an essential "open role" to the public. Apart from its cultural, exhibitional and research dimension, it has ventured to dynamically expand its educational and pedagogical dimension, included actually in its mission statement redacted almost 40 years before. According to Matoula Scaltsa, professor of Museology at Aristotle University of Thessaloniki and member of the Board of Directors, this "expansion" starts from the inclusion of the educational dimension of almost every exhibition project it undertakes and continues with the art museum's strategy for cultural development and education [7]. This "strategy" is being translated to the implementation of a wide variety of educational programs and workshops, mainly for children, teenagers, families and school groups which offer successful learning opportunities and enjoyable museum experiences to the visitors.

4 Challenges of Adult Learning in Art Museums

Through their interactive nature, today museums have been considered important sites for informal and non-formal learning having already a long history of educating public [8]. Although nowadays all kinds of museums, including those situated in Greece, pay special attention to their educational dimension, they are not always given the consideration they deserve, as meaningful centers in adult education. Scholars have noticed that "museums are underrepresented on existing adult education literature" [9] underlining "the clear need to further integrate adult education and museums" [8].

The discourse about an increased interaction between adult educational theory and museum sites becomes even more crucial when it comes to the Art Museums, mainly because of them serving as "repositories of high status knowledge" [10]. Despite the interactive character of post-modern art whose means of expression often require the visitor's participation, museums of contemporary art face special challenges in recruiting new audience, due to the difficulties in art's perception by a large proportion of society. The "unconventional" and "subversive" character of modern and contemporary art, which struggled a lot to overthrow the previous "academic conventions", creates a gap between art and the public, attributed mainly to the absence of collective meanings and recognizable symbols and codes associated with the artworks. It becomes easily apparent that if the contemporary museum does not want any more to present an art described as an "affair between artists and art theorists where the public in not invited" [11], special interpretative tools are necessary in order to approach it.

5   Adult Learning at MMCA: The Previous Experience

5.1   Workshops for Immigrants and Unemployed People

The Action 09/1.2 Program entitled "The art as a channel for the integration of immigrants—workshop of painting, photography and theatre" was the museum's first attempt to handle a large scale external funded program for the implementation of educational activities especially for adults. It was funded from the European Integration Fund and was addressed to adult immigrants. The 4-month program was held in spring 2011 and each of the workshops had at least 20 members. The teaching stuff consisted of professors as well as of visual artists.

The main objectives of the Action 09/1.2 were to promote the intercultural dialogue and to facilitate the integration process at the host country by creating better conditions for social inclusion for the participants and their communities. It also aimed to offer access to a cultural site and the potential of "familiarization" with it.

Upon the completion of the Action 09/1.2, the creations of the two visual-art workshops (painting and photography) were presented in an special exhibition accompanied by a theatrical performance held by the participants of the theater workshop. The action 09/1.2 derived also the publishing of a catalogue with texts, photographic documentation of the project and the immigrants' feedback on the experience [12].

Responding to the Greece's ongoing economic crisis and recognizing the responsibility of the contemporary museum in combating social inequality [13], the following years, MMCA, apart from other benefits and facilities, decided to provide forms of useful and exploitable artistic education for unemployed people. The Active Art Workshops for the Unemployed were implemented during the years 2013 and 2014, when a grant from Stavros Niarchos Foundation to the MMCA, supported the museum's special fast track art workshops for the unemployed.

The main goals of this program were to reinforce the attendants' creative skills and to help them discover their individual aptitudes through art and artistic practice. It focused on the encouraging of self-esteem, along with the contact with the art, while equipping the unemployed citizens with sort of new qualification in order to facilitate them in a potential professional reorientation.

The workshops offered new skills in the fields of fine arts, photography, printmaking, design, new media and video art. They had a duration of 100 seminar hours and were attended in total by 340 trainees of varying ages and levels of education, who responded to the call of MMCA.

Exactly like the program for immigrants, it was completed with a huge exhibition in the museum's premises, with representative artworks of the participants. The catalogue delivered included also an extended analysis of the evaluation results of the program, conducted by means of a questionnaire that was distributed both to the trainees and their instructors at the end of the program [14, 15].

5.2 "Cultural Lessons"

"Cultural Lessons" is a series of academic lectures held every week on MMCA in a paid basis with a duration of 4–6 months (usually from January to June). Various professors, academic scholars, artists and curators are invited to speak about a certain issue related to arts, belonging to a predefined thematic axis. Presenting an academic profile, they offer the opportunity to examine in depth the cultural and social phenomena in all their perspectives (historical, philosophical, psychoanalytical etc.) by specialized professors on it. They are being attended from people of different ages and interests from MA students on Culture and Arts to retired art-lovers.

6 "Adult Art": A New Sustainable Workshop

6.1 The History

The workshop called "Adult Art" begun in March 2016 after a 6-month's disruption in the function of MMCA. Two months before its temporary closure, during the International Museum Day in May 2015, a thematic museum guide was organized, along with an art workshop based on the theme given by the International Council of Museums (ICOM). One of the artists whose artwork was presented in the exhibition, was invited in order to animate the workshop. The audience's response as well as the outcome of the workshop, convinced the museum staff for the public's increased interest, almost a kind of "demand", for a workshop addressed to adults in a constant basis.

In fact, the interest for a workshop for adults, even in a paid basis, had been occasionally set to the museum staff from segmented categories of visitors such as former participants of the previous workshops, parents whose children participate in the workshops of the museum, students of Fine Arts and Art History and museum friends.

During the planning procedure and especially as part of the segmentation process, MMCA tried to engage both "traditional visitors" and "new ones" [2]. As "new visitors" were considered people from different professional backgrounds not related directly to the arts, many school teachers or other educators with whom the museum come across during the educational programs for school groups and other infrequent museum visitors.

6.2 The Goals

Through the Adult Art workshop, MMCA aims to provide a multi-dimensional perspective of the artworks, of the exhibitions and of the museum space, exploring

new ways of coming across with the MMCA's collections. Basically it responds to the needs of the adult audience for further artistic education and familiarization with the "vocabulary" of modern and contemporary means of expression, in order to reinforce the understanding of historical, aesthetic and technical features concerning the artworks. The workshop offers the adequate interpretive tools that facilitate participants to overcome possible difficulties in developing personalized links with art as well as the equipment with the criteria that could encourage personal approaches and considerations. Finally, Adult Art promotes the personal artistic expression in the framework of creative and unifying social experiences through art, making participants feel attached to spiritual activities.

6.3   Brief Description

A casual 4-hour meeting of Adult Art provides at first place a contact with the artworks of a selected artist, belonging to the MMCA's permanent collection or temporary exhibition. This "theoretical" part offers an overall view of the selected artist's oeuvre and it is usually realized with the help of video or power point projection. Artists' stories, works of art from collections and museums, social and political contexts, unknown narratives and elements of history and aesthetics, compose a rich preparatory stage exactly before the direct contact with the related museum exhibits in the exhibitional space.

Afterwards, the participants take part in a creative workshop based on the concepts, the artistic practices and techniques used by the selected artists, experiencing in practice tangible artistic procedures. At the end of the "practical" and "experiential" stage, all participants make a brief presentation on their artwork commenting their choices and discussing them with the educators and the rest of the group.

By combining theoretical references and practical application, Adult Art manages to offer a holistic acquaintance with the process of art creation in all its successive steps: from the original idea and the selection of the techniques and the materials, to the final synthesis of the artwork. The museum educators of Adult Art are a museologist, employee at MMCA and a visual artist, coordinator at the museum. Both attribute to the implementation of each stage of the meeting, by interpreting, commenting and encouraging the understanding and the creative expression of the participants.

6.4   The Audience's Response

From the first series of its implementation, Adult Art, overcame the minimum necessary number of attendees needed for its realization.

After 3 years of implementation, the MMCA's Adult Art workshop maintains almost its first core of participants, while recruiting gradually new members. Despite the economic crisis, the lack of time for leisure activities for a great proportion of

Greek population and the parallel offer of creative activities by other cultural institutions, the 75% of the attendants of the first series of meetings, are being registered in every cycle ever since. The fact that people who interrupt for a specific cycle, appear again in the next one, underlines the importance of not losing the sense of "connection" with the museum, the educators and the rest of the group.

6.5 The Evaluation

The evaluation process of the program is based until now on questionnaires and on group discussions. By these methods, the museum attempts to map the participants' initial expectations from the program, the components that motivate them to continue and valuates possible alterations in their relation with the contemporary art and the museum space. It also estimates how satisfied they are from the museum's infrastructures, by the frequency and the duration of the meetings and by innovations such as special events or direct contact with guest artists.

The questionnaire includes close ended questions, multiple choice questions, rating scale questions, as well as some open-ended ones.

The analysis of the answers enrich MMCA's understanding of the audience's needs. For example, among the answers given to the very first question which asks the participants to rate their initial expectations from the workshop, the most popular seem to be "the understanding of notions and the acquirement of knowledge on art", the next one "the touch with the visual arts" and afterwards "the familiarization with the museum", the "entertainment through a leisure activity", the "acquirement of new skills", "the chances for personal artistic expression", while the less important seem to be the "socializing and being a member of a group for activities".

Other interesting results are associated with the participants' relation to contemporary art and the museum. Almost all of them claim that the workshop have changed their relations with the art. The ways that this alteration is being conceived and described, are different, varying from "I feel I understand it better than before" and "I have already started to develop a critical aspect towards artworks and artists".

6.6 Adult Art and Social Media

The public group under the name "Adult Art—Macedonian Museum of Contemporary Art" [16] was created after the members' request to share news, comments and photos of the educational process with the rest of the group, along with their real and digital friends in social media. Facebook is a social network still popular in Greece especially among people over 30 years old. The Adult Art's public group page actually serves as an occasion for a "digital gathering" of the workshop's members, offering to them a unifying sense of sharing and finally, enforcing the relations between them. The rest of the digital group's members serve as a kind of an increasing

extended network, which shares and spreads the page's posts supporting occasionally the workshop's events by their physical presence in the museum' space.

7   Conclusion

"Adult Art", a workshop for adults offered in a constant basis at Macedonian Museum of Contemporary Art, has emerged as a response to the audience's desire for museum learning experiences. Based on the museum's rich experience on educational programs for adults, it works across audience and contemporary museum in ways that explore new paths on the designing of engaging activities for the audience. At the same time Adult Art promotes the museum's potential to act as a space for critical literacy and development of social consciousness. Working in depth with a wide range of ideas and stimuli provided by the postmodern artistic creation, the workshop integrates the museum's policy to render the public a "meaning co-creator" by offering the space and the occasions, where interpretations under different spectrums are equally accepted and encouraged. In an era where adult education is mainly related to the acquiring of new skills for a better "employability", museum's innovations such as "Adult Art" maximize the contemporary museum's dynamics and justify its role as a "social museum" that can be "successful in attracting and retaining both existing and new audiences while making a positive impact on society" [17].

References

1. Wells M, Butler B, Koke J (2013) Interpretive planning for museums. Integrating visitor perspectives in decision making. Left Coast Press, Walnut Creek, CA
2. Runyard S, French Y (1999) The marketing and public relations handbook for museums, galleries and heritage attractions. Altamira Press, Walnut Creek, CA
3. Hooper-Greenhill E (1994) Museum education. In: The educational role of the museum. Routledge, London, pp 229–257
4. Fourteau C (2004) Building an audience: a long term goal. In: Museum and galleries as learning places. LERNMUSE project of the European Commission. Engageextra, London, pp 37–41
5. Dodd J, Sandell R, Coles A (1998) Building bridges: guidance for museums and galleries on developing new audiences. Museums & Galleries Commission, London
6. Rentschler R (2007) Major case study: museum of contemporary art markets itself. In: Rentschler R, Hede A-M (eds) Museum marketing competing in the global marketplace. Elsevier, Great Britain, pp 197–202
7. Scaltsa M (2009) Museum education in the Macedonian Museum of Contemporary Art. In: 1979–2009 30 years Macedonian Museum of Contemporary Art. Catalogue, Macedonian Museum of Contemporary Art, Thessaloniki
8. Monk F-D (2013) John Dewey and adult learning in museums. Adult Learn 24:63. On behalf of the Official Journal of the American Association for Adult and Continuing Education (AAACE). Sage. https://doi.org/10.1177/1045159513477842

9. Grenier R-S (2007) How do museums fit into our notions of adult education. In: Proceedings of adult education research conference. New Prairie Press, Halifax, NS
10. Borg C, Mayo P (2010) Museums: adult education as cultural politics. N Dir Adult Contin Educ 127:35–44. https://doi.org/10.1002/ace.379
11. Worts D (1995) Extending the frame: forging a new partnership with the public. In: Pierce S (ed) Art in museums. Athlone Press, London
12. The Art as a Channel for the Integration of Immigrants Workshop of Painting, Photography and Theatre (2001) Exhibition catalogue. Macedonian Museum of Contemporary Art, Thessaloniki
13. Sandell R (2002) Museums and the combating of social inequality: roles, responsibilities, resistance. In: Sandell R (ed) Museums, society, inequality. Routledge, London
14. Active Art Workshops for the Unemployed. Macedonian Museum of Contemporary Art. Sponsor: Stavros Niarchos Foundation (2013) Exhibition catalogue. Macedonian Museum of Contemporary Art, Thessaloniki
15. Active Art Workshops for the Unemployed. Macedonian Museum of Contemporary Art. Sponsor: Stavros Niarchos Foundation (2014) Exhibition catalogue. Macedonian Museum of Contemporary Art, Thessaloniki
16. https://www.facebook.com/groups/mmcartadult/
17. MacLean F, O'Neill M (2007) The social museum and its implications for marketing. In: Rentschler R, Hede A-M (eds) Museum marketing competing in the global marketplace. Butterworth-Heinemann, Oxford, pp 215–225

The Role of Social Relations in Fostering Entrepreneurship and Creative Use of SME Resources

Natalya Totskaya

Abstract This paper investigates the role of social relations in helping individual entrepreneurs to develop their businesses in uncertain environmental conditions. Using the social (relational) capital theory and the mixed methods approach we examine the role played by horizontal and vertical relations established by the owners of Russian small and medium size enterprises in helping them to choose the best business development opportunities. Prior research has established that connections play a critical role in entrepreneurial activities if national institutional environments are underdeveloped, and the rules of doing business are uncertain. "Who do you know" vs "what do you know" becomes a critical contributor to running a successful business across various industries and countries. This study highlights the importance of horizontal networking for expanding the scope of entrepreneurial activities. It also discusses the stimulating role of environmental uncertainty in SME development.

Keywords Social capital · Relational ties · Entrepreneurship · SMEs · Emerging markets

1 Introduction

This paper aims to add to the less than extensive literature on small and medium size enterprises (SMEs) operating in Russia, one of the major emerging markets. The purpose of this study is to look at relationship between the structure of SME relational ties, also known as "sviazi", and their developmental opportunities.

"Sviazi", i.e. social and business networks represent a resource that is unique to any particular firm—its social capital. The forms and effects of social capital have been extensively studied in the context of developed economies [1–10]. Researchers

N. Totskaya (✉)
Laurentian University, Sudbury, ON, Canada
e-mail: ntotskaya@laurentian.ca

paid less attention to the role played by social capital in emerging markets, especially in Russia. Some recent studies of Russian business practices touch upon the issues of building and using network relations [11, 12], but this topic is still under-investigated. We look at firm-internal and firm-external ties as the two sources of social capital. These two types of social capital vary in terms of the strength of ties: they can be strong or weak [7]. Strong ties are often associated with in-group relations and firm-internal social capital. Weak, or arm's length ties are associated with formal relations, and based on the practice of repeated interactions or on the third-party references. Firm-external network relationships are often built upon weak ties.

This study aims to look at the link between the structure of SME relational ties and its developmental choices. The context of Russia as an emerging market will provide a setting in which the role of social capital as a firm resource is especially visible. We will look at firm-internal and firm-external ties as the two sources of social capital. These two types of social capital vary in terms of the strength of ties. Social capital literature distinguishes between strong and weak ties [7]. Strong ties are often associated with in-group relations and firm-internal social capital; they are characterized by frequent interactions, high reciprocity and ascribed trust. Weak, or arm's length ties are characterized by formal, sporadic transactions; they are associated with earned trust that is based on the practice of repeated interactions or on the third-party references. Firm-external network relationships are often built upon weak ties.

Two research questions are addressed in this study: (1) What are the effects of social capital on the choice of SME developmental options? (2) How does external environment contribute to SME development? To answer these research questions, the second section of this paper presents a theoretical framework for the analysis of SME networking. The third section describes the research methodology and analytical procedures based upon primary survey data, and follow-up interviews with managers of Russian manufacturing SMEs. Results of hypotheses testing followed by contributions and implications of this study conclude this paper.

2 Social Capital in Russia: How "Sviazi" Matter

2.1 The Value of Social Interactions in Emerging Markets

Doing business in emerging economies brings into focus the importance of networking as most of emerging countries suffer from institutional voids, and do not provide any stable institutional mechanisms to support economic actors [13]. Inter-organizational networks differ across types of firms and across countries in terms of configuration and strength of ties. For instance, in Asian context family ties, common birthplace or social background are very important for creating inter-organizational networks [14]. There is some evidence that in Europe weak ties seem to be more beneficial for SME development [15]. In Poland for example, ties

and social networks may not play role while the implementation of new technologies increases competitiveness and this is the aim of companies [16] while in Greece, especially with the prolonged economic crisis, issues of networking play a significant role for companies in different sectors [17, 18]. Yet the studies of Russian business networking tend to emphasize the imperfections of post-communist context, and the rigidity of "sviazi" [1, 11]. In rapidly changing emerging economies, social capital can leverage SME's competitive position and increase its resistance to unfavorable external and internal changes. Vertical and horizontal networking brings in more opportunities for growth [19]. The role of networking is greater for SMEs as they have limited resources and often rely on business networking to improve their competitiveness.

2.2 Qualitative Assessment of Complexity of SME Business Partnerships

The earlier discussion has introduced some evidence that networking allowed firms to explore more opportunities, and even attempt internationalization [20]. Thus, the scale of SME development in terms of diversity of business partnerships may be large. SMEs that are involved in extensive networking ("sviazi") may even try internationalization as a long-term developmental option.

Hypothesis 1: Extensive networking is more likely to lead to the utilization of more complex partnerships.

Like other organizations, SMEs operate in an external environment where market size and other conditions define socio-economic, political, and legal conditions, and shape the behavior and outcomes of economic actors. Unpredictable changes in external environment affect SME developmental options [21], and also increase the impact of poor management choices [22]. Thus, greater uncertainty calls for cautious firm behavior, including networking strategies.

Hypothesis 2: Environmental uncertainty is less likely to lead to the utilization of complex partnerships.

3 Research Methodology

3.1 Sample, Instruments and Procedures

Sample and Measures Three hundred SMEs officially registered with the Federal Tax Service of Russia were contacted about participation in this study. SMEs represented a mix of manufacturing firms from high- and low-tech industries; all were located in the region of Siberia. Most of the companies in the sample had up to

100 employees. Seventy-one firms agreed to participate, making the response rate about 24%, and this rate was similar to prior research conducted in emerging markets [2, 23]. To compensate for the small sample size, eight in-depth interviews have followed statistical data processing. The interviews were recorded about 6 months after initial data collection.

Independent Variables Structure of firm-external networking was measured by the number of horizontal and vertical ties [3]. Drawing upon previous research [4, 24] respondents were asked about eight horizontal and seven vertical ties. Horizontal ties included connections with customers, suppliers, business partners, competitors, professional associations, chambers of commerce, foreign commercial structures, and ethnic associations (diaspora). Vertical ties included connections with banks, financial agencies, government agencies, and also federal, regional, municipal and foreign government structures. Strength of ties was measured by their reciprocity. On a dichotomous scale, reciprocity was coded as 1 for close relationships and 0 for distant relationships [7].

Environmental uncertainty was measured with six items assessed on a 7-point Likert scale [24], with responses varied from 1 (disagree very strongly) to 7 (agree very strongly).

Dependent Variables Complexity of partnerships was measured by the scale and sophistication of SME business dealings, using previously tested measure of internationalization [23]. Activities such as import, direct export, export through intermediaries, licensing (product or service), contracting (agency or distribution), franchises, direct sales and direct purchasing were measured dichotomously (1 if yes, 0 otherwise). Answers were coded in three categories reflecting the complexity of SME contractual relations. Involvement in direct domestic sales or purchasing only was coded as 1. If in addition to that the SME had any agency or distribution agreements, it was coded as 2. And finally, if the SME was involved in all the previously mentioned types of relations, and had any foreign contracts or partnerships, it was coded as 3. These three categories allowed for the assessment of the overall complexity of SME business dealings.

Control Variables To minimize the effect of confounding variables this study controlled for firm age, size, and industry. Firm age was measured by the number of years as of SME founding, not considering changes in firm ownership or name. Firm size was measured as the natural logarithm of the number of employees [25]. Industries in the sample were coded as high to medium-technology (1) or medium to low-technology (0), following the classification based on R&D intensities [26].

Instruments and Procedures The questionnaires were filled in either by the CEOs themselves, or by one of the top managers, who were well informed of the SME's market development. Industry codes were validated through statistical reports collected by the Russian Federal State Statistics Service. Firm-level data on contractual relations and various partnerships was also verified via firm web pages, booklets and catalogues. Firm age data was verified through an on-line database of the Federal

Tax Service of Russia. Multinomial Logistic Regression Analysis was used to examine the main effects between dependent and independent variables.

4 Results

4.1 Relations Between SME Networking and Complexity of Partnerships

In performing hypothesis testing with multinomial stepwise logistic regression analysis, we chose a p-value of .2 as a variable removal probability; the level recommended for logistic regression models using small samples [27]. Only the density of horizontal ties made a unique statistically significant contribution to the model testing partnerships (contractual relations). This strongest predictor of complexity of contracts recorded an odds ratio of 2.188 for the model, comparing the first and the second outcome, and 2.930 for the model, comparing the first and the third outcomes. This indicated that the SMEs that developed at least one horizontal tie above sample mean level were over two times more likely to be involved in more complex business dealings at domestic and international levels, controlling for all other factors in the model. Environmental uncertainty made a statistically significant contribution to a model. SMEs chose to add international partnerships to their portfolio of contracts 1.3 times more likely if environmental uncertainty was one unit above mean level, controlling for other factors in the model.

The second model tested the strength of ties and environmental uncertainty as predictors. Strength of horizontal ties made a unique statistically significant contribution to the model by comparing the first and the third outcomes. With an odds ratio of 2.569, strength of horizontal ties was the strongest predictor of utilization of complex contracts that included domestic and foreign partnerships. This indicated that SMEs with a higher than average strength of horizontal ties were over two times more likely to develop various domestic and international contractual relations than just domestic direct contracts, controlling for all other factors in the model. Other variables in this model were not significant.

Summing up the test results provided partial support for Hypothesis 1. Both density and strength of horizontal ties increased the likelihood of SMEs developing complex relations with business partners, including international partnerships. Hypothesis 2 was not supported. Overall, SMEs with strong horizontal ties were able to have business dealings that were riskier, and that required more time and commitment of resources. Vertical ties had no effect on the utilization of complex partnerships. Environmental uncertainty seems to have had the direct effect on stimulating SMEs to diversify their contractual relations, and add intermediaries and foreign firms as their partners.

4.2   More About "Sviazi": Follow-Up Interviews

To elaborate further on the findings of statistical analysis we followed-up with eight interviews to shed more light upon test results. Respondents were asked to comment about the types of connections important for establishing their businesses, and for developing them at later stages. They were also asked about general approaches to doing business, about various factors contributing to SME success, or impeding its development. Most of respondents have noted that close, or long-term relationships were preferred as they were mutually beneficial, and partners were trustworthy. Those close relations could be built upon weak ties, and by using variety of tools.

Thus, the interviews supported the notion that firm-external networking improved competitiveness, and helped SMEs to establish stronger market position. Administrative ties could help getting into specific market segments with tighter regulations. At the same time relying on business-to-government networking restricts developmental options, especially for SMEs that are seeking wider scope of activities, and faster growth.

5   Discussion and Conclusion

The research addressing social capital of firms, and in particular, SMEs is rather fragmented. Most of existing studies focus on the Asian context. Hence, the most important contribution of this study is to add more information on the value of relational capital for SMEs operating in the emerging economy of Russia. By doing that, this study provides more empirical evidence for the less explored areas of firm strategic behavior in unstructured environments. It also contributes to the less developed stream of organizational social capital research, indicating that horizontal network connections facilitate the utilization of diverse and sophisticated contractual relations with SME partners. This particular aspect of SME development has not been tested in the literature. This study also brings into focus an important distinction between the role of horizontal and vertical networking, and provides more insight into the role of contextual factors in firm strategic actions and outcomes.

This study extends our understanding of the specific role of business networking for emerging markets SMEs. Another important implication is the stimulating role of environmental uncertainty for building complex partnerships. Owners and managers of SMEs may benefit from a better understanding of the role played by bridging connections in fostering specific strategies of growth that can be based on innovative thinking or implementation of new technologies.

References

1. Afanassieva M (2015) Survival through networks: the "grip" of the administrative links in the Russian post-Soviet context. Public Manag Rev 17(9):1261–1281. https://doi.org/10.1080/14719037.2014.906964
2. Batjargal B (2007) Network triads: transitivity, referral and venture capital decisions in China and Russia. J Int Bus Stud 38:998–1012. https://doi.org/10.1057/palgrave.jibs.8400302
3. Boissevain J (1974) Friends of friends, networks, manipulators and coalitions. Basil Blackwell, Oxford
4. Cao Q, Simsek Z, Zhang H (2010) Modeling the joint impact of the CEO and the TMT on organizational ambidexterity. J Manag Stud 47(7):1272–1296. https://doi.org/10.1111/j.1467-6486.2009.00877.x
5. Coleman JS (1988) Social capital in the creation of human capital. Am J Sociol 94:95–120. https://doi.org/10.1086/228943
6. Collins CJ, Clark KD (2003) Strategic human resource practices, top management team social networks, and firm performance: the role of human resource practices in creating organizational competitive advantage. Acad Manag J 46:740–751. https://doi.org/10.2307/30040665
7. Granovetter MS (1973) The strength of weak ties. Am J Sociol 78:1360–1380
8. McDonald ML, Westphal JD (2003) Getting by with the advice of their friends: CEOs' advice networks and firms' strategic responses to poor performance. Adm Sci Q 48:1–34. https://doi.org/10.2307/3556617
9. McDonald ML, Khanna P, Westphal JD (2008) Getting them to think outside the circle: corporate governance, CEO's external advice networks, and firm performance. Acad Manag J 51:453–475. https://doi.org/10.5465/AMJ.2008.32625969
10. Nahapiet J, Ghoshal S (1998) Social capital, intellectual capital, and the organizational advantage. Acad Manag Rev 23(2):242–266. https://doi.org/10.5465/AMR.1998.533225
11. Ledeneva A (2013) Russia's practical norms and informal governance: the origins of endemic corruption. Soc Res Int Q 80(4):1135–1162. https://muse.jhu.edu/article/541990
12. Titov VN (2013) The distribution of social capital as a condition for the modernization of Russian society. Sociol Res 52(5):40–58. https://doi.org/10.2753/SOR1061-0154520503
13. Khanna T, Palepu K (1997) Why focused strategies may be wrong for emerging markets. Harv Bus Rev 75:44–52
14. Hitt MA, Lee HU, Yucel E (2002) The importance of social capital to the management of multinational enterprises: relational networks among Asian and Western firms. Asia Pac J Manag 19:353–372. https://doi.org/10.1023/A:1016247920461
15. Musteen M, Francis J, Datta DK (2010) The influence of international networks on internationalization speed and performance: a study of Czech SMEs. J World Bus 45:197–205. https://doi.org/10.1016/j.jwb.2009.12.003
16. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214. https://doi.org/10.4018/978-1-5225-0843-4
17. Sahinidis A, Kavoura A (2014) Exploring corporate social responsibility practices of Greek companies. The Małopolska School of Economics in Tarnów Research Papers Collection 25:185–193
18. Kavoura A, Sahinidis A (2015) Communicating corporate social responsibility activities in Greece in a period of a prolonged economic crisis. Procedia Soc Behav Sci 175:496–502. https://doi.org/10.1016/j.sbspro.2015.01.1228
19. Totskaya N (2015) Relational ties in emerging markets: what is their contribution to SME growth? N Engl J Entrep 18:47–60. https://doi.org/10.1108/NEJE-18-02-2015-B004

20. Tang YK (2011) The influence of networking on the internationalization of SMEs: evidence from internationalized Chinese firms. Int Small Bus J 29:374–398. https://doi.org/10.1177/0266242610369748
21. Davidsson P, Achtenhagen L, Naldi L (2007) What do we know about small firm growth? In: Acs ZJ, Audretsch DB (eds) The life cycle of entrepreneurial ventures, vol 3. Springer, New York, pp 361–398
22. Covin J, Slevin DP (1991) A conceptual model of entrepreneurship as firm behavior. Entrep Theory Pract 16:7–25. https://doi.org/10.1177/104225879101600102
23. Manolova TS, Brush CG, Edelman LF, Greene PG (2002) Internationalization of small firms: personal factors revisited. Int Small Bus J 20(1):9–31. https://doi.org/10.1177/0266242602201003
24. Xu K, Huang KF, Gao S (2012) The effect of institutional ties on knowledge acquisition in uncertain environments. Asia Pac J Manag 29(2):387–408. https://doi.org/10.1007/s10490-010-9196-6
25. Lu JW, Beamish PW (2001) The internationalization and performance of SMEs. Strateg Manag J 22:565–586. https://doi.org/10.1002/smj.184
26. Organisation for Economic Co-operation and Development (2015) Institutional sectors and classifications for R&D statistics. In: Frascati manual 2015: guidelines for collecting and reporting data on research and experimental development. OECD, Paris. https://doi.org/10.1787/9789264239012-5-en
27. Hosmer DW, Lemeshow S (2000) Applied logistic regression, 2nd edn. Wiley, New York. https://doi.org/10.1002/0471722146

Traditional and Modern Forms of Synergies Between Cultural and Tourism Sectors: Challenges and Opportunities for Greek Folk Festivities Promoting Traditional Products

Olga Tsakirides

Abstract The paper examines the concept of culture in its modern dimension, its relation to the traditional civilization and intangible cultural heritage, and finally festivals as traditional institutions promoting traditional products on the market. In this paper, two traditional festivals/festivities promoting traditional products are being studied: the "Chestnut Feast" and the "Melizazz Festival" both located in Arcadia (Peloponnese, Greece), areas of special natural beauty and cultural interest. From the study of the two above cases conclusions are drawn and questions are raised regarding the improvement of these kind of feasts in order to be a part of the tourist product for the benefit of the local sustainable growth and the cultural tourism packages as well.

Keywords Traditional products · Traditional feasts · Cultural tourism · Intangible cultural heritage · Synergies

1 Introduction

The aim of this paper is to study modern cultural institutions that contribute to modernization and improvement of the tourist product in Greece through the synergies of all sectors of the economy. New ways of intercultural and tourist interconnection, for mutual benefit, are being studied. Specific goals of this paper are to highlight small traditional feasts found throughout Greece, their role in the promotion of raw materials and products based on tradition and their tourism exploitation. For this reason, parameters regarding the organization of these festivities in terms of effectiveness are being examined. The qualitative approach research includes two case studies, taken from the sum of feasts recorded.

O. Tsakirides (✉)
National Center of Social Research, Athens, Greece

345

2 Methodology

This paper is a follow—up to a basic research which took place in 2017–2018 under the program "Social and Economic Dimensions of Innovation in Industry and Labor Market", Research Package 4. The title of the research is "Innovation Based on Culture and Tradition—Research in Production Units". In this research a first picture of the phenomenon of small or larger enterprises innovations based on traditional raw materials, traditional products and traditional techniques is being presented. We focus to the improvement of the Greek tourist product and to the enhancement of the comparative advantages of the whole country as a tourism and cultural destination, but also to the enhancement of the advantages of each individual area, as the cultural mix of the various regions differs from each other. We could say that the mixture of culture and local tradition give each place its own identity which can become its branding. We put forward this idea for further academic discussion.

The approach followed is multidisciplinary. So, some concepts were examined through wider social and humanitarian sciences, while international bibliography has provided considerable assistance. The first stage of the research identified traditional festivals that enhance local products. These festivals mainly promote products and raw materials existing in Greece for many centuries, some of which are prehistoric ones that still exist, as for example olive, oil, herbs etc. This research has encountered difficulties since the material is scattered and scarcely published. Multiple internet sources, international databases and files were used.

Next, two festivals were selected, well-known but with several differences as to their organizing and readiness to receive visitors. One promotes a traditional fruit,—chestnut—and the other a special variety of eggplant, the "Tsakoniki" eggplant. The two festivals take place every year. The "Kastanitsa" feast takes place every October and the "Melizazz" festival is organized every July, in the middle of the touristic season. For their selection, important was the role of accessibility organizing, online presentation, accessibility costs, the promotion of a traditional Greek product, the existence of a wider visitors' interest at the area of the product, the prospects for growth in terms of feasibility and realism. We chose the qualitative approach [1–4] as a tool for field research, an approach that was based on scientific, experimental observation with pre-designed observation sheets, photographs and study of the official websites (where available) in order to achieve a more comprehensive, scientific approach. We visited the areas in question through organized excursions of known travel agencies in the same year. Observations were recorded in the two case studies.

3 Basic Concepts, Literature Review

Alfred Kroeber and Clyde Kluckhohn recorded more than 150 different definitions of "culture" [5]. Today, several developments affect both the content of its concept and its practical dimensions, whereas culture practices are considered an integral part thereof. The most important aspects are:

(a) The modern dimensions and content of the phenomenon
(b) The importance of civilization (and/or culture) for the economy
(c) The intercultural dialogue and interdisciplinary approaches

Changes that affect the notion of culture nowadays include:

- Technological progress, including the Internet
- Globalization and the trends of homogenization and differentiation, as well as the concept of "global village" (global village theory) [6, 7]
- The economic crisis and the pressure occurred in the state budgets that suffer for a reduction of costs, as well as the development of the "economy of experience" [8]
- The intensity of refugee flows from war zones to Europe and the West and the increase of migratory flows (referred to as a phenomenon of "new immigration") [9]
- Scientific discoveries
- Ecology and environment issues are now part of everyday life, while natural disasters and extreme weather events hit societies, structured and non-structured environment, economies and countries
- The prevalence of the principle of "sustainable development"

In Greece, studies highlight the economic dimension of the cultural sector and its contribution to GDP [10, 11]. Other studies examine the role that creative industries and the exploitation of cultural resources play in sustainable growth [12–14].

Modern cultural organizations face international competition and modern economic conditions mainly in the following ways:

- They aim at innovation and quality services, utilizing their competitive advantages
- They develop mild business activities
- They cooperate with all economy sectors seeking funding from multiple sources
- They apply the principles of management and marketing
- They undertake initiatives of cultural resources exploitation in each region in order to achieve its sustainable development [15].

At the same time, new cultural enterprises appear offering management, education, public research, promotion, cultural tourism packages services etc. In the field of culture, new specializations and new interdisciplinary objects are emerging [16].

Modern technology is an important means of preserving, cultivating and enhancement of cultural wealth, and it is indispensable to cultural organizations in order to support their operations [17].

In conclusion, culture is now considered as a strong part of the economy, it needs the assistance of management and marketing to function effectively and synergies with the other three sectors of the economy.

3.1 Local Culture: The "Place" and Its Cultural Resources

Tradition is connected with folk culture and it has even become one of its distinctive qualities [18]. It also contributes to the formation of intangible cultural heritage. People's culture includes all those cultural elements deriving from a society and transported over time to the next generations as "tradition". Key element in the semantic structure of the term "Tradition" is the "transfer", i.e. the intergenerational transfer of cultural elements. Cultural elements are transported "orally", as customs and traditions. UNESCO today records intangible cultural heritage, as a heritage of humanity.

Terry Eagleton in his work "The Idea of Culture" argues that it is a vivid procedure for the evolution of civilization to respect the past in order to move forward [19]. The same writer refers to tradition as a variety of values that are inherited which significantly determine the function of the members of a society, often without these members being fully aware because everyday life most of the time is lived unconsciously. Local festivals and celebrations are part of the tradition of each place.

In modern times the term "place" tends to become broader; however, the "Place" is considered as our roots, as our "place of origin", as "our specific homeland". Over the years, in each place its own particular culture is being formed and therefore each place acquires its own particular cultural identity. Folk, traditional culture is part of each local culture. One would say that the culture of a specific place is its distinctive feature, its own "comparative or competitive advantage" [20].

The place is marked by the members of the society who settled in it, shaping a local culture of great value and importance [21]. Fernand Braudel in his book "History of Civilizations" refers inter alia to the question of civilization in relation to geographical areas pointing out that they have relationships of interdependence [22].

The "local cultural mixture" is composed of "cultural resources" [23]. Cultural resources constitute: the fundamental sources for the production/creation of cultural wealth/capital/treasure, the primary source for the creation of cultural wealth, the fundamental "inputs" in cultural system, the various cultural elements that can be recorded and exploited.

The exploitation of cultural resources and their management requires specialized knowledge and respect for the institutions that protect cultural heritage. Sustainable Development matches in a perfect way in this case. Among the local cultural resources traditional feasts and folk festivals are included as part of the intangible cultural heritage.

4   Folk Festivals: Promoting New and Old Local Products

Folk festivals and local folk feasts are closely linked with religious celebrations in honor of a Saint constituting a social traditional expression [24]. In modern folklore studies it is pointed out that in villages, in areas outside the city, an invasion of urban patterns and of the urban way of thinking is being observed [25]. According to Professor Mihalis Meraklis, nowadays a new kind of man—homo Urbanus—has been formed, who returns to the places of his origin, bringing to small villages and towns his way of thinking and living. Thus, folk festivals are not just social-religious events but in several places they acquire economic dimensions through the promotion of local products.

   This trend, especially for some forms of tourism, such as the cultural, the wine and gastronomic one, has been pointed out and analyzed [26–29]. From our observations to the recorded local feasts, although they lay in beautiful places with natural and cultural interest in general, the majority of them do not supported by smart platforms that could promote the events and the place. Moreover, they do not do not meet the modern requirements of travelers and analysts [30].

5   Folk Festivals, Local Feasts and Festivities: Two Case Studies

5.1   Local Culture: The "Place" and Its Cultural Resources

The Identity of the Festivity   The feast is organized every year towards the end of October in the village of Kastanitsa, in the Prefecture of Arcadia, in Central Peloponnese. The village is mountainous (mountain Parnon), located at an altitude of 840 m and it is surrounded by chestnut trees which makes the landscape unique in colors, especially in autumn. The Chestnut Celebration, which dates back to the eighteenth century, aims at the visibility of the area, attracting visitors and promoting the local chestnut production.

Management Bodies   The festival is organized by collective bodies of public interest, such as the Municipality of North Kynouria and "Parnonas SA". There are also environmental and cultural associations contributing the effort. The "Kastanitsa Environmental Information Center", a local leading institution for the protection of the forest and the environment, is one of the most important bodies.

Infrastructure   The road to the village, although recently restored, marked on both sides with white line, is narrow, with turns and uphill. There is only one hostel in the village, with few rooms, while the lack of public hygiene facilities is strong. There are three or four restaurants, located mainly in the village square, that cannot serve visitors effectively. Visitors' comments point out that while the attitude of the local is positive, the village does not have a modern substructure for visitors (from a well

known web platform), while complaints are also expressed about long waits at the restaurants before visitors are being served, as well as in terms of some issues of financial management (price list, receipts). The feast does not have a website; there is no formal organizing and taking of responsibility. However, many young people are trying to keep the village "alive".

Observations of Cultural Tourism The village is of cultural and environmental interest. It is one of the Tsakonika villages, built by the Tsakones, inhabitants of Laconia, who fled to mountainous Arcadia for reasons of protection and safety during the Medieval Ages. References to written sources can be found in the "Chronicle of the Morea" from the sixth century AD. It is a listed traditional settlement; the houses are stone-built, while there are towers and ruins of an ancient castle. An Environmental Information Center was established by the Management Authority of Mount Parnon and of Moustos wetland. On 28/2 October 2016 an exhibition of traditional professions was organized at the Center [31]. "Chestnut" as a traditional product is also celebrated in others areas of Greece such as Doliana, Agiasos, Xourichi etc. It must be noted that Arcadia in general and more specifically Doliana, have been recently offering traditional products such as honey, pasta, breads, nuts, herbs etc. which have been improved by innovative methods of production and advertising.

Comments on Gastronomic Tourism Traditional food and sweets based on chestnuts, such as chestnut jam, chestnut spoon sweet and salad—original and almost unknown to most people, chestnut paste and chestnut pie. This is a common phenomenon as literature has illustrated that contributes to the identity of a place [32, 33].

Accessibility The feast takes place along an open wide place of special natural beauty, surrounded by chestnuts and forest flora. The sides of the road leading to this plateau, on the outskirts of the village, are full of stalls, where chestnuts, as well as other local products made of chestnuts are sold. However, the area has not many possibilities since there is no parking space, while big buses cannot get there because of the road, which is very narrow and downhill. Large buses have to park several kilometers up and tourists walk on foot downhill while on the uphill the prefecture offers small buses of about 50 people each. Visitors have to wait for a long time. There are not any benches where visitors can have some rest. The evacuation of the area is unsafe and time-consuming. This is the case in other disadvantageous areas where action needs to be taken [34].

Discussion Points Relevant to Kastanitsa Feast According to the observations, the data collected and the S.W.O.T. analysis, among the strong points of the feast are the very interesting environment, with marvelous red and dark green colour of the chestnut trees specially during autumn, the traditional architecture of the houses, the unique local production of chestnuts of high quality, unique flavors and local recipes.

On the other hand, many weak points found like insufficient organization of the event, lack of infrastructure for guest hosting, problems in water and electricity

systems, lack of restoration, and last but not least, very important issue in our century is the lack of internet accessibility.

There are a lot of risks for further development because the roads are very steep with a lot of rotors. Since the evacuation of the space from the visitors is slow, due to the roads' condition, there is a great danger for accidents. In case of fire, let's say, it would be no less than a disaster that no one could ever imagined.

Hence, in order to succeed sustainable development a lot of investments should be done. The whole place has opportunities for alternative forms of tourism, such as cultural, agrotourism, mountain and other, but the local authorities should establish a strategic plan to attract funding and then tourists trying to exploit the local resources in general.

5.2 Local Culture: The "Place" and Its Cultural Resources Basic Concepts

The Identity of the Festival The festival takes place in the town of Leonidio, at the foot of Mountain Parnon, every year in mid-July. Leonidio is the capital of the Municipality of South Kynouria. In the area of Leonidio, the famous eggplant "Tsakoniki of Leonidio" grows. Formerly, the event was a traditional feast but today it has become an organized contemporary festival, a member of the European Festivals Association, with distinctions and awards. Initially, the festival, whose logo is an eggplant in the shape of a musical instrument, took place in order to promote local agricultural products. Today, it is organized in order to promote the town itself (Leonidio of Arcadia) traditional products, such as handmade loom weavings, wine production of nearby area of Nemea and the preservation and study of traditional dances worldwide searching and building cultural bridges. The festival area spreads across the settlement. A Visitor's Program and Guide is created every year.

Management Bodies Municipality of "NeaKynouria", the "Development Association of Parnonas SA" and various sponsors are the ones who cooperate. The creation of synergies that may bring benefits for all is a usual phenomenon that is far apart from competitions [35, 36].

Infrastructure Leonidio has several hostels for guests, restaurants, streets and sanitary facilities. It is a lowland town, capital today of the villages of "Tsakonia" with exit to the sea (Myrtoo Sea). All modern infrastructures are in good condition and there is also internet access. The festival has its own website.

Observations of Cultural Tourism The village of Leonidio retains the elements of a traditional village. There are tower houses and many samples of traditional architecture.

Observations of Gastronomic Tourism Local food based on the Tsakoniki egg-plant and wines of the nearby Nemea are offered. A cooking contest is held and the best aubergine dish is awarded a prize by a Committee of distinguished chefs.

Visiting the Place Access is easy, roads are asphalted and in good condition, there are parking and rest areas for the visitors.

Discussion Points Relevant to the Above Case-Study (Melizazz Festival)
According to data collected and the S.W.O.T. analysis a lot of strong points for this festival are emerged such as its modern organization, its innovative logo, its own website and its affective promotion of the unique local vegetable: the so called "Tsakoniki" eggplant. Furthermore, a variety of events bring together people from different cultures, cultivating intercultural dialogue.

On the other hand, some weak points diminish the positive impressions of the visitors such as the expensive prices in some restaurants and accommodation, the lack of adequate health infrastructures and the insufficient road network. The local community and the organizers of the festival should pay extra attention to remain the local traditional culture which is under pressure due to the massive type of touristic development. Apart from this, many opportunities arise for sustainable development investments on agrotourism and cultural tourism as well where entrepreneurship can be initiated [37, 38]. Leonidio could be developed as a center for excursions in the very interesting surroundings.

6   Discussion

The above two case-studies refer to local festivities promoting traditional products [39]. The first case is still considered as a local feast which has stuck in the past denying to receive a modern form. Hence, various problems appear preventing local development. In the second case the traditional feast has evolved into a modern festival with international visibility. Several synergies have been developed with local, regional and European units and agencies. Thus, the festival manages to contribute to local sustainable development.

7   Conclusion

Unique traditional products are not enough to make a place accessible in order to achieve sustainable development. Traditional festivals can be upgraded and orga-nized according to modern festivals standards, without losing their local color and authenticity. Hence, the challenge for local authorities is getting more and more important. Kastanitsa festival could be a springboard for local development, but strategic planning and efficient administration are needed, with an emphasis on building modern infrastructures. The "Melizazz Festival", being in danger of resting

on the laurel so far success story, needs to place particular emphasis on maintaining its local color. Moreover, in the above-mentioned cases, the financial management does not follow the international standards, without suitable price lists, menu and without giving receipts in several cases. Finally, special emphasis should be placed on health and safety issues in the event of accidents and natural disasters. In the context of sustainable development and interconnection of all these small traditional, local feasts and festivals with all the economy sectors and the local culture, field research and strategic planning are needed. To this end, it is proposed that a similar successful example from other EU member states, the United States or Canada is useful to be studied. This paper summarizes the results, which, due to the extent of the sample, may not be representative; however, they constitute a first discussion framework. Improvements are being highlighted so that each place can obtain greater benefit from these two local festivals.

References

1. Berg LB (1998) Qualitative research methods for the social sciences. Allyn and Bacon, Boston, MA. ISBN 0-205-26475-1
2. Robson C (2000) Real world research. Gutenberg, Athens. (in Greek)
3. Lydaki A (2012) Qualitative methods of social research. Kastaniotis, Athens
4. Sociology Lab of Panteion University and National Center for Social Research (1977) Introduction to the methodology and the techniques of social research. Gutenberg, Athens
5. Gizelis G (1980) The cultural system. Its semiotic and communicative character. Grigoropoulos, Athens
6. McQuail D (1995) Introduction to the theory of mass communication [in Greek by Papathanasopoulos S]. Kastaniotis, Athens
7. McLuhan M, Powers B (1986) The global village: transformations in world life and media in 21st century. Oxford University Press, New York
8. Tsakirides O (2016) Cinematographic entrepreneurships in Athens. Transformations in the period of economic crisis. In: Thanopoulou M, Mouriki A, Tsiganou J (eds) Employment and social policy in the municipality of Athens. National Center of Social Research, Athens, pp 129–151. http://www.ekke.gr/open_books/EKKE_BOOK_12.pdf
9. Tsakirides O (2012) A cultural approach for the integration of immigrants: perceptions of theory and practice. In: Afouxenidis A, Sarris N, Tsakirides O (eds) Integration of immigrants in Greece today: perceptions, policies, practices. National Center for Social Research, Athens
10. Pahaki K et al (2000) Culture as a branch of economic activity. Center for Planning and Economic Research, Athens. ISBN: 960-341-033-0
11. Lazaretou S (2014) Smart economy: cultural and creative industries in Greece. Could they be a perspective to way out of the crisis? (Working Paper No 175). Bank of Greece, Athens
12. Badimaroudis F (2011) Cultural communication: organizations, theories, means. Kritiki, Athens
13. Konsola D (2006) Cultural development and policy. Papazisis, Athens
14. Poulios J, Mascha E (2015) Cultural management, local society and sustainable development. Hellenic Open University, Athens
15. Belch M, Belch G (2017) Advertising and promotion: an integrated marketing communications perspective. McGraw-Hill, New York
16. Gantzias G, Korres G (2011) Cultural economy and sponsorships: economic management and development of cultural units. Hellenic Open University, Patra

17. Gantzias G (2017) Cultural management and cultural activities: the model dynamic perception of cultural activities. https://doi.org/10.4018/978-1-5225-2458-8.ch002
18. Meraklis M (2007) Greek folklore: social structure, ethics and customs, folk art. Odysseus, Athens
19. Eagleton T (2003) The idea of culture [in Greek translated by Maglinis I]. Polis, Athens
20. Tsakirides O (2012) Issues of identity and diversity in Greece today. Some questions about cultural management. In: Varvounis M, Sergis M (eds) Greek folklore. Herodotus, Athens
21. Tsartas P (1996) Tourists, travelling, places: sociological approach to tourism. Exandas, Athens
22. Braudel F (2001) The grammar of civilizations. Cultural Center of the National Bank of Greece, Athens. (in Greek)
23. McManamon F, Haton A (eds) (2000) Cultural resource management in contemporary society: perspectives on management and presenting the past. Routledge, London
24. Kakamboura R (1999) Among the urban center and the local communities. Association of Konitsa Province in Athens, Cultural Center of the Municipality of Konitsa, Konitsa/Greece. Published Ph.D. dissertation, National Capodistrian University of Athens
25. Varvounis M, Sergis M (eds) (2012) Greek folklore: historical, theoretical, methodological aspects, vol B. Herodotus, Athens. ISBN 978-960-485-039-6
26. Sharpley R (2000) Tourism and sustainable development: exploring the theoretical divide. J Sustain Tour 8(1):1–19. https://doi.org/10.1080/09669580008667346
27. Marchini A, Giganelli C, Diotallevi F (2016) The success factors of food events: the case study of Umbrian extra virgin olive oil. J Food Prod Mark 22:147–167. https://doi.org/10.1080/104554446.2014.1000432
28. Sims R (2009) Food, place and authenticity: local food and the sustainable tourism experience. J Sustain Tour 17(3):321–336. https://doi.org/10.1080/09669580802359293
29. Park KS, Reisinger Y, Kang HJ (2008) Visitor's motivation for attending the south beach wine and food festival, Miami Beach, Florida. J Travel Tour Mark 25(2):161–181. https://doi.org/10.1080/10548400802402402883
30. Buhalis D, Amaranggana A (2015) Smart tourism destinations enhancing tourism experience through personalization of services. In: Tussyadiah I, Inversini A (eds) Information and communication technologies in tourism 2015. Springer, Cham, pp 377–389. https://doi.org/10.1007/978-3-319-14343-9_28
31. Official website: www.fdparnonas.gr. August, 2018
32. Bitsani E, Kavoura A (2012) Connecting oenological and gastronomical tourisms at the Wine Roads, Veneto, Italy, for the promotion and development of agrotourism. J Vacat Mark 18:301–312. https://doi.org/10.1177/1356766712460738
33. Kavoura A, Bitsani E (2014) E-branding of rural tourism in Carinthia, Austria. Tourism 61:289–312. UDC: 338.48-44(1-22) (436)
34. Bitsani E, Kavoura A (2012) Accessibility versus advertising for mountain tourism: the case of Nafpaktia. Tourismos 7:217–235. 338.48+640(050)
35. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for Southeastern Rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, PA, pp 45–66
36. Kavoura A, Andersson T (2016) Applying Delphi method for strategic design of social entrepreneurship. Libr Rev 65:185–205. https://doi.org/10.1108/LR-06-2015-0062
37. Kavoura A, Sahinidis A (2015) Communicating corporate social responsibility activities in Greece in a period of a prolonged economic crisis. Procedia 175:496–502. https://doi.org/10.1016/j.sbspro.2015.01.1228
38. Stavroulakis D, Karagiannis S, Mitoula R, Papagrigoriou A (2013) Female entrepreneurship and agritourism cooperatives in the Greek periphery: an overview. Am J Econ Bus Adm 5:129–138
39. Tsakirides O (2017) Innovation based on culture and tradition: research in production units. In the framework of the research project titled: socio-economic dimensions of innovation in the industry and the labor market, Package 4. National Center for Social Research, Athens

Health Management Issues from Related Quality of Life Between Greek and Refugees Postpartum Women in Greece

George Pierrakos, Dimitra Latsou, Eleni Kouklaki, Aspasia Goula, John Pateras, Chisostomos Natsis, and Sotiris Soulis

Abstract Greece due to its geographical location received 51,110 asylum applications in 2016. Given the country's universal coverage by a public system, all Greek population and refugees have access to health care. The aim of this study was to compare the quality of life between Greek and refugees' postpartum mothers in a public obstetric hospital. This is a cross-sectional study. The study participants were 110 postpartum women referred to largest public obstetric hospital. Specifically, 55 Greek postpartum mothers and 55 refugees were randomly selected. Data collection tools was the SF-36 questionnaire. The SF-36 was translated in English and Arabic languages. The duration of the study was November 2017–January 2018. Data were analyzed using SPSS 25. The majority of refugees' sample (78.2%) belonged to 25–34 years as well as 61.8% of Greek sample. The mean of physical component was 47.7 for refugees and 48.4 for Greek women, mental component was 22.8 and 41.6 respectively. All dimensions of SF-36 were found statistically significant between two groups ($p \leq 0.001$), except from BP. Moreover, the satisfaction of hospital obstetric services was correlated with dimension VT ($r = -0.291$) and SF ($r = 0.296$) in the group of refugees' postpartum mothers. However, no correlation was found in the corresponding group of Greek women. Policy makers need to prioritize aspects of psychological problems among refugees. Also, health professionals have a crucial role to play through their expertise in advocacy for improvements in policy and service development.

Keywords Health management · Quality of life · Postpartum women · Greek · Refugees

G. Pierrakos (✉) · D. Latsou · A. Goula · J. Pateras · C. Natsis · S. Soulis
Health and Social Care Management, University of West Attica, Athens, Greece

E. Kouklaki
General-Maternity District Hospital "Helena Venizelou", Athens, Greece

1   Background

Since Greece is the south-eastern board of European Union, has been characterized as a getaway to the greatest movement of populations across Europe since the end of World War II [1]. In 2017, refugees in Greece are estimated over 57,000 (Arabic speaking) with the crisis still evolving [2]. As Greece has to face this challenge of immigration, at the same time has to cope with many socio-economic issues due to economic crisis initiated in 2008.

Major challenge is to deal with refugees' physical and mental health problems at the point of registration, but this is almost impossible to monitor on a follow-up basis, given the many challenges and constraints posed by the current crisis [3]. Fazel et al. [4] estimate that 9% of adult refugees may suffer from post-traumatic stress disorder, which can be ten times higher in comparison to the general population. Researches suggests that poor perceived quality of life (QOL) may be the most significant factor in psychological illness and stress related disorders in refugee populations [5, 6]. These findings are supported by World Health Organization concerning the importance of subjective quality of life as a measure of how an individual perceives "their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" [7].

Moreover, many changes are made during pregnancy and postpartum including organic, emotional and societal alteration [8]. Adjusting to these alterations may cause emotional problems in women after birth [9]. The main factors for depression after delivery are history of mental disorders, depression during pregnancy, socio-economic insufficiency, and existence of other medical conditions [10, 11]. Moreover, physical health problems after delivery are common, and nearly 70% of mothers experience at least one problem in physical well-being due to birth. These problems are related to functional restrictions [12]. Quality of life after delivery is related to maternal social and demographic characteristics, birth factors, type of delivery, and social support [13]. At present there is, at least to our knowledge, very few data concerning the perceived QOL of postpartum refugees who have entered in Greece. However, several studies referred to refugee crisis in Greece [14–17]. These are important issues that have fundamental implications for the future health and well-being of a large number of people. The aim of this study was to assess the QOL in postpartum Greek and refugee mothers. Our results can be useful for better care for mothers, improvement of their well-being and confront health management issues that may arise.

2   Methods

A cross-sectional study was conducted from November 2017 to January 2018 on postpartum women who give birth to one of the largest public obstetric hospital in Greece with over 400 beds [18]. 130 women were randomly selected to participate in

the study. However, 110 women finally agreed to participate, of which 55 were Greek postpartum mothers and 55 were refugees. The study subjects had no other diseases. Excluding criteria were women under the age of 18 years. The sample was observed after the 3rd day of their hospitalization.

A structured questionnaire was used to assess women's socio-demographic and quality of life (QOL) characteristics. The QOL was measured with short form health survey questionnaire (SF-36). SF-36 is a standard and well-known general health related QOL showing highly practicable, reliable [19]. The Greek translation and validation of SF-36 has been successfully tested in repeated studies [20]. Additionally, the English and Arabic version of questionnaire was used for the completion of the refugees. The SF-36 consists 36 items with 8 sub-scales, which measures: physical functioning; physical role limitations; bodily pain; general health perceptions; energy/vitality; social functioning; emotional role limitations and mental health. The SF-36 is divided into two components: physical health and mental health also. Each subscale ranged from 0 to 100 with higher scores indicating a better quality of life.

Additionally, one more question was added regarding the satisfaction of hospital obstetric services which measured on a 10-point likert scale (0 = not at all satisfied and 10 = absolute satisfied).

The SPSS-25 software was used for data analysis. Mean differences between groups (Greek women and refugees women) were analyzed using the Student's t-test. The correlation between scores of QOL sub-scales and satisfaction of hospital obstetric services were evaluated by Pearson correlation coefficient. P-value of less than 0.05 was regarded as statistically significant.

The study approved by scientific committee of the hospital where the investigation was conducted. Women who agreed to participate provided an informed verbal consent and researcher informed them about aim of the study. Women were assured that their information would be kept confidential.

3   Results

The majority of refugees' sample (78.2%) belonged to 25–34 years, as well as 61.8% of Greek sample. 94.5% of refugees was married, compared to 78.2% of Greek women. All refugees stated that their household annual income was less than 5000 €, but 56.4% of Greek sample stated 10,000–15,000 € (Table 1).

The mean of physical component was 47.7 for refugees and 48.4 for Greek women. In contrary, Greek postpartum women (41.6) scored significantly higher in mental component than refugees (22.8). Moreover, our findings demonstrated that seven of eight SF-36 dimensions (except from BP) were scored significantly lower by refugees in comparison to the Greek women. These differences were ranged from a moderate effect size (VT, GH, SF, MH) to a large effect size (RP, RE) (Fig. 1). All dimensions of SF-36 were found statistically significant between two groups ($p \leq 0.001$), except from BP.

Table 1 Socio-demographic characteristics of the sample

		Refugee	Greek
Age group	18–24	21.8	7.3
	25–34	78.2	61.8
	35–44	0	30.9
Educational level	Secondary education	80.0	58.2
	University	20.0	41.8
Marital status	Married	94.5	78.2
	Unmarried	5.5	21.8
Household annual income	>5000 €	100	1.8
	10,000–15,000 €	0	56.4
	15,001–20,000 €	0	41.8
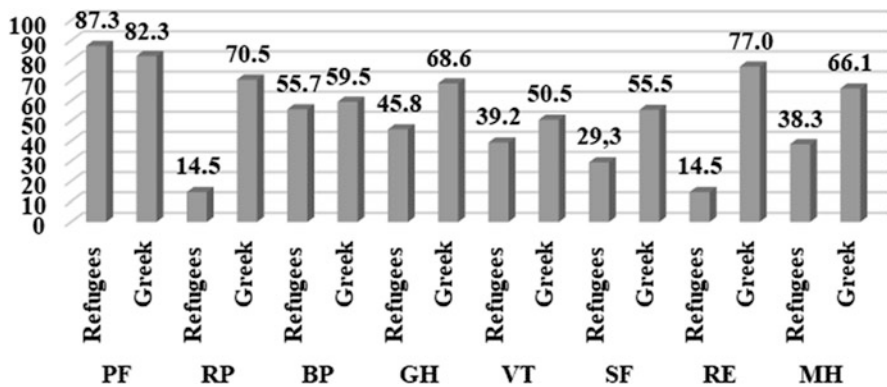
Fig. 1 Quality of life between refugees and Greek postpartum women

Furthermore, Greek postpartum women stated that they were very satisfied by hospital obstetric services (8 ± 0.7), while refugees were approximately absolute satisfied (9.2 ± 0.7). The satisfaction of hospital obstetric services was correlated with dimension VT ($r = 0.291$, $p = 0.031$) and SF ($r = 0.296$, $p = 0.028$) in the group of refugees' postpartum mothers. It is worth mentioning that the increase of satisfaction of hospital obstetric services leads to the increase of refugees' mental health, proving that the relationship of health professionals and refugee postpartum women influence the mental health of the last. However, results showed that there were no significant correlations between satisfaction of hospital obstetric services and dimensions of SF-36 for the Greek women.

4   Discussion

This survey investigates the comparison of QOL between Greek and refugees' postpartum mothers in a public obstetric hospital and the effect of satisfaction in hospital services on postpartum mothers' QOL. The results indicated the significant

differences on quality of life between Greek and refugees' postpartum mothers. Refugees' mental health was significantly lower than Greek postpartum mothers, however physical health was almost equal. The differences in SF-36 scores ranged from 10 to 60 points, except from bodily pain, with refugees' postpartum mothers had poorer quality of life. Additionally, the satisfaction of hospital services associated with two dimensions of refugees' mental health.

Some findings of this study are consistent with those of the international literature. Generally, the migration process and resettlement are associated with high stress levels which have led to heightened levels of health and psychological problems [21, 22]. Our results pointed out that refugees women are more likely to have postpartum depression, which is in agreement with similar survey reported that correlate low scores on subscales of SF-36 with symptoms of depression [23, 24]. Moreover, literature showed that patients' quality of life is affected by multiple factors including satisfaction of care services and quality of care [25].

It is important to mention that in Greek pregnant and postpartum mothers were provided counseling and psychological support from specialized departments of three public obstetric hospitals in Attika. The purposes are: (a) to inform pregnant women and father or wider family about the changes in body and its functions, (b) to prepare mentally and physically pregnant women and father or wider family for childbirth, (c) to strengthen women's self-confidence to overcome fears and cope with childbirth and motherhood as the most important experience and integration of their female nature, (d) to give the father the opportunity to share the care, the anxieties and the happiness of the perinatal period, (e) to strengthen the child's bond with his /her parents. Furthermore, several NGOs provide counseling and psychological support in new mothers, mainly through phone support lines. These NGOs operate under the auspices of the Ministry of Health.

Keeping in mind the above results, all health professionals who provide care to these population should be sensitive and detect on an early stage, women whose psychological health is vulnerable [26, 27]. With this approach, health professionals can develop interventions in order to promote high quality of life of refugee women during perinatal period. Researches have shown that individual care through counseling by authorized and expertise health professionals is beneficial and implies high level of quality of life [28, 29]. As far as everyday practice is concerned, it is crucial that all health care professionals have to be aware of spotting women who seem to need a more personalized support and evaluate these women under close surveillance. Providing information in their language, respect to their human nature and organizing campaigns for better screening on these women seems to be vital.

Therefore, it is important that all health care professionals attend training programs in order to get familiar with the differences that these population have compared to Greeks. Different language, religion, culture and habits, cultivate an enormous gap which should to be eliminated. Through training programs, health care providers, become more sensitive and can adjust easier when taking care of women with these social differences.

In conclusion, the results of the study provide evidence that refugees' postpartum mothers have poorer mental health in comparison with Greek. The dimensions

vitality and social functioning of refugees were associated with the satisfaction of hospital obstetric services. Finally, our findings should constitute a starting point for further assessments regarding the quality of life of refugee population and their specific health and social issues. It is believed that national or/and international overviews should contribute to the increase of refugees' quality of health and the prioritization of public health policies.

References

1. Gulland A (2015) Global refugee total reached almost 60 million in 2014, highest since WWII. BMJ 351:h6478. https://doi.org/10.1136/bmj.h6478
2. Kousoulis A, Ioakeim-Ioannidou M, Economopoulos KP (2016) Access to health for refugees in Greece: lessons in inequalities. Int J Equity Health 15:122. https://doi.org/10.1186/s12939-016-0409-6
3. Aziz IA, Hutchinson CV, Maltby J (2014) Quality of life of Syrian refugees living in camps in the Kurdistan region of Iraq. Peer J 2:e670. https://doi.org/10.7717/peerj.670
4. Fazel M, Wheeler J, Danesh J (2005) Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. Lancet 365:1309–1314. https://doi.org/10.1016/S0140-6736(05)61027-6
5. Akinyemi OO, Owoaje ET, Ige OK, Popoola OA (2012) Comparative study of mental health and quality of life in long term refugees and host populations in Oru-Ijebu, Southwest Nigeria. BMC Res Notes 5:394. https://doi.org/10.1186/1756-0500-5-394
6. Matanov A, Giacco D, Bogic M, Ajdukovic D, Franciskovic T, Galeazzi GM et al (2013) Subjective quality of life in war-affected populations. BMC Public Health 13:624. https://doi.org/10.1186/1471-2458-13-624
7. World Health Organization. Division of Mental Health and Prevention of Substance Abuse (1997) WHOQOL: measuring quality of life. Geneva
8. Sadat Z, Abedzadeh-Kalahroudi M, Atrian MK, Karimian Z, Sooki Z (2014) The impact of postpartum depression on quality of life in women after child's birth. Iran Red Crescent Med J 16:e14995. https://doi.org/10.5812/ircmj.14995
9. McGarry J, Kim H, Sheng X, Egger M, Baksh L (2009) Postpartum depression and help-seeking behavior. J Midwifery Women Health 54:50–56. https://doi.org/10.1016/j.jmwh.2008.07.003
10. Decastro F, Hinojosa-Ayala N, Hernandez-Prado B (2011) Risk and protective factors associated with postnatal depression in Mexican adolescents. J Psychosom Obstet Gynaecol 32:210–217. https://doi.org/10.3109/0167482X.2011.626543
11. Dubey C, Gupta N, Bhasin S, Muthal RA, Arora R (2012) Prevalence and associated risk factors for postpartum depression in women attending a tertiary hospital, Delhi, India. Int J Soc Psychiatry 58:577–580. https://doi.org/10.1177/0020764011415210
12. Webb DA, Bloch JR, Coyne JC, Chung EK, Bennett IM, Culhane JF (2008) Postpartum physical symptoms in new mothers: their relationship to functional limitations and emotional well-being. Birth 35:179–187. https://doi.org/10.1111/j.1523-536X.2008.00238.x
13. Sadat Z, Taebi M, Saberi F, Kalarhoudi MA (2013) The relationship between mode of delivery and postpartum physical and mental health related quality of life. Iran J Nurs Midwifery Res 18:499–504

14. Jansen AG, Essink-Bot ML, Duvekot JJ, van Rhenen DJ (2007) Psychometric evaluation of health-related quality of life measures in women after different types of delivery. J Psychosom Res 63:275–281
15. Christodoulou GN, Abou-Saleh MT (2016) Greece and the refugee crisis: mental health context. BJPsych Int 13:89–91
16. Gkionakis N (2016) The refugee crisis in Greece: training border security, police, volunteers and aid workers in psychological first aid. Intervention 14:73–79
17. Farhat JB, Blanchet K, Bjertrup PJ, Veizis A, Perrin C, Coulborn RM et al (2018) Syrian refugees in Greece: experience with violence, mental health status, and access to information during the journey and while in Greece. BMC Med 16:40. https://doi.org/10.1186/s12916-018-1028-4
18. Moris D, Karamagioli E, Kontos M, Athanasiou A, Pikoulis E (2017) Refugee crisis in Greece: the forthcoming higher education challenge. Ann Transl Med 5(15):317
19. Regional General Hospital – Maternity Hospital – "ELENA VENIZELOS". www.hospital-elena.gr
20. Sarris M, Goula A, Soulis S (2008) Patients' health-related quality of life after liver transplantation. Arch Hell Med 25:334–340
21. Elklit A, Ostergard KK, Lasgaard M, Palic S (2011) Social support, coping and posttraumatic stress symptoms in young refugees. Torture 22:11–23
22. Buhmann CB (2014) Traumatized refugees: morbidity, treatment and predictors of outcome. Dan Med J 61(8):B4871
23. Zubaran C, Foresti K (2011) Investigating quality of life and depressive symptoms in the postpartum period. Women Birth 24:10–16. https://doi.org/10.1016/j.wombi.2010.05.002
24. Papamarkou M, Sarafis P, Kaite CP, Malliarou M, Tsounis A, Niakas D (2017) Investigation of the association between quality of life and depressive symptoms during postpartum period: a correlational study. BMC Women Health 17:115. https://doi.org/10.1186/s12905-017-0473-0
25. Alonazi WB, Thomas SA (2014) Quality of care and quality of life: convergence or divergence? Health Serv Insights 7:1–12. https://doi.org/10.4137/HSI.S13283
26. Werner E, Miller M, Osborne LM, Kuzava S, Monk C (2015) Preventing postpartum depression: review and recommendations. Arch Women Ment Health 18:41–60. https://doi.org/10.1007/s00737-014-0475-y
27. Badr LK (2018) Is the effect of postpartum depression on mother-infant bonding universal? Infant Behav Dev 51:15–23. https://doi.org/10.1016/j.infbeh.2018.02.003
28. Ramezani S, Khosravi A, Motaghi Z, Hamidzadeh A, Mousavi SA (2017) The effect of cognitive-behavioural and solution-focused counselling on prevention of postpartum depression in nulliparous pregnant women. J Reprod Infant Psychol 35:172–182. https://doi.org/10.1080/02646838.2016.1266470
29. Sockol LE (2018) A systematic review and meta-analysis of interpersonal psychotherapy for perinatal women. J Affect Disord 232:316–328. https://doi.org/10.1016/j.jad.2018.01.018

ICT in the Promotion of Arts and Cultural Heritage Education in Museums

Stella Sylaiou and Georgios Papaioannou

Abstract This paper discusses the uses and the potential of Information and Communication Technologies (ICT) in contemporary museums. ICT play an increasingly important role in fostering the promotion of arts and cultural heritage educational activities, as well as programs and actions in museum learning environments, whose aim is to attract and serve visitors, and to satisfy their needs. Nowadays, museums seek to keep redefining their role and to continuously transform their cultural communication framework with the help of ICT methods and tools, so as to become even more accessible and create an even more participatory environment, enabling visitors to actively engage into learning, educational and amusing experiences. ICT are tools for both creating and promoting. In terms of creating, ICT have resulted in applications inside (on-site) and outside (online) of the museum. In terms of promoting, ICT can be used as part of new museum strategies to disseminate arts and cultural heritage educational activities, aims, objectives, programs and products via the web and the social media networks.

Keywords ICT · Museum education · Museum marketing · Museum communication

1 Introduction

In a changing world, the increasing competitiveness between museums and other creative industries had resulted initially to a decline of museum visitors' numbers due to various social, economic, political and technological developments [1]. Additionally, the current and ongoing economic global crisis has caused drastic cuts across all government agencies and has had severe and dramatic effects on museums [2].

S. Sylaiou (✉)
Aristotle University of Thessaloniki, Thessaloniki, Greece

G. Papaioannou
University College London in Qatar, Doha, Qatar

Inevitably, museums have started to seek alternative financial sources to achieve funding and sustainability, including the use of opportunities provided by Information and Communication Technologies (ICT) considering at the same time ethics in their practices [3]. Since they are subject to market forces, museums need to reconsider many aspects of their management, determine their strategic actions accordingly, adopt marketing tools and follow contemporary market trends not only to increase their long-term viability, but also to confront their economic needs [4]. Moreover, museums have radically changed their social role in the last few decades. They do not serve as mere repositories for cultural artifacts; they have transformed to active educational institutions prioritizing engagement with a diverse range of communities [5]. Museums had to use methods developed and used for profit organizations [6]. Museums are producers using at the same time new and traditional media and a large variety of activities. Their main aim is not only to keep their existing audiences, but also attracting new and larger ones. Therefore, audience research is increasingly focused on visitor educational and entertaining experiences. Appealing education outreach programs are considered as a means for community engagement and strong promotional tools that deepen the relationship of the museum with their audiences leading to more frequent and longer visits. Art and cultural heritage educational programs can also contribute in increasing students' attendance and building future loyal audiences. At the same time, they can transform the way visitors think about the museum and strengthen the relationship between them and the museums.

This paper investigates and contributes to the discussion about the role of contemporary museums in promoting arts and cultural heritage educational activities, programs and actions, as well as to provide an insight into the relationship between museums, ICT, art and cultural heritage education. The scope of this research is not to be exhaustive; the initial stage of this investigation includes the search of literature related to keywords, such as *museum education*, *marketing and communication*, primarily in the databases Scopus and Google Scholar. Based on the research findings we discuss new trends in arts and cultural heritage education in museums, the effective use of ICT in museum informal learning environments and museums' communication.

2 Marketing and Communicating Museums

Marketing helps museums to explore and understand the market, conduct audience research and create cultural products that serve the needs of their visitors. Marketing and communications are about raising visitors' commitment, building relationships and loyalty [7], and creating value. The 'trying to communicate everything to everyone' has been replaced by segmentation, targeting and positioning strategies that are used to help museums to identify target groups and audiences. Museums strategies should be designed to meet and satisfy the needs and expectations of their targets from existing or potential visitors. Museums' messages are expected to be

adjusted accordingly. Positioning and branding play an important role in advertising, promoting and developing a museum. A brand identity puts emphasis on selected special aspects of that brand. It is the process of creating a unique name and image of a cultural product in the minds of existing or potential visitors [8]. These special features make the cultural product distinctive from similar ones. Also, it serves as the basis for the development of a marketing mix, the so-called or 4Ps (product, price, place, promotion) that combines the cultural product forms (e.g. an educational program based on school curricula, virtual museums, digital apps), the prices/costs, the place(s) where the cultural product is available and/or happens, and the types of its promotion.

Positioning is also related to the impression (the perceptual identity) of the cultural product in the minds of the museum visitors via marketing techniques. The cultural product should constantly be measured, evaluated and enhanced. Marketing communication tools create satisfying experiences that can be: (a) object experiences (seeing rare and valuable things, seeing authentic things, admiring the beauty of things etc.); (b) cognitive experiences (acquire knowledge, enrich understanding); (c) introspective experiences (feeling a sense of belonging and connectedness, imagining other times and places, recalling memories and past experiences etc.); (d) social experiences (spending time with family, friends, other people etc.) [9]. Thus, new relationships with existing or new visitors/participants to the cultural educational programs are created and nurtured. Also, market analysis can be used as a tool to understand the stakeholders and the markets that the cultural education program interact with and facilitate the establishment of effective museum cultural educational programs [10].

Communication is part of the museum management and aims at helping museums to develop their own resources and accomplish their educational goals and plays a crucial role to their viability. There is an amplitude of the communication techniques and this is reflected in the entire museum experience, e.g. exhibitions, cultural products, cultural heritage and arts education programs. Museums create strategic communication plans that involve a number of disciplines, such as marketing, management, public relations, and a variety of communication channels and activities.

Around the 80s, museums have experienced difficulties communicating with the wide public and attracting new audiences. The movement of 'new museology' has changed museums philosophy and led museums to reconsider and reassess their role in society, as well as their relationship with their visitors [11]. Nowadays, in the era of post-modern museum, the field of museology has changed radically. Museums are 'connectors' between people, cultures and time, 'mediators', and 'communicators' contributing to the democratization of knowledge. They have created new and creative forms of promotion, they shifted their focus from collections to visitors and their experience, adhering to the constructivist education theory. As a consequence, museums have embraced and adopted new communication strategies and channels not only to engage the existing museums' visitors, but also to reach, attract and retain new audiences [12]. Visitors have the opportunity to select from a variety of new media in physical, virtual or hybrid museum environments. Via innovative

communication tools art and cultural heritage educational programs, museums secure public understanding, visibility and commitment.

Communication and promotion are processes by which a museum interconnects with its target groups [13]. Via traditional and technologically facilitated communication, museums reinforce their relationships with their existing audiences, build and maintain relationships with new ones. A communication program is composed of four stages: research, planning, implementation and evaluation [14]. Museums need to have a vision, specific objectives and well-defined target groups/audiences, before selecting the marketing communication tools that will allow them to reach their goals. The SMART model [15] is helpful in this direction. It helps museums posing goals: *Specific* (Who, what, where, when, which, why); *Measurable* (How much, how many); *Achievable* (Can it be achieved in the proposed timeframe with the available resources?); *Relevant* (Does the objective address the goal?); *Time-bound* (when will it be accomplished).

3   ICT and Promotion of Museum Education

The driver and catalyst for museum success in its educational mission and goals is the adoption of an effective set of marketing communication policies and practices and their combination/integration with Information and Communication Technologies (ICT). ICT have radically reshaped the museums and transformed museum experiences. Digital channels and tools are used to provide ubiquitous and round-the-clock access via the World Wide Web to an online and virtual museum environment. Museums use ICT for different purposes ranging from virtual visits and collection exploration to interactive educational experiences [16]. '*Museum learning is a transformative, affective experience in which we develop new attitudes, interests, appreciation, beliefs, or values in an informal, voluntary context*' [17]. ICT can offer free choice, experiential, personalized learning in museums, cultural spaces and exhibitions for visitors with different learning styles. They multiply the communicative power of museum collections and provide rich and appealing content. Museums and their digital extension "*will make available to the community, and for the community's purposes, its profound expertise at telling stories, eliciting emotion, triggering memories, stirring imagination, and prompting discovery*" [18]. The digital aspect of museums is therefore instrumental in reaching new audiences and moreover, in creating engaged virtual museum communities.

Museums inspire and learn not only from, but also with their audiences. Museum learning assisted by ICT tools relies on the ability to convey information about the objects and their context in an effective, engaging, meaningful, diversified and self-controlled way. The Contextual Model of Learning (CML) helps museums to better understand visitors' experience. The CML is influenced and deeply transformed by (a) the *personal* context related to visitors' own personal knowledge, past experiences, interests, beliefs, motivations and expectations, (b) the *socio-cultural* context that refers to visitors' cultural background and mediation with other people, and (c) the *physical* context that relates to factors of the actual environment, like the

orientation in the physical space, the design of the museum exhibition, etc. The personal context is also influenced by the friendliness of website navigation, the orientation to the digital space, the design of the exhibitions, programs and technological applications, and subsequent events and experiences outside the museum [19].

Nowadays, ICT affect deeply the way museums manage their heritage collections [20] and reshape museums as pedagogical spaces. Via ICT, museum visitors have the opportunity to have hybrid experiences that combine physical and digital elements, allowing them to interact around physical objects that are connected to digital ones. ICT can enhance the learning experience on-site and online. They enhance the potential of museums and provide interpretational freedom, educational and entertaining experiences that prompt learning. These environments can permit social interactions that can further enrich communicative strategies and the learning processes by means of dialogic approaches.

The design for learning is hinged on 'productive tensions', i.e. the procurement of digital material to think on (and not to dictating how or what to think), and the provision of flexible ICT tools, resources and sensations as fulcrums for individual meaning-making, rather than prescriptions. New technologies and tools, such as 3D and mobile technologies, Augmented Reality (AR) [21], Virtual Reality (VR) and Mixed Reality (MR), storytelling, gamification and serious games [22], permit interaction and varied level of interpretation, motivate their learning process and free-choice learning, deeper understanding, critical thinking and engagement. They trigger visitors' creativity and they permit collaboration between the virtual visitors. They permit empowerment, since they increase personal autonomy, enable the virtual visitors to build self-confidence via self-actualisation activities that can lead to the development of personal, interpersonal and social skills.

Social media communication strategies help museums to achieve their communication goals. Social media can help museums obtain information about their audience and therefore to know their audiences better. These communication strategies refer and relate to social media characteristics, quality of content, interpretation, use of narratives, interactivity, visitors' engagement, the museums' public and brand image, the ways in which museum messages adjust to different social media platforms, the boundaries that need to be established for social media use, the differences among social media audiences from other museum audiences, the ways social media complement the museum experience, the information that museums can obtain from their social media visitors, and the metrics that can be used for tracking the social media success.

Social media platforms, such as Facebook, Twitter, and Instagram, help museums reach, attract, connect in new and effective ways, and engage their audiences. Their increasing use has changed the ways museums communicate, since they can further encourage dialogue, public discussion and participation on museum activities. Research on the impact of social media on museum learning suggests that social media have a significant role to play in creating authentic learning experiences based on social networking and knowledge sharing around collections [23]. Museums, via social media platforms, have the opportunity to advertise new exhibitions, events and educational programs.

4   Concluding Remarks

The advent of digital technologies, heralded a new era in terms of museum visitors' engagement in culture, heritage and art. ICT can function as a fulcrum with respect to marketing and promotion, fostering museum visitors' reflexivity, engagement as well as meaning-making processes with respect to artworks and artefacts alike. The personal, the subjective as well as the virtual, are foregrounded through interactivity, remaining at the same time, inextricably related with the objective, the interpersonal as well as the physical, in a mutually beneficial manner. Learning in this model takes place through active participation, engagement through affective mechanisms and under a heuristic paradigm based on discovery, within a technological context of continuous advancements. These outputs can build an important impact on society and on economic activity.

The adoption of ICT tools by museums allows for multiple learning styles, points of access, and experiences of a wide range of audiences who visit the museum on-site and/or online with different levels and areas of knowledge and interest [24]. Therefore, museums using ICT can offer opportunities for diversified approaches. ICT can provide non-linear, navigable and multi-layered contextual material and educational programs around artifacts/artworks, thereby allowing visitors to construct meaning by enticing them to explore deeper content. To accomplish this, museums should go for well-designed, audience-centered and ICT-driven marketing and promotion strategies, including advanced developments and social media platforms. Adequate, engaging and appealing (visually as well as conceptually), digital material can foster a multitude of perspectives and enhancing visitors' experience and satisfaction.

To conclude, also according to the Draft Recommendation concerning the Protection and Promotion of Museums and Collections, their Diversity and their Role in Society [25] two of the primary museums' functions are communication and education interacting with the public in both physical and digital forms, educating audiences about their collections and civic life, and helping to raise greater awareness of the importance of preserving heritage, and fostering and stimulating creativity and self-expression. ICTs can enhance people's lives in different fields and can be useful tools by inspiring active engagement with learning through discovery and exploration, that also museums can more fully incorporate and help museums reach their full potential as informal learning environments.

The use of ICT in museums' education can be viewed nevertheless, though a critical lens: overinvestment in the spectacular aspect of ICT, can bolster the *Disneyfication* of museums and their transformation to recreational parks, in which visitors will be more engaged to new media and technologies than to the exhibits and the museum experience [26]. These closing remarks, as there is a lot of research to be done in the field, serve as a reminder of the necessary balances that have to be observed by museums in order to find the optimal approaches for the use of ICT in the promotion of arts and cultural heritage education.

References

1. Cole D (2008) Museum marketing as a tool for survival and creativity: the mining museum perspective. Mus Manag Curatorship 23:177–192
2. ICOM (2013) National Committees of European countries: appeal to the European Parliament and commission, to the parliaments and governments of European countries and to regional and local governments. http://icom.museum/fileadmin/user_upload/pdf/Statements/ENG/Lisbon_Declaration_ENG.pdf
3. Papaioannou G, Paschou S (2017) Do predators go digital? Discussing museum ethics in the digital habitat. ICOFOM Study Ser 45:128–129
4. Stallabrass J (2013) The branding of the museum. Art History 37(1):148–165
5. Filippoupoliti A, Sylaiou S (eds) (2015) Special issue: museum education today: creative synergies and pedagogic innovations in multicultural contexts. Museum & Society 13:2. https://www2.le.ac.uk/departments/museumstudies/museumsociety/documents/volumes/filippoupoliti-sylaiou
6. Kotler NG, Kotler P, Kotler WI (2008) Museum marketing and strategy, 2nd edn. Jossey-Bass, San Francisco
7. Wallace MA (2006) Museum branding: how to create and maintain image. Loyalty and support. Rowman & Littlefield, Oxford
8. Kavoura A (2012) Politics of heritage promotion: branding the identity of the Greek state. Tour Cult Commun 12:69–83. https://doi.org/10.3727/109830413X13575858951086
9. Doering Z (2007) Strangers, guests, or clients? Visitor experiences in museums. In: Sandell R, Janes RR (eds) Museum management and marketing. Routledge, Oxon, pp 331–344
10. Tobelem J (2007) The marketing approach in museums. In: Sandell R, Janes RR (eds) Museum management and marketing. Routledge, Oxon, pp 294–312
11. McCall V, Gray C (2014) Museums and the 'new museology': theory, practice and organisational change. Mus Manag Curatorship 29:19–35
12. Richani E, Papaioannou G, Banou CH (2016) Emerging opportunities: the internet, marketing and museums. In: 20th international conference on circuits, systems, communications and computers (CSCC 2016), Corfu, Greece. https://doi.org/10.1051/matecconf/20167602044
13. McLean F (2007) Marketing the Museum. Routledge, London
14. Capriotti P (2013) Managing strategic communication in museums. The case of Catalan museums. Commun Soc 26(3):98–116
15. Doran GT (1981) There's a S.M.A.R.T. way to write management's goals and objectives. Manag Rev 70(11):35–36
16. Sylaiou S, Mania K, Paliokas I, Pujol-Tost L, Killintzis V, Liarokapis F (2017) Exploring the educational impact of diverse technologies in online virtual museums. Int J Art Technol 10(1):58–84
17. Lord B (2007) What is museum-based learning. In: Lord B (ed) The manual of museum learning. Alta Mira Press, Lanham, MD, pp 13–19
18. Weil S (2007) The museum and the public. In: Watson S (ed) Museums and their communities. Leicester readers in museum studies. Routledge, Oxford, pp 32–46
19. Falk J, Dierking L (2008) Enhancing visitor interaction and learning with mobile technologies. In: Tallon L, Walker K (eds) Digital technologies and the museum experience, handheld guides and other media. Altamira Press, Walnut Creek, CA, pp 19–60
20. Gombault A, Allal-Chérif O, Décamps A (2016) ICT adoption in heritage organizations: crossing the chasm. J Bus Res 69(11):5135–5140
21. Deliyannis I, Papaioannou G (2014) Augmented reality for archaeological environments on mobile devices: a novel open framework. Mediterr Archaeol Archaeom 4:1–10
22. Paliokas I, Sylaiou S (2016) The use of serious games in museum visits and exhibitions: a systematic mapping study. In: 8th international conference on games and virtual worlds for serious applications (VS-Games): VS-Games, pp. 1–8

23. Russo A, Watkins J, Groundwater-Smith S (2009) The impact of social media on informal learning in museums. Educ Media Int 46(2):153–166
24. Hemsley J, Cappellini V, Stanke G (eds) (2017) Digital applications for cultural and heritage institutions. Routledge, Oxford
25. Report of the intergovernmental meeting of experts (Category II) related to a draft recommendation on the protection and promotion of museums, their diversity and their role in society, UNESCO. http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/images/Final_Text_of_Draft_recommendation_EN_02.pdf
26. Watermeyer R (2012) A conceptualisation of the post-museum as a pedagogical space. J Sci Commun 11:1–8

The Role of Destination Brand Image and Revisit Intention on Tourist Spending

Jashim Khan, Vivi Maltezou, and Chang He

Abstract There has been a substantial rise in the number of tourists in coastal cities in Asia and Europe. Yet very little is known about their tourism spending behavior, particularly how their perceived the importance of amenities in destination brand image and their influence on re-visit intention. This paper examines the relationship between amenities of tourist destination and their effect on tourist spending by examining (a) the mediating role of destination branding and (b) the moderating role of re-visit intention in the relationship between amenities and destination brand image. An online survey used to collect data from 150 Greek and 370 Chinese participants. Results show that destination brand image mediates the relationship between amenities of the destination and tourist spending. Moderated mediation reveals that the indirect paths (destination brand image) through which amenities exerts its effect on destination brand image is dependent on the value of tourist re-visit intention. Surprisingly, the model did not perform with Greek data. The role of destination brand image and tourist re-visit intention on tourist spending discussed together with future research directions.

Keywords Destination branding · Brand image · Amenities · Re-visit · Spending

1 Introduction

The travel and tourism industry is one of the world's largest industries with a global economic contribution of over 7.6 trillion U.S. dollars in 2016 [1]. The contribution of travel and tourism to GDP in Greece contributed 14 billion euros in 2017 [1]. A total of 5.1 million visits to the Attica region of Greece in 2017 [1]. Similar scenario

J. Khan (✉) · V. Maltezou
University of Surrey, Guildford, UK
e-mail: j.a.khan@surrey.ac.uk

C. He
Dongbei University of Finance & Economics, Dalian, China

noted in Dalian's tourism in China (coastal city comparable to Athenian Rivera) [2]. Dalian's tourism revenue during holiday soared more than 3 billion RMB in 2017. Despite the growing importance of destination, branding, extant research relies on brand message [3], brand image and destination branding [4] and in relation to vital characteristics of destinations influencing visit intention [5]. Another stream of research investigates destination branding from brand equity perspective [6]. Whilst extant branding literature suggests that consumers' perceived brand value is one of the most influential concepts to investigate consumer behaviors, predicting loyalty, and behavioral intention [7], the application of consumer perceived value in influencing tourists' spending is under researched. To address this literature gap, this research sets to examine the role of destination branding, amenities and visit/revisit intention on consumer spending. The research seeks to explore the destination branding relationship in the context of Athenian Riviera as compared to Costal Dalian, China. Two cities present similar coastal line and tourist.

2   Background

Research in tourism destination branding is distinguishable and unique [8]. Despite this uniqueness, the need to attract visitors requires conscious branding strategies for the different target visitor groups [9]. Several countries were very successful in applying the country-branding concept, particularly New Zealand [10], Spain [11], France, and Scotland [12]. The competitiveness of a destination is related to infrastructure development [13]. Authors [14] suggest destination branding is influenced by accommodation [15], transport [16], and other public service amenities [16]. This research underpins destination branding as an influential factor in destination visit/revisit intention and consumer tourist spending. According to [17] authors suggest destination brand establishes a favorable destination image and encourage visit/revisit intention. There is research [18] that suggest relationship between destination branding, amenities and visit intention but only few studies study the role of destination branding on tourism spending [19]. The important contribution of this paper lies in examining the role of destination branding and revisit intention in the relationship between destination facilities and tourist spending. In line with this reasoning, our paper examines the relationship between amenities of tourist destination and their effect on tourist spending by examining (a) the mediating role of destination branding and (b) the moderating role of re-visit intention in the relationship between amenities and destination brand image.

3   Research Methodology

This research adopts quantitative method and structured questionnaire adopted to the comparative study. Following a convenience sampling method, an electronic invitation sent out to individuals who were aged between 18 and 50 years old in in coastal city of China and Greece. The participants instructed to answer the questionnaire based on the latest destination that they visited within the past 12 months. This is also a screening question. Those who did not visit any destinations within the last 12 months would not go further in answering the questionnaire. In total, 520 useable questionnaires returned. Prior to online survey, qualitative assessment of questionnaire done. The respondents assured of their anonymity and confidentiality.

Structured Likert scale used in destination image research. The items were adapted and measured on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Based on research objectives, the survey questionnaire consisted four main parts. The first section focused on assessing the respondent's perceptions of public service amenities [20, 21] items were adopted to measure amenities of respective cities. The second section included items that are related quality of experiences, environment and tourist attractions [15]. The construct visit and re-visit intention was adapted from [22]. The last section of questionnaire aimed to collect demographic characteristics of respondents such as age, geographical regions and social class and spending.

Non-probability criterion-based purposive sampling used, screening for revisit and visiting intention to Athenian Riviera and comparable coastal city of Dalian China.

4   Results and Discussion

To analyse unidimensionality, exploratory factor analysis (EFA) employed using SPSS, version 20. Followed by confirmatory factor analyses (CFA) for validation purpose of the measurement model. All of the fit indices (RMR = 0.03, GFI = .99, AGFI = .98, NFI = .98, TLI = .98, CFI = .98 RMSEA = 0.04) were in the acceptable range as suggested by [23]. In addition, we found all the individual factor loadings to be highly significant, giving support for convergent validity [24]. We calculated the Cronbach alpha coefficient, composite factor reliability, and average variance extracted for each of the scale and the values were in the desirable range. We also tested for alternate models and found the original models to be better than all the constrained models.

We used hierarchical multiple regressions to test the mediating role of destination branding and hierarchical moderated regression to test role of re-visit intention in the relationship between amenities and destination brand image. Both analysis

Table 1 Mediated- moderation result for destination brand and re-visit intention

Mediator	Re-visit	Conditional direct effect	SE	Sig	LLCI	ULCI
Destination branding	−1.1	16.0	1.8	.03	12.8	20.1
	.00	13.7	1.7	.05	11.0	17.5
	1.1	11.5	1.7	.00	8.6	15.3

(mediation and moderation) followed procedure shown by [25] utilizing Hayes model 7 [26].

The results show that the direct effect of amenities on tourist spending insignificant in presence of destination brand image ($\beta = 1.06$, S.E $= 2.2$, $p > .05$). The effect of amenities on tourist spending is significant via the mediator destination branding. In other words, the relationship is significant indirectly amenities $\rightarrow$ destination branding $\rightarrow$ tourist spending ($\beta = 2.0$, S.E. $= .50$, Boot LLCI $= 3.0$, Boot ULCI $= 1.0$). Absence of zero between Boot LLCI (Boot Lower Level Confidence Interval) and Boot ULCI (Boot Upper Level Confidence Interval) supports that the effect of amenities and tourist spending is stronger when destination brand is stronger. Our result is in line with relevant studies that study the relationship between destination branding, amenities and visit intention [27]. However, Greek data did not predict the above-hypothesized relationships. Our unique contribution to destination branding literature is on showing a moderated mediation analysis. Our result reveals that the indirect paths (destination brand image) through which amenities exerts its effect on destination brand image is dependent on the value of tourist re-visit intention (see Table 1).

5   Conclusion

The result of this study contributes to understanding the role of destination brand image and tourist re-visit intention on tourist spending. We specifically address this important lacuna in our conceptualisation and propose that tourism department should enhance amenities, and destination brand image and to encourage tourist visit and spending. Based on the paper's objective, amenities of destination and tourist spending increases with higher levels of destination brand image. The mediated relationship is stronger when tourist's re-visit intentions are higher. This suggests that government should invest in building amenities of tourism destination while communicating brand image with target market to increase brand awareness and visit intention. It is worthwhile to note respondent's revisit intention moderates the mediated relationship and indicate that higher the destination brand image, higher is re-visit intention. Results are suggestive that in tourism sector loyalty or re-visit seem to depend on destination brand image. The result of this study contributes to understanding the role of destination brand image and tourist re-visit intention on tourist spending where strategy does not imply competition but synergies [28–32]. We specifically address this important lacuna in our conceptualisation and

propose that tourism department should enhance amenities, and destination brand image and to encourage tourist visit and spending.

Limitation of the study pertains to data. The data were collected using convenience sampling, in a cross-sectional design. To better represent the role of destination branding and re-visit intention, future research is recommended to adopt a probability sampling technique and collect data from more Asian European countries. Future studies are encouraged to explore other possible moderators travel experience, and their potential impact on the proposed relationships between destination branding and tourist spending.

References

1. Statista (2018) Direct and total contribution of travel and tourism to the global economy from 2006 to 2018. https://www.statista.com/statistics/233223/travel-and-tourism%2D%2Dtotal-economic-contribution-worldwide/
2. Papadopoulos N, Elliot S, Szamosi L (2014) Measuring event planners' perceptions of place image attributes: the case of Greek convention destinations. Tour Anal 19:505–516. https://doi.org/10.3727/108354214X14090817031233
3. Ooi CS (2004) Poetics and politics of destination branding: Denmark. Scand J Hosp Tour 4:107–128. https://doi.org/10.1080/15022250410003898
4. Prebensen NK (2007) Exploring tourists' images of a distant destination. Tour Manag 28:747–756. https://doi.org/10.1016/j.tourman.2006.05.005
5. Gnoth J (2007) The structure of destination brands: leveraging values. Tour Anal 12:345–358. https://doi.org/10.3727/108354207783227939
6. Boo S, Busser J, Baloglu S (2009) A model of customer-based brand equity and its application to multiple destinations. Tour Manag 30:219–231. https://doi.org/10.1016/j.tourman.2008.06.003
7. Cronin JJ Jr, Brady MK, Hult GTM (2000) Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. J Retail 76:193–218. https://doi.org/10.1016/S0022-4359(00)00028-2
8. Fyall A, Leask A (2006) Destination marketing: future issues—strategic challenges. Tour Hosp Res 7:50–63. https://doi.org/10.1057/palgrave.thr.6050029
9. Freire J (2005) Geo-branding, are we talking nonsense? A theoretical reflection on brands applied to places. Place Branding 1:347–362. https://doi.org/10.1057/palgrave.pb.5990033
10. Lodge C (2002) Success and failure: the brand stories of two countries. J Brand Manag 9:372–384. https://doi.org/10.1057/palgrave.bm.2540084
11. Gilmore F (2002) A country—can it be repositioned? Spain—the success story of country branding. J Brand Manag 9:281–293. https://doi.org/10.1057/palgrave.bm.2540078
12. O'Leary S, Deegan J (2005) Ireland's image as a tourism destination in France: attribute importance and performance. J Travel Res 43:247–256
13. Lee J, Kyle G, Scott D (2012) The mediating effect of place attachment on the relationship between festival satisfaction and loyalty to the festival hosting destination. J Travel Res 51 (6):754–767. https://doi.org/10.1177/0047287512437859
14. Sultana R, Sultana KS (2018) Factors determining tourism: a framework to promote tea tourism destination in Chittagong. Glob J Manage Bus Research. https://journalofbusiness.org/index.php/GJMBR/article/view/2502
15. Qu H, Kim LH, Im HH (2011) A model of destination branding: integrating the concepts of the branding and destination image. Tour Manag 32(3):465–476. https://doi.org/10.1016/j.tourman.2010.03.014

16. Jaafar M, Bakri NM, Rasoolimanesh SM (2015) Local community and tourism development: a study of rural mountainous destinations. Mod Appl Sci 9:399. https://doi.org/10.5539/mas.v9n8p407
17. Baker MJ, Cameron E (2008) Critical success factors in destination marketing. Tour Hosp Res 8:79–97
18. Amara D (2018) Events tourism: a potential to build a tourist destination branding: the case of cultural events in Egypt. Int J Herit Tour Hosp 11(2/2). http://journals.fayoum.edu.eg/index.php/Tourism/article/view/375
19. Hanna S, Rowley J (2008) An analysis of terminology use in place branding. Place branding and public diplomacy 4:61–75. https://doi.org/10.1057/palgrave.pb.6000084
20. Echtner CM, Ritchie JRB (1993) The measurement of destination image: empirical assessment. J Travel Res 31:3–13. https://doi.org/10.1177/004728759303100402
21. Das D, Mohapatra PKJ, Sharma SK, Sarkar A (2007) Factors influencing the attractiveness of a tourist destination: a case study. J Serv Res 7:103–134. https://www.researchgate.net/profile/Debadyuti_Das/publication/281902368_Factors_Influencing_the_Attractiveness_of_a_Tourist_Destination/links/567bd43608ae19758381ae67.pdf
22. Baloglu S, McCleary KW (1999) A model of destination image formation. Ann Tour Res 26:868–897. https://doi.org/10.1016/S0160-7383(99)00030-4
23. Bentler PM (1992) On the fit of models to covariances and methodology to the bulletin. Psychol Bull 112:400–404. https://doi.org/10.1037/0033-2909.112.3.400
24. Gerbing DW, Anderson JC (1988) An updated paradigm for scale development incorporating unidimensionality and its assessment. J Mark Res 25:186–192. https://www.jstor.org/stable/3172650
25. Preacher KJ, Rucker DD, Hayes AF (2007) Addressing moderated mediation hypotheses: theory, methods, and prescriptions. Multivar Behav Res 42:185–227. https://doi.org/10.1080/00273170701341316
26. Hayes AF (2012) PROCESS: a versatile computational tool for observed variable mediation, moderation, and conditional process modeling. https://www.afhayes.com/index.html
27. Saeedi H, Heidarzadeh Hanzaee K (2018) The effects of heritage image on destination branding: an Iranian perspective. J Herit Tour 13:152–166. https://doi.org/10.1080/1743873X.2016.1264958
28. Kavoura A, Stavrianeas K (2015) The importance of social media on holiday Visitors' choices - the case of Athens, Greece. EUROMED J Bus 10:360–374. https://doi.org/10.1108/EMJB-03-2015-0016
29. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia, Austria. Tour Int Interdisciplinary J 61:289–312. https://hrcak.srce.hr/110912
30. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66
31. Sophocleous H, Masouras A, Papademetriou C (2019) Brand as a strategic asset for cultural organisations - a proposal for the forthcoming cultural institution of pafos. In: Kavoura A, Kefallonitis E, Giovanis, A (eds) Strategic innovative marketing and tourism, 7th ICSIMAT
32. Siakalli M, Masouras A, Papademetriou C (2017) E-Marketing in the Hotel Industry: marketing mix strategies. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing, Springer proceedings in business and economics. Springer, Cham. https://doi.org/10.1007/978-3-319-33865-1_15

Creativity and Sustainable Development: A Proposal to Transform a Small Greek Island into a Creative Town

Kiriaki Alyfanti and Despina Sdrali

Abstract During the last decades, creative-based strategies have been considered as key drivers for the revitalization and development of small and medium-sized cities. The purpose of this paper is to: (a) investigate the current situation in a small Greek island, Aegina, concerning certain key creative factors, (b) identify the variables that need to be considered in order to transform the island into a creative one. The results of this study stress the importance of some key success factors, such as entrepreneurship, endogenous assets and networks. This study attempts to give guidance to policy makers so they can swift Aegina into a creative island and develop it in a way that all stakeholders (i.e. residents, workers, tourists etc.) can enjoy, meeting the concurrent goals of environment, i.e. environmental, social, cultural and economic sustainability.

Keywords Creative economy · Sustainable local development · Aegina Island · Greece

1 Introduction

By looking for a new development model, from an economy solely based on the production of goods to an economy significantly fuelled by ideas and innovation, the role of creativity could not be ignored. During the last decades, creative-based strategies have been considered as key drivers for the development not only of big cities and metropolitan areas, but also of small and medium-sized cities.

The purpose of this paper is to investigate the current situation in a small Greek island, Aegina, concerning certain key creative factors, and identify the variables that need to be considered in order to transform the island into a creative and sustainable one.

K. Alyfanti (✉) · D. Sdrali
Harokopio University, Athens, Greece

The paper starts with a literature review of the linkage between creativity and sustainable development. Then the methodology is described and the presentation of the study area follows. The paper ends with a discussion of the results, the main conclusions and implications, and the directions of future research.

2 Creativity and Sustainable Development

A number of international organizations state that development activities have to be planned, managed and developed so as to be environmentally tolerable over time, ethically and socially compatible with local communities, generate economic benefits to the locals, and preserve the natural and cultural resources.

However, Landry [1] was the first who stressed the essential role of culture as a "distinct" fourth pillar in the area of sustainable development. Except from the three dimensions, i.e. environment, social and economy, culture is now regarding as a critical key resource for sustainable development, replacing resources, such as industry or area's geographical location. Economy and culture are not, thus, longer separate but is part of a larger process of development. This linkage is the result of the emergence of the concept of the "creative economy".

Creative economy is a concept based on creative assets. It adopts effective cross-sectoral mechanisms and innovative actions that can create jobs and generate income and export earnings, while promoting social inclusion, cultural diversity and human development. It embraces economic, cultural and social aspects that interact with technology and tourism goals [2].

A component of the creative economy concerns "creative industries". Creative industries supply goods and services that have their origin in individual creativity, skill and talent, and are associated with arts, culture, entertainment, business and technology [3, 4]. The production of creative goods and services may be proved crucial to enhance efficiency and productivity, develop and promote sustainable development, and preserve cultural identity [5]. The symbolic dimension, design and production of creative goods and services have led to a high awareness of individuals in innovative practices through publicity [6].

Creative cities are at the heart of the creative economy [7, 8] and are originally associated with creative industries. According to Landry [1], the creative city is based on the idea that "culture as values, insight, a way of life and form of creative expression, represents the soil form within which creativity emerges and grows, and therefore provides momentum for development".

However, it is argued that creative people are those they become the key drivers for sustainable development. Florida [9] argues that cities need a good "people climate", an approach focused on the creative class and highly skilled people. Creative people generate "creative milieu"; they share common values, increase "creative capital", give a competitive advantage to the places they live and attract new enterprises [4]. This fact contributes to widening the sustainable creative

community and attracting young families, midlife career changers, active retired persons, investors, entrepreneurs, tourists etc. [4, 10].

Therefore, economy (creative industries), place (creative spaces) and people (creative talent) are the interlinked variables that could develop a creative-based strategy, an essential component for sustainable development.

In recent years a question, however, arises: "Could the creative -based strategies be built for the development of small-sized cities and not only of big ones?"

Small cities can play a role in the creative economy and the attraction of the creative class, since small-sized communities are often characterized by quality of life and amenities. High standards of quality of life and unique characteristics in a place can help communities to be more creative and sustainable. In fact, people are looking for life satisfaction that is linked to the four pillars of sustainable development, i.e. environment, social, culture and economy. The creative class is attracted to places that are characterized by a sustainable lifestyle; low-carbon lifestyle, strong community ties, diversity, less density and a vibrant cultural life; characteristics that may be abundant on the small cities [4]. Finally, studies [11, 12] have shown that the creative class is present in areas with high natural amenities, while it is growing more rapidly in mountainous areas characterized by sunny climate with a mix of forest and open space.

At last but not least, governance is a crucial factor in promoting a new strategic vision based on creativity. Governance is related not only with leadership and place management, but also with the coordination of actors, public participation and territorial cooperation [13]. Finally, strong community participation and involvement is necessary. However, in order local people being able to engage in discourse, knowledge is required.

3   Methodology

The purpose of this paper is to investigate the current situation in a small Greek island, concerning certain key creative factors, and identify the variables that need to be considered in order to transform the island into a creative and sustainable one. For the study purpose secondary data were used.

Based on the theoretical insights and empirical studies on the small creative cities [4, 13], five factors are investigated:

- Governance: It is a critical factor for the promotion of a creative economy in small communities. Local leaders can be acted as promoters or facilitators of the development of creative ecosystems [13].
- Natural and built environment: It refers to the natural resources that affect human survival and economic activity, and the artificial, man-made structures as well. It is regarded as an important component to attract creative people.
- Social and symbolic capital: It is linked with the community and its social interactions.

- Economic activities and cultural facilities: They are referred to the local economic activities, entrepreneurship, and cultural infrastructure and events.
- Connectivity: It is considered as a component of great importance for the success of creative context. It fosters cooperation between the creative class, activities, resources and territories. It encompasses both virtual (digital communication) and physical accessibilities.

4 The Study Area

4.1 Context

The island of Aegina, Greece, is situated in the center of the Saronic Gulf, 17 miles from the port of Piraeus -the Greek capital's largest port city-. Aegina covers an area of 82.63 km^2 with a population of 13,190 permanent inhabitants [14]. The average density per km^2 is 150.9 per inhabitant. The length of its coasts is 57 km. The municipality of Aegina consists of the island of Aegina. It is part of the Islands Regional Unit, Attica region.

4.2 Governance

The local strategy is embedded on the island's endogenous assets based on the historical and religious background and the natural environment, and aims at the promotion of the island as an authentic tourism destination. In recent years, an attempt has been made to promote special interest and alternative tourism, such as gastronomic tourism based at pistachio flavors, religious and marine tourism, and walking tours. Recently, Aegina has participated in a CLLD/LEADER programme entitled "Culture and Environment—On board", aiming at the promotion of the islands of the Saronic Gulf. In terms of the regional cooperation, there are partnerships among the local authorities, the Attica region and the Greek Tourism Organization. Finally, Aegina is a member of the DAFNI Network of Sustainable Greek Islands; a non-profit organization that seeks to create opportunities and support initiatives towards the sustainable development of Greek islands [15].

4.3 Natural and Built Environment

Aegina is part of the so-called Aegean Volcanic Arc and most of its landscape is dominated by volcanic rocks that cover the entire south and north eastern part of the island. Only the north western part has less rugged landscape and richer vegetation [16]. The island is best known for its pistachio trees. However, olive trees, almond

trees and pine trees are also found on the island. The Mountain of Hellanion -the highest point on Aegina- is of great natural beauty which is protected by the Greek state. The Mountain is also of great archaeological interest, since several kinds of remnants of the ancient temple of Zeus Hellanius exist at the foothills of it. In addition, the ancient olive grove (or Eleonas) is known for the great number of olive trees that are many hundreds of years old. Eleonas is part of a permanent wildlife zone and a migratory bird station. On the island, there are also eight walking paths. Finally, 576 species of plants and herbs have been recorded. Aegina has a Mediterranean climate, consisting of mild winters and dry, hot summers.

Regarding the built environment, the island has a set of archaeological sites and museums; i.e. the temple of Aphaia and the Aphaia Museum [17, 18], which are the most popular destinations of the island, the archaeological museum of Aegina and the archaeological site of Kolonna [19]. The island has also an exceptional set of religious monuments, such as the church of Aghios Nektarios and the monastery of the Holy Trinity founded by Aghios Nektarios, which are considered as the most important religious sites of the island [18]. On a steep hill adjacent to the church and monastery of Aghios Nektarios is located Paliochora, which means "Old Town", and was the old Capital of the island (ninth century–early nineteenth century AD). It is built on a natural fortified hill at an altitude of 355 m [17]. Paliochora is one of the most atmospheric places to visit on the island, with churches standing as the only monuments on the hill [18]. Moreover, Aegina has historical buildings, known as the "Kapodistrian buildings", which were constructed, during the period where Ioannis Kapodistrias became the first Governor of the New Greek nation (1828–1829), to be used as public buildings and institutions. Finally, the island has a "hidden" harbor, just to the main harbor [20]. It is the only country's "hidden" harbor where the sea-bathers can see ancient remnants at the bottom of the sea.

4.4 Economic Activities and Cultural Facilities

Tourism has acquired an increasing importance on the island and is one of the main activities of it. Aegina has the natural and cultural capital so as to be a popular destination for cultural tourists, pilgrims, and weekenders and/or yachtsmen. In addition, the agricultural activity is important, especially the pistachio cultivation. Specifically, in 1994 the Aegina Pistachio entered the list of Protected Designation of Origin products (P.D.O.).

Regarding cultural activities, there is a range of cultural events, such as arts exhibitions (painting, photography, artworks, sculpture and contemporary art), festivals of folk dances and theatre, the Bakopoulou International Music Festival and the pistachio festival that contribute to the sustainable local development. In addition, the cultural infrastructure comprises museums, such as the Folk Art Museum and the Sculpture Museum of Christos Kapralos, and the Library—a Kapodistrian building—. Aegina has also a number of independent groups/clubs, such as photography, theatre for adults and children, sports, folk dances and reading ones, as well as

many clubs that are aiming to revive the "kopaneli", a traditional embroidery of the island.

4.5 Social and Symbolic Capital

The identity of Aegina is rooted in its historical past and religious heritage, but it is also shaped by the pistachio product. On the island there is also a sense of community since there are many community groups providing a wide range of activities, such as environmental, cultural, safety and health ones. For instance, the walking paths on the island have been engraved by the local associations and the Greek Environmental Society. Furthermore, many volunteers help at the Wildlife and Bird Care Centre of the island. Finally, the beauty of the landscape, along with the rich historical and cultural background, has attracted and inspired many Greek artists and writers to live and work on Aegina.

4.6 Connectivity

The island's geographic position allows easy access to the Capital of Greece, Athens, (about 1 hour), the neighbouring coastal areas of the Greek mainland, and the routes in the central Aegean and beyond. Regarding virtual connectivity, public spaces with free Internet access have been provided.

5 Discussion—Conclusions

Based on a diverse natural and cultural capital, Aegina has the potential to be a creative island, inducing the attraction of creative enterprises and creative people. Encouraging innovation and investing in culture and education are the main axes on which the proposal is based.

Entrepreneurship is considered as a crucial factor in the analysis of creative-based strategies. Creative entrepreneurs have a strong entrepreneurial spirit, which allows identifying new opportunities in the marketplace, promoting job creation and generating economic growth. Many studies [21–25] have shown alternative usages of pistachio. The creation, thus, of innovative products based on pistachio, such as medical products, sweets [26], dairy products, pistachio oil, sausages and cosmetics, could strengthen the local economy. In fact, according to a Greek study [27], most pistachio farmers of Aegina regard pistachio cultivation as a dynamic one that can contribute to the island's development by combining tradition with innovation.

Moreover, cooperation between local authorities, universities, enterprises and research centres is proposed in order to create sustainable cultivation practices,

innovative products and modern ways of promotion. In the services sectors examples have illustrated the way synergies can be employed [28, 29].

In addition to this, agro-food clusters can be an innovative way of promoting the product as literature has illustrated that it can be a successful case [30]. In regard to this study, it is worth mentioning that an action entitled "Open Centres of Commerce" is going to be taken promoting the collaboration of the municipality of Aegina and the Union of private businesses, traders and manufacturers of the island.

However, it is rather important to develop a creative-friendly local education system as an internal source for creative minds and talents. On Aegina the Drury Center is operated, which is founded by Drury University, a private Arts College in Springfield, Missouri. The centre has hosted many students on semester programs and on short-term and custom programs.

Furthermore, a multi-activities centre of communication, entertainment, culture and education is proposed. The centre could be housed in the historical building of the Kapodistrian orphanage, which is in the process of restoration. The centre is proposed to include an interactive pistachio museum, a conference room, an exhibition hall, a library, a reading room, a pistachio shop and a coffee-bar restaurant.

The cultural vitality is a crucial feature for the development of a creative atmosphere. The positive cultural image attracts the creative class, which is a prerequisite for sustainable development [31]. Aegina has a rich cultural background; however, further research in archaeological sites of Aphaia and Kolonna is proposed. In addition, the country's only "hidden" harbor could be transformed to a marine museum, which, according to archaeologists, may be listed in the six famous marine museums of the Mediterranean. Finally, in recent years the places where Kapodistrias lived in Greece and abroad are connected. Networking can bring people with creative spirit, skills and talent, and the possibility of increasing tourism as well. Networks focused on culture and creativity could play a crucial role as a bridge between the "local" and the "global".

This study attempts to give guidance to policy makers so they can swift Aegina into a creative island and develop it in a way that all stakeholders (i.e. residents, workers, tourists etc.) can enjoy, meeting the concurrent goals of environment, i.e. environmental, social, cultural and economic sustainability. However, further research on the residents' views on creative-based strategies is needed. Participation development is extremely important for the success of creative processes [32–35] since the residents can act as "creative brokers" promoting an interdisciplinary approach.

References

1. Landry C (2000) The creative city: a toolkit for urban innovators. Earthscan, London
2. Creative Economy Literature Review (2012) Presented by the creative Nova Scotia leadership council in partnership with the Nova Scotia department of communities, culture, and heritage

3. Caves R (2000) Creative industries: contracts between art and commerce. Harvard University Press, Cambridge, MA
4. INTELI (2011) Creative-based strategies in small and medium-sized cities: guidelines for local authorities. Portugal
5. Porter ME (1998) Clusters and the new economics of competition. Harv Bus Rev 76:77–90
6. D'Ovidio M, Morató AR (2017) Introduction to SI: against the creative city: activism in the creative city: when cultural workers fight against creative city policy. City Cult Soc 8:3–6. https://doi.org/10.1016/j.ccs.2017.01.001
7. UNCTAD (2006) Culture and development: strategies of the ACP Group second meeting of the ministers of culture of the African, Caribbean and Pacific (ACP). ACP-CULTURES.EU. http://www.acpcultures.eu/pdf/STRATEGIES_ACP_en.pdf
8. UNCTAD (2010) Creative economy report 2010. A feasible development option, United Nations
9. Florida R (2002) The rise of the creative class. Basic Books, New York, NY
10. Kagan S, Hahn J (2011) Creative cities and (un) sustainability: from creative class to sustainable creative cities. Cult Local Gov 3:11–27. https://doi.org/10.18192/clg-cgl.v3i1.182
11. McGranahan D, Wojan T (2007a) Recasting the creative class to examine growth processes in rural and urban countries. Reg Stud 41:197–216. https://doi.org/10.1080/00343400600928285
12. McGranahan D, Wojan T (2007b) The creative class: a key to rural growth. Amber Waves 5:1–6. http://ageconsearch.umn.edu/record/125533/files/Creative.pdf
13. Selada C, da Cunha IV, Tomaz E (2012) Creative-based strategies in small and medium-sized cities: key dimensions of analysis. Qua Geo 31:43–51
14. Hellenic Statistical Authority. http://www.statistics.gr/en/home/
15. DAFNI Network. http://www.dafni.net.gr/en/
16. Klebinder-Gauss G, Gauss W (2015) Opportunity in scarcity: environment and economy on Aegina. In: Lichtenberger A, von Rüden C (eds) Multiple Mediterranean realities: current approaches to spaces, resources and connectivities. Ferdinand Schöningh, Paderborn, pp 67–91
17. Sphyroera S (2002) Aegina: the first capital of modern Greece (in Greek). Ellinika Grammata, Athens
18. Koulikourdis G (2000) Aegina 1. Athens (in Greek)
19. Aegina Island. http://www.aegina.com.gr
20. Ancient Aegina. http://greeklandscapes.com/greece/aegina/aegina-ancient.html
21. Lua A, Yang T (2003) Effect of activation temperature on the textural and chemical properties of potassium hydoxide activated carbon prepared. J Colloid Interf Sci 274:591–601. https://doi.org/10.1016/j.jcis.2003.10.001
22. Demiral I, Gülmezoğlu N, Atilgan N, Şensöz S (2008) Production of biofuel from soft shell of pistachio (*Pistacia vera* L.). Chem Eng Commun 196:104–115. https://doi.org/10.1080/00986440802300984
23. Shamsaddini-Bafti M, Mahnaz Salehi M, Maghsoudi A, Tehrani A, Mirzaei F, Mojtaba Momen S (2012) Effect of sex and rearing system on the quality and mineral content of fiber from Raeini cashmere goats. J Anim Sci Biotechnol 3:20. https://doi.org/10.1186/2049-1891-3-20
24. Ghasemi S, Naserian AA, Valizadeh R, Tahmasebi AM, Vakili AR, Behgar M, Ghovvati S (2012) Inclusion of pistachio hulls as a replacement for alfalfa hay in the diet of sheep causes a shift in the rumen cellulolytic bacterial population. Small Rumin Res 104:94–98. https://doi.org/10.1016/j.smallrumres.2011.09.052
25. Kamrani YY, Amanlou M, Esmaeelian B, Bidhendi SM, Saheb Jamei M (2007) Inhibitory effects of a flavonoid-rich extract of *pistacia vera* hull on growth and acid production of bacteria involved in dental plaque. Int J Pharm 3:219–226. https://doi.org/10.3923/ijp.2007.219.226
26. Chitzanidis A (2010) From Asia to Aegina: the story of the pistachio tree. XIV GREMRA Meeting Pistachio and Almonds no: 94
27. Alyfanti K, Sdrali D, Theodoropoulou E, Mitoula R (2016) Pistachio cultivation on the Aegina island, Greece: contributing to sustainable development and prospects, based on the views of pistachio growers. In: Koutsouris A, Tsiboukas K, Partalidou M (eds) The role of the

agricultural sector in the current crisis, proceedings of the 13th Pan-Hellenic agricultural economic conference, Thessaloniki, Graphima, pp 222–237 (in Greek)

28. Sophocleous H, Masouras A, Papademetriou C (2019) Brand as a strategic asset for cultural organisations - a proposal for the forthcoming cultural institution of Pafos. In Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism, 7th ICSIMAT

29. Khan J, Maltezou V, He C (2019) The role of destination brand image and revisit intention on tourist spending. In Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism, 7th ICSIMAT

30. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia, Austria. Tour Int Interdiscip J 61:289–312

31. Konsola N, Karahalis G (2010) Cultural action and local development: the festivals in the Greek cities of the region. In: Konsola N, Karahalis G (eds) The regional dimension of the new strategy, Europe 2020, 16th scientific conference of the association of Greek regionalists, Athens, pp 374–378

32. Bitsani E, Kavoura A (2012a) Accessibility versus advertising for mountain tourism: the case of Nafpaktia. Tour Int Multidiscip J Tour 7:217–235

33. Sdrali D, Goussia-Rizou M, Kiourtidou P (2015) Residents' perception of tourism development as a vital step for participatory tourism plan: a research in a Greek protected area. Environ Dev Sustain 17:923–939. https://doi.org/10.1007/s10668-014-9573-2

34. Bitsani E, Kavoura A (2014) Host perceptions of rural tour marketing to sustainable tourism in Central Eastern Europe. The case study of Istria, Croatia. Procedia Soc Behav Sci 148:362–369. https://doi.org/10.1016/j.sbspro.2014.07.054

35. Bitsani E, Kavoura A (2012b) Connecting enological and gastronomical tourism at the wine roads, Veneto, Italy for the promotion and development of agrotourism. J Vacat Mark 18:301–312. https://doi.org/10.1177/1356766712460738

Understanding the Challenges of the Healthcare System in Promoting Best Use of Digital Marketing Tools for a Purposeful Living

Ana María Gómez-Olmedo and Maria Tsirintani

Abstract The pace of the evolution of digital marketing is faster than ever and the concept of marketing and marketing models have been redefined to respond to this challenge. As a result, consumers have been empowered thank to the accessibility to this ecosystem and consumers' behaviour is affected by this disruptive evolution on the era of instant access, multiple opportunities and availability of information. The concept of health and health care system approaches have been also redefined. Instead of focusing on cure a disease the focus is now put on the holistic concept of prevention from the starting point, the promotion of healthier lifestyles or purposeful living. Thus, one of this approaches states that the term of value needs to be questioned and offers a value-based approach where the central focus is put on health outcomes. From this perspective, increasing value seems to be crucial for a better interaction with one of the main healthcare system customers, the patients. Despite these challenges, the healthcare system seems to remain the same and digital marketing tools have not been properly implemented. Instead, it seems to be an increase of misuse of drugs, counterfeit drugs and the empowered and more informed consumer feels misguided. A review of literature is conducted to generate a picture of how consumers are making use of the digital marketing tools to promote their health from a "purposeful living" perspective. In order to shed some light, recommendations are suggested to those institutions in charge of educating consumers on their best use of internet for this purpose.

Keywords Purposeful living · Health · Digital marketing · Education · Consumer empowerment

A. M. Gómez-Olmedo (✉)
ESIC Business & Marketing School, Madrid, Spain
e-mail: ana.gomez@esic.edu

M. Tsirintani
University of West Attica, Athens, Greece

1 Background

The concept of purpose can be defined as "a central, self-organizing life aim that organizes and stimulates goals, manages behaviour, and provides a sense of meaning" [1]. Purposeful living seems to be linked to longevity, general health and well-being and goes beyond healthy living because it reflects a clear persistence towards one's goals upon which individuals drive their lives [1]. Physical and mental health may be positively influenced by purposeful living since it may drive our behaviour and motivation, improve our psychological flexibility, help us to better allocate our cognitive, behaviour and physiological resources and more importantly it implies high cognitive processes which differentiate purposeful living from other primitive motivations [1].

This concept represents a holistic view of health, an approach that seems to be crucial for the adaptation of the health system to the reality of developing countries. Given this evidence it seems that purposeful living should be promoted between health institutions to improve health among population and to implement the proper mechanisms that would foster this sense of living as well as a key tool to foster prevention strategies that impact on cost-effective resources.

Since purposeful living requires high cognitive processes it may be implied that patients with this goal in life would have higher health literacy ratios and will make use of information resources according to this condition. To understand the type of information resources that would best drive individual health decision-making we will make use of the definition of health literacy offered by the US Department of Health and Human Services (2000) "the capacity to obtain, interpret, and understand basic health information and services and the competence to use such information and services to improve health'.

The use of Internet for the acquisition of health information is intrinsically aligned with consumer decision-making and according to the health literacy definition, the resources provided by the access to health information on the Internet might be too extensive and individuals would need some guidance to interpret the most useful and accurate information [2]. Moreover, Internet is considered an active channel, where some cognitive effort is needed, as opposed to passive channels such as TV where little cognitive effort is required which may explain the need of proper strategies to provide health information to population [2].

According to the World Health Organization, e-health can be defined as the "use of information and communications technologies (ICT) in support of health and health-care services, health surveillance, health literature and health education, knowledge and research" [3] and it has the potential to be beneficial to improve functions such as the tracking of patients, communication systems between institutions, patient monitoring tasks, clinical information collection or minimisation of errors in data collection [4]. After conclusions like this it seems urgent to implement e-health technologies.

As for online marketing efficacy on healthcare providers as well as on patients, it seems that still remain unanswered although it is considered as an important issue to be solved [5].

Due to all these circumstances, there is a need to provide innovative ways through internet to help patients in their decision-making process [2]. Apart from this, the use of e-health technologies has been proved promising for having a positive impact on health management in developing countries [4].

Systematic reviews have been made to give evidence about the benefits of e-health technologies for the promotion of patient care [6–12]. However, little research seem to have been made around the promotion of purposeful living through internet technologies. Therefore, this systematic review aims to shed some light about the amount or the lack of research around this objective. In order to do so, we provide the following key questions: What is the amount of literature around purposeful living and e-health? What are the main topics discussed in the identified papers?; What are the main recommendations offered?

2   Methodology

This systematic literature review is reported following the PRISMA statement [13]. The PRISMA Statement consists of an evidence-based minimum set of a 27-items (checklist) and a four-phase flow diagram for reporting in systematic reviews and meta-analyses.

2.1   Search Strategy, Search Terms and Databases

This systematic literature review was conducted in August 2018 in biomedical electronic databases [PubMed, PubMed Central, PubMed Health] as well as in Scopus and Google Scholar seeking peer-reviewed articles related to the keywords "purposeful living" or "healthy living", and "health" and "digital marketing". The Boolean search string used to assure a wider variety of results was ("purposeful living" OR "healthy living") AND health AND "digital marketing".

2.2   Eligibility Criteria

The inclusion criteria established to conduct this review is detailed as follows:

- Only peer-reviewed articles. Therefore, books, conference papers, doctoral dissertations or any other document types were not included.
- Articles focused on the topics relevant to the topics.
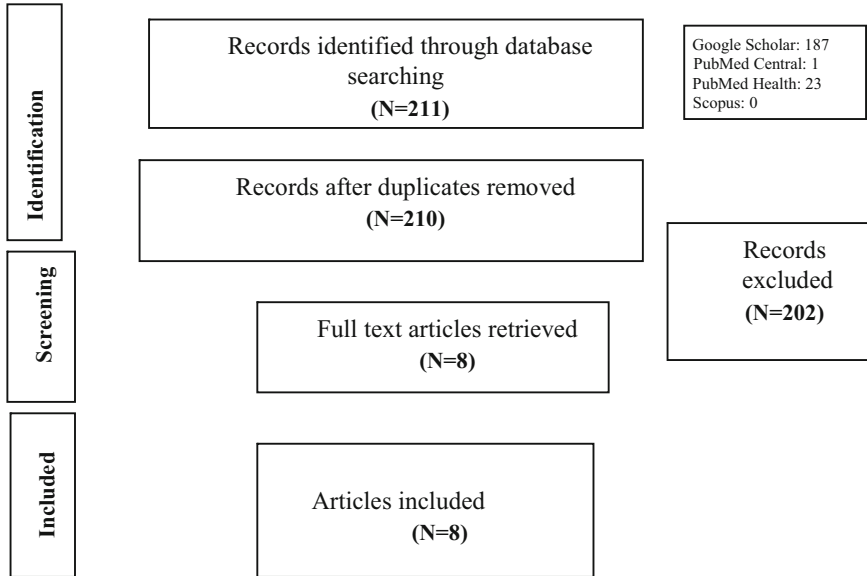
Fig. 1 PRISMA 2009 flow diagram for selection of papers

- Articles written in English.
- In Google Scholar search, patents and citations were excluded.

2.3 Study Selection

The main author assessed the eligibility of peer-reviewed articles listed by the different search engines. Selection criteria was then applied after a review of titles and abstracts, carefully identifying only those related to the topics associated with the search terms. Duplicated articles were removed and full text of potential papers was retrieved to be assessed for inclusion. Disagreement about inclusion of articles was resolved by consensus between the two authors. As a result of this process, 8 articles were selected for analysis. Selection of papers flow diagram following the PRISMA protocol is detailed in Fig. 1.

2.4 Data Extraction and Analysis

Data was then extracted using an electronic extraction form that was first tested with three of the selected studies and evaluated by the two authors. Additional coding categories were included after considering that it was necessary. After agreement, the data extraction resulted in a codification of the articles using the following

categories: Author, Date of Study, Title, Journal, Aim of the Study, Digital Marketing Tool, Country of study, Target, Data extraction, Method, Main results, Limitations of the Study, Conclusion. Data extracted was analyzed in order to address the key research questions presented in this study.

3   Results

The search strategy followed in this systematic reviewed yielded a total of 8 results to address the key questions proposed in this study. The study undertook by Donohue et al. [14], explored the direct-to-consumer advertising field within pharmaceutical industries in the United State Market and targeted to physicians. Their descriptive analyses showed an increase of promotional activities during the period of study, 1996 to 2005, and a sharp growth of direct-to-consumer advertising of prescription drugs in United States. Promotion to professionals seemed to still represent the main target of this activity.

In regards of type of drugs promoted, those that treated chronic conditions seemed to be the most advertised. These results seem to be of concerned since FDA regulation may not have the ability to enforce advertising regulation needs, in fact, it seemed to have been weakened since for much more expenditure on advertising, the amount of FDA staff seems to remain the same. This lead to recommendations of reviewal of direct-to-consumer advertising regulation and procedures in the pharmaceutical industry.

With respect to the research conducted by Miklosik [15] the promotion of mHealth applications in search engines was reviewed by designing a search engine results page strategy in the main search engine, Google and in two platforms, desktop and mobile. This study allowed to explore the positioning and visibility of mHealth applications in a certain category, Health and Fitness, in two different markets. Australia and Slovakia. Besides, it allowed to establish a method to further assess search engine visibility.

Results showed a tougher competition in keywords for exercise, training and mental health applications than in healthy and diet categories. Differences between the two countries were observed and this lead to the recommendation of further research to reveal opportunities in each market. Recommendations were also made about the optimization of web pages since not many web pages of the mHealth applications were listed in the first search results. This also led to the challenge of working on onsite and offsite search engine optimization with third-party websites, social media profiles and paid per click strategies to drive traffic to the applications. App stores represented the main source of traffic with the possibility of accessing a direct link for downloading the application.

As for the research of Tobia et al. [16] the usage of social media strategies within the healthcare business was explored. This conceptual paper identified opportunities and challenges from which they offered some suggestions and best practices to take into account to better implement these activities.

With regards to the strategic opportunities of social media, the following aspects of social media platforms were considered: sharing of information, patient engagement, interactivity, customer relationship activities, recruitment and talent retention, cost-efficiency, networking, enhancement of care quality, education and learning, publishing opportunities, trustworthiness, accessibility, crisis communication channel, intelligence gathered, organic and non-traditional communication channel.

In terms of challenges, confidentiality and privacy of the information of patient seemed to be an issue to be assured along with information accuracy and real operational costs. However, the authors agreed that the benefits obtained by the usage of social media to improve the business models of healthcare organizations outweighed the risks. After this theoretical approach some suggestions of best practices and best use of social media channels within the healthcare industry were proposed.

With respect to the conceptual approach to the marketing mix elements made by Türk et al. [17] within the organic food market in the European Union, the authors followed an analytical hierarchy process to analyze the 4As classification of marketing mix elements: acceptability, affordability, accessibility and awareness.

Awareness seemed to be the most determined element to drive consumers purchase intentions followed by affordability, accessibility and acceptability. These results have a direct impact on the management of organic food demand and recommendations for an intensive and low-cost distribution strategy within the organic food industry were made. As for the best tool to reach potential consumers, community-based social marketing platforms seemed to better influence consumers.

A systematic literature review was conducted by Kraak and Story [18] to analyze the use of brand mascots and characters for the promotion of healthy diets between children in the United States. They examine the media landscape through five electronic databases and searches on the Internet to find out little advancement on the accountability of these marketing practices as well as in the regulation enforcements made to promote healthy diets in American children. In fact, digital channels seemed to be widely used for the promotion of quite the opposite, nutrient-poor food and beverage products.

Storey et al. [19] undertook a deep conceptual work to analyze how health communication might help to tackle health issues such as HIV/AIDs in the United State market. Their work suggested that mHealth tools, although still not widely used, are considered of great impact and offer the possibility to enhance the promotion of campaigns that help to prevent diseases such HIV. Social media channels seem to have successfully helped to increase awareness, visibility, customer relationship services and user engagement. Besides, they help to prevent misinformation.

The African market was explored through the work of Hofnie-Hoëbes et al. [20]. A systematic review and meta-analysis were conducted to identify information sources used by African women to search for menopause information. As a result of this research, the information sources that best ranked were friends and relatives while medical providers were consulted by only 30% of the participants included in the study [20].

These results meant a higher reliance on primary sources of information and calls are made for an increase of awareness of education of not only women but also their friends and relatives to better provide more accurate, timely and helpful information.

Limited use of digital tools was reported. 1% use of internet websites in Namibia, 8.9% of electronic & print media in Nigeria and 38.3% of print & electronic media in South Africa.

As for the final result obtained in this review, the work of Gordon et al. [21] the effectiveness of social marketing interventions for the improvement of diet management, physical activity and substance use was explored within the United Kingdom market. Three systematic reviews were undertaken to give strong evidence of the impact of social marketing on nutrition and substance misuse whereas impact on physical activity seemed not to be clear. This great impact was effective not only within diverse target groups but also in different settings such as schools, clinical practices or workplaces and broad or narrow interventions seemed equally successful.

3.1   Key Questions

Question 1: What is the amount of literature around purposeful living and e-health? This literature review yielded a total of 8 results published from 2006 to 2018 as for their released date. Although this number of results seems clear insufficient, the recent date of the publication of the majority of the results (6 out of 8 on the last 4 years) may show a recent relevancy of the use of digital marketing tools within the healthcare industry.

Question 2: What are the main topics discussed in the identified papers? Social media interventions and platforms were explored in two of the studies [16, 21], while more generic issues were researched by other authors such as direct-to-consumer advertisement [14], marketing mix elements [17] or the state of health communication as a whole [19]. More specific issues such as mobile applications promotion strategies [15], or information sources to gather health information [20] were analyzed.

Question 3: What are the main recommendations offered? Enforcement of regulation of digital marketing was considered a main issue in two of the studies [14, 18] making recommendations about tougher measures to guarantee patient security. As for social media, these channels seem to better influence consumers, compared with traditional channels [16] as well as serve as an effective tool for diverse audiences [21]. Recommendations for the improvement of mobile application strategies to obtain a better performance on the promotion of mobile health applications within search engines were made although there seem to still not have reached an agreement on the classification of mHealth applications due to diversity of assessment criteria [15]. Community-based social marketing tools were also recommended as specific platforms to reach potential consumers for the healthcare industry [17]. Calls for an improvement of the awareness and education of primary

sources of information were made in the research undertook in the African market [20] what is aligned with the results obtained by Türk & Erciş [17] who considered awareness to be the most important element of the marketing mix model.

4 Discussion

4.1 Strengths and Limitations

Diverse markets, fields of the healthcare industry and target of consumers were explored in this systematic review which provide a certain heterogeneity of the study. Due to the amount of the results analyzed our search may have missed other researches that might provide different analyses and other considerations that may be relevant for our topic. Since the pace of the digital marketing market is rapid, the date of publication of the studies examined seem to give an up-to-date picture of the main challenges and opportunities encountered in the industry. Reporting biases might have influenced the conclusions offered in this systematic review and its impact cannot be estimated.

4.2 Practical Implications

Methods of search engine strategies and practical recommendations were offered in order to better implement digital marketing tools by healthcare organizations. Besides, all the studies seem to report successful interventions which also give evidences about the great potential of digital channels for the design of business models by the healthcare industry. Future research is needed to shed light about methodologies and considerations to be taken to get the best out of this promising field.

5 Conclusion

The healthcare industry should look at digital marketing platforms, such as social media, as important channels to communicate with its customers as part of the patient care strategies. Also, we need to mention the intelligence offered by users through these channels. Social media tools seem to be not only great tools for innovation but the perfect space for being up-to-date of consumers' conversation about health issues. Compared with traditional marketing channels, digital platforms seem to be more engaging and give more possibilities to design more personalized, interactive and emotional content. Finally, social marketing looks like a promising health behaviour intervention tool.

References

1. McKnight PE, Kashdan TB (2009) Purpose in life as a system that creates and sustains health and well-being: an integrative, testable theory. Rev Gen Psychol 13:242–251. https://doi.org/10.1037/a0017152
2. Bodie GD, Dutta MJ (2008) Understanding health literacy for strategic health marketing: eHealth literacy, health disparities, and the digital divide. Health Mark Q 25:175–203. https://doi.org/10.1080/07359680802126301
3. WHO (2005) 58th world health assembly: resolutions and decisions (Sustainable health financing universal coverage and social health insurance). Geneva
4. Blaya JA, Fraser HSF, Holt B (2010) E-health technologies show promise in developing countries. Health Aff 29:244–251. https://doi.org/10.1377/hlthaff.2009.0894
5. Constantinides E, Karantinou K, Alexiou M, Vlachaki A (2016) The efficacy of the internet and social media as medical marketing tools. In: 45th EMAC annual conference 2016: marketing in the age of data
6. Oh H, Rizo C, Enkin M, Jadad A (2005a) What is eHealth (3): a systematic review of published definitions. J Med Internet Res 7:e1
7. Oh H, Rizo C, Enkin M, Jadad A (2005b) What is eHealth?: a systematic review of published definitions. World Hosp Health Serv 41:32–40. https://doi.org/10.2196/jmir.7.1.e1
8. Black AD, Car J, Pagliari C et al (2011) The impact of ehealth on the quality and safety of health care: a systematic overview. PLoS Med 8:e1000387. https://doi.org/10.1371/journal.pmed.1000387
9. Stellefson M, Hanik B, Chaney B et al (2011) eHealth literacy among college students: a systematic review with implications for eHealth education. J Med Internet Res 13:e102
10. Collins SA, Currie LM, Bakken S et al (2012) Health literacy screening instruments for eHealth applications: A systematic review. J Biomed Inform 45:598–607
11. Barello S, Triberti S, Graffigna G et al (2016) eHealth for patient engagement: a systematic review. Front Psychol 6:2013. https://doi.org/10.3389/fpsyg.2015.02013
12. Kim H, Xie B (2017) Health literacy in the eHealth era: a systematic review of the literature. Patient Educ Couns 100:1073–1082
13. Moher D, Liberati A, Tetzlaff J, Altman DG (2009) Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. J Clin Epidemiol 62:1006–1012. https://doi.org/10.1016/j.jclinepi.2009.06.005
14. Donohue JM, Cevasco M, Rosenthal MB (2007) A decade of direct-to-consumer advertising of prescription drugs. N Engl J Med 357:673–681. https://doi.org/10.1056/NEJMsa070502
15. Miklosik A (2018) Promotion of Mhealth applications in search engines–a study of Australia and Slovakia. Aust Acad Bus Econ Rev 4(2):103–111
16. Tobia SNM, Masroma M (2016) Strategic advantages of social media within healthcare business activities: organizational practical implications, Laws, regulations and theoretical concerns. Abstr Bus Strateg Soc Sci 5
17. Türk B, Erciş A (2017) 4A marketing mix impacts on organic food purchase intention. Serbian J Manag doi 12:189–199. https://doi.org/10.5937/sjm12-10785
18. Kraak VI, Story M (2015) An accountability evaluation for the industry's responsible use of brand mascots and licensed media characters to market a healthy diet to American children. Obes Rev 16:433–453. https://doi.org/10.1111/obr.12279
19. Storey D, Seifert-Ahanda K, Andaluz A, Tsoi B, Matsuki JM, Cutler B (2014) What is health communication and how does it affect the HIV/AIDS continuum of care? A brief primer and case study from New York City. JAIDS J Acquir Immune Defic Syndr 66:S241–S249
20. Hofnie-Hoëbes K, Weightman A, Shatona M, Kelson M (2018) Information sources consulted by women in African countries to manage menopausal symptoms: a systematic review and meta-analysis. Open J Nurs 8(5):317
21. Gordon R, McDermott L, Stead M, Angus K (2006) The effectiveness of social marketing interventions for health improvement: what's the evidence? Public Health 120:1133–1139. https://doi.org/10.1016/j.puhe.2006.10.008

Combining Traditional and Digital Tools in Developing an International Guerilla Marketing Strategy: The Case of a SME Greek Company

Sofia Gkarane, Lenoudias Efstratios-Marinos, Chris A. Vassiliadis, and Yannis Vassiliadis

Abstract Economic crisis in Greece has led many Greek SMEs to turn to foreign markets and overseas distributors, since the interior market is low disposable income and because they do not have the funds for foreign direct investments. Even though the SMEs are aware of the advantages of an export activity, they often ignore the challenges, which incur time investment and extra costs, and follow a traditional export strategy, which just includes the participation to international exhibitions. This study suggests the use of guerilla marketing by SMEs, through the incorporation of several innovative advertising instruments along with their traditional and digital ones, in an attempt to achieve sales in foreign countries with the minimal resources. The validity of this methodology is proved through a case study of a SME in Thessaloniki, Greece, which followed the aforementioned practice and performed successful exports, managing to sell its products to overseas markets. After the case study analysis, the paper outlines some propositions for further research regarding the use of guerilla marketing by the SMEs. Finally, the emphasis is given to the managerial implication that SMEs, Greek and others, could use in order to perform well during their export efforts.

Keywords Guerilla marketing · Greek exports · SMEs

1 Introduction

Greek economy, the most closed economy in EU, presents weak exports and a continuous deterioration on its export market performance, yet it has a huge potential to increase its exports [1, 2]. The economic crisis has influenced SMEs in all sectors

S. Gkarane (✉) · L. Efstratios-Marinos · C. A. Vassiliadis · Y. Vassiliadis
University of Macedonia, Thessaloniki, Greece
e-mail: sgarane@uom.edu.gr

[3] however an international expansion could result in a sustainable economic growth through the enhancement of country-level competitiveness and the generation of foreign currency earnings [4].

The recent economic crisis along with the liquidity problems require that export promotion be developed and planned carefully and methodically, selecting carefully the markets for exports [2]. Of course, small-medium enterprises (SMEs) often confront several barriers like lack of qualified personnel, experience, knowledge, financial and technological resources [5] but it is marketing that appears to be the greatest competitive advantage for the Greek enterprises to survive [6]. Due to lack of resources, many SMEs practice Guerilla marketing, an unconventional advertising strategy that intends to get the maximum results with the lowest budget [7].

Although there have been several recent studies as regards the Greek exports within the economic crisis, they mainly focus on macroeconomic data and fiscal indicators [8–10], and the literature lacks, to the best of our knowledge, a scientific contribution, which will examine an international export strategy, within a Guerilla marketing concept, adopted by Greek SMEs.

The purpose of this study is to get a profound understanding of a SME's export practices and to provide insights into the utilization of traditional and digital tools through the lens of Guerilla marketing.

To reach the aforementioned targets, we conducted a qualitatively methodologically case study survey of a Greek SME and its successful efforts for selling its products to overseas distributors. In the first section, we discuss the Guerilla marketing and in the next section we present our methodology. After the findings, a discussion follows along with the paper's implications and limitations.

2 Literature Review

2.1 Traditional and Digital Marketing

Traditional marketing which includes print media, broadcast media, direct mail and telemarketing, is still chosen by SMEs which prefer to use the traditional advertising tools, such as newspapers, magazines, radio, television and printed leaflets and catalogues, instead of the digital ones [11–13]. As regards exports, the task of finding overseas collaborators is difficult, but international trade exhibitions can provide SMEs with remarkable possibilities for networking, establishing relationships and strengthening contacts, together with other selling and information gathering benefits, becoming a tool for the enterprise promotion [14, 15].

On the other hand, despite the fact that digital marketing could bring a positive potential and benefits for SMEs, many of the latter do not fully use the digital channels, like website, emails, search engine optimization, social media, banner advertising, or are still at an early stage of adopting these channels, mainly because of lack of knowledge [14, 16]. Social media, especially, have become an attractive means for finding online customers, and, as concerns B2B commerce, social media

can provide the opportunity of building relationships, trust and communication with customers and suppliers [17–19].

It is essential that marketers include both traditional and digital media during their marketing programs, because the traditional still offer value and the digital offer options that did not exist some decades before [20].

2.2 Guerilla Marketing

Over the last years, classical advertising has been decreasing and does not seem to attract consumers' attention, thus SMEs marketers have to search for new concepts of effective advertising to increase consumers' attention, at low expenses [21]. During the recent global financial crisis, Guerilla concept, getting popularity by Conrad Jay Levinson, the author of the book Guerilla Marketing in 1984, seems to be convenient for SMEs, which seek low cost marketing techniques, aiming at drawing the attention of a large number of recipients [22].

Guerilla marketing involves innovative, attractive, unique and unconventional advertising techniques, which offer opportunities to differentiate and target to gain big results and great impact at low cost [21–24]. SMEs lack the funds of the large corporations, which can invest in full-scale advertising campaigns or can hire expensive consultants, so SMEs should turn to something also effective but less costly [25]. Besides, almost half of the marketing weapons at the disposal of the companies are free of charge [26].

Despite the fact that SMEs do not need to advertise or to use every marketing tool, though a marketing plan is requisite and the first key to success [25, 27] for enterprises that are committed to it [16, 28]. Guerillas count new relationships, being grown from dialogues and interactivity and being built on a long-term basis with each individual customer [25]. Establishing human bonds is among the ten most important weapons for winning big profits [26].

3 Exploratory Case Study of a Greek Exporting SME

A Greek small-medium enterprise manufacturing company, which is in Cosmetics Branch Industry, was chosen for the study. The case company was selected as the intention was to check companies, which have been operating during crisis, achieving positive export results thanks to their international marketing strategy. Export knowledge and exporting experience were also set as prerequisites for the selection, since both of them are essential for successful international expansion [29]. In order to survive during crisis, the studied SME adopted the ten requirements that

PROPOSED THEORETICAL FRAMEWORK
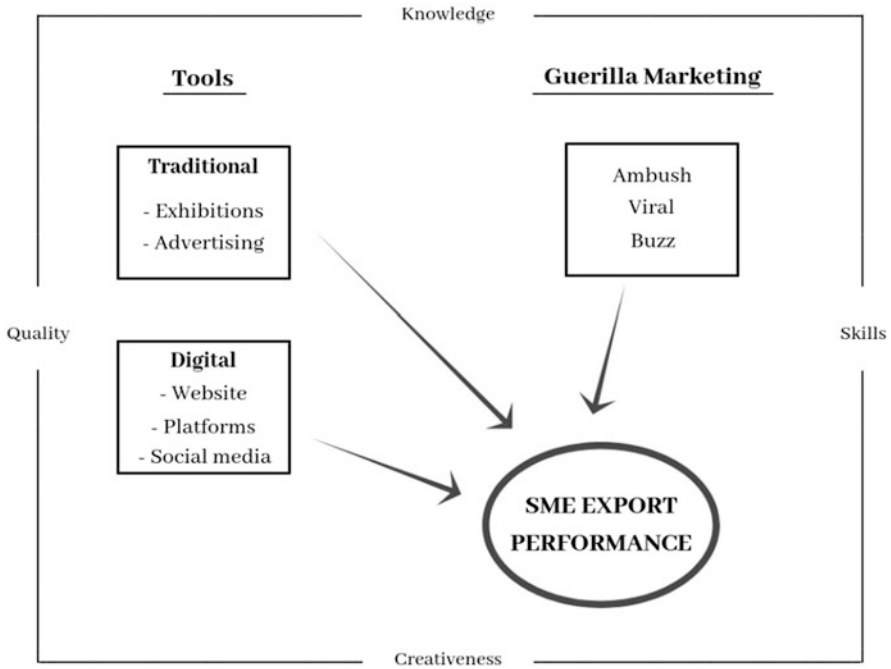
Fig. 1 Proposed theoretical framework for the successful export performance of the SME

Levinson [26] suggested about becoming a Guerilla, including thinking marketing differently and not being afraid to attack.

This study does not concentrate on generalizations but on getting a deeper understanding of international Guerilla marketing strategy of a SME to gain customers. Case study generalizations are more likely to take the form of an analytic or conceptual generalization [30]. The researchers conducted in-depth interviews with the managers of the company (general manager, export manager, marketing manager) and spent time observing the way the enterprise works on a daily basis, with a view of getting a profound knowledge of the way the studied enterprise performs its exports. In-depth interviewing is a qualitative method of gathering data to get deep knowledge and is usually used in combination with other means, such as live experience of the interviewer in what is being studied [31].

This preliminary case study was designed to investigate the potentiality of adopting Guerilla marketing, along with traditional and digital instruments, in order to achieve international sales.

In Fig. 1, a conceptual framework based on literature review and on our findings is presented for discussion. The following section discusses the general attributes of the framework along with the tools that were used in combination with Guerilla marketing, with possible managerial implications.

4 Findings

The examination of the SME, revealed that it takes part in a number of international exhibitions all around the year in several parts of the world based on its export marketing plan, giving special emphasis on the preparation before exhibiting, on the creation of the suitable promotional material according to the targeted market and on the hiring of experienced personnel. The enterprise also makes use of print media in its selected countries, through the application of traditional advertising in local magazines.

The SME seems to understand the potentiality of digital marketing and to keep pace with the digital developments. Its website is always updated and translated in four different languages. Concerning social media, the company invested on Facebook and LinkedIn and hired an expert on social media to administer its pages. The SME has also presence as a Gold Member on Alibaba.com, the online B2B trading platform, where importers and exporters from all over the world meet online and perform wholesale trade.

In order to take the maximum results from minimal resources, the SME adopted Guerilla tactics to create memorable experiences to its present and potential customers and to enhance its brand awareness. By adopting the Ambush marketing, it promoted its brand in several fairs and events that it had not taken part as exhibitor or sponsor. The SME created a moving stand with a few products and leaflets and its representatives approached potential customers. Ambush marketing is the use of an event for brand promotion, without legal permission, keeping expenditures at low level [21] and aiming at expanding its brand awareness [7]. Moreover, during events and fairs, it organized a travel contest and encouraged its potential customers to take photos of the products and share them within their own social media, tagging the company with the view of becoming viral. The participants were photographed with the personnel, who were dressed up with specific clothes, which reminded the specific sector of the enterprise. Viral marketing is the passing information from one person to another [7], making it being spread like a viral buzz [21]. Additionally, the general manager of the company had been photographed totally naked, in order to support a campaign against the HIV, material which has been used afterwards in the SME's marketing campaigns.

It must be pointed out that not all foreign potential customers reacted positively to the surprise effects that stemmed from SME's Guerilla efforts, mainly because of the difference in the cultures, yet, the majority of them welcomed this marketing concept and remembered the enterprise after returning to their home countries, by responding positively to its messages for business discussion and possible cooperation.

The SME relies on creativity [7] in an effort to differentiate and have a sustainable competitive advantage [22]. It did not reduce costs at the expense of quality, because, undoubtedly, SMEs should offer quality in their product or services [26]. The company always hired skilled personnel to support its export efforts. High-quality skills have a positive contribution to innovation and exporting success and prior innovation experience will more likely lead to export growth [32]. Finally,

the SME has a deep and long-term knowledge of exporting procedures. The lack of knowledge on international markets, among others, may constrain the exporting activities and become a barrier, which will frustrate the exporting efforts of the SME [5].

5   Discussion

The findings comply with the literature, since it is recommended that SMEs use both traditional and digital marketing tools to extend their life, instead of replacing one with the other [13]. Social media are employed by companies in different sectors [33–36] although there is still space for a better adoption of digital tools. Secondly and based on the findings, according to Levinson [25], it is the marketing combination that works and not the single-weapon marketing tools, like having just a website or making advertising.

From a managerial perspective, the results would motivate and guide SMEs in the adoption of Guerilla marketing in their export activities. By adopting the proposed framework, managers may be reinforced to apply it into their export marketing agenda and improve their company's international competitiveness. Moreover, they should recognize social media as an important aspect of the Internet and incorporate Guerilla concepts as part of their export marketing efforts.

To the best of our knowledge, this paper is the first to examine the Guerilla adoption in an SME export activity and contributes to the existing literature by identifying a procedure that may be further examined as regards the determinants of export activities, the extent of Guerilla marketing adoption and its impact on export performance of SMEs. From a theoretical perspective, the proposed theoretical framework provides a better understanding of the innovative way the SME under study performed its successful export activities and may become a useful guide for future investigations for export marketing strategies.

6   Conclusion

The paper is a preliminary qualitatively methodologically case study survey and there are limitations as concerns the sector, the SME and the country used, which open directions for future research and do not permit generalizability. Therefore, for future research we suggest that the conceptual framework presented here be tested empirically through the examination of SMEs from other sectors and industries. More export marketing characteristics need to be explored and SMEs from different countries be encompassed, along with the adaptation of several statistical methods of analysis, so as to further improve the possibility of generalization. The possible ethical issues involved should be also taken into consideration.

References

1. Böwer U, Michou V, Ungerer C (2014) The puzzle of the missing Greek exports (no. 518). https://doi.org/10.2765/70035
2. Kanellopoulos NC, Skintzi GD (2016) Identifying export opportunities for Greece. IEEP 13 (3):369–386. https://doi.org/10.1007/s10368-016-0353-3
3. Kavoura A, Sahinidis A (2015) Communicating corporate social responsibility activities in Greece in a period of a prolonged economic crisis. Procedia Soc Behav Sci 175:496–502. https://doi.org/10.1016/j.sbspro.2015.01.1228
4. Kahiya ET, Dean DL (2016) Export stages and export barriers: revisiting traditional export development. Thunderbird Int Bus Rev 58(1):75–89. https://doi.org/10.1002/tie.21741
5. Kumlu Ö (2014) The effect of intangible resources and competitive strategies on the export performance of small and medium sized enterprises. Procedia Soc Behav Sci 150:24–34. https://doi.org/10.1016/j.sbspro.2014.09.004
6. Chouliaras V, Gazepis A, Kargidis T (2015) Marketing's contribution to the profitability of Greek enterprises during the economic crisis. Procedia Econ Financ 19:217–225. https://doi.org/10.1016/S2212-5671(15)00023-4
7. Behal V, Sareen S (2014) Guerilla marketing: a low cost marketing strategy. Int J Manag Res Bus Strateg 3:1–6
8. Dinopoulos E, Kalyvitis S, Katsimi M (2015) Export pricing and credit constraints: theory and evidence from Greek firms. Mimeo
9. Geronikolaou G, Spyromitros E, Tsintzos P (2016) What drives Greek exports performance? A macrolevel analysis. In: A new growth model for the Greek economy. Palgrave Macmillan, New York, pp 307–313. https://doi.org/10.1057/978-1-137-58944-6_20
10. Skalkos DP (2018) Studying the political economy of reforms: the Greek case, 2010–2017. Theoret Appl Econ 2(615):163–186
11. Agarwal J, Wu T (2018) The changing nature of global marketing: a new perspective. In: Agarwal J, Wu T (eds) Emerging issues in global marketing. Springer, Cham
12. Kumar V (2018) Transformative marketing: the next 20 years. J Mark 82:1–12. https://doi.org/10.1509/jm.82.41
13. Cant MC, Wiid JA (2016) The use of traditional marketing tools by SMEs in an emerging economy: a south African perspective. Problems and perspective management, vol 14, pp 64–70. https://doi.org/10.21511/ppm.14(1).2016.07
14. Stoian MC, Dimitratos P, Plakoyiannaki E (2018) SME internationalization beyond exporting: a knowledge – based perspective across managers and advisers. J World Bus 53:768–779. https://doi.org/10.1016/j.jwb.2018.06.001
15. Measson N, Campbell-Hunt C (2015) How SMEs use trade shows to enter global value chains. J Small Bus Enterp Dev 22:99–126. https://doi.org/10.1108/JSBED-09-2011-0025
16. Taiminen HM, Karjaluoto H (2015) The usage of digital marketing channels in SMEs. J Small Bus Enterp Dev 22(4):633–651. https://doi.org/10.1108/JSBED-05-2013-0073
17. Agnihotri R, Dingus R, Hu M-Y, Krush M-T (2018) Social media: influencing customer satisfaction in B2B sales. Ind Mark Manag 53:172–180. https://doi.org/10.1016/j.indmarman.2015.09.003
18. Nunan D, Sibai O, Schivinski B, Christodoulides G (2018) Reflections on "social media: influencing customer satisfaction in B2B sales" and a research agenda. Ind Mark Manag 75:31–36. https://doi.org/10.1016/j.indmarman.2018.03.009
19. Wamba SF, Carter L (2016) Social media tools adoption and use by SMEs: an empirical study. In: Social media and networking: concepts, methodologies, tools, and applications. IGI Global, Hershey, PA, pp 791–806. https://doi.org/10.4018/978-1-4666-8614-4.ch035
20. Belch G, Belch M (2014) The role of new and traditional media in the rapidly changing marketing communications environment. Int J Strateg Innov Mark 1:130–136. https://doi.org/10.15556/IJSIM.01.03.001

21. Hutter K, Hoffmann S (2011) Guerrilla marketing: the nature of the concept and propositions for further research. Asian J Mark 5:39–54. https://doi.org/10.3923/ajm.2011.39.54
22. Klepek M (2007) Guerrilla marketing concept and further research possibilities. Silesian University in Opava, School of Business Administration in Karvina, pp 79–87
23. Hisrich RD, Ramadani V (2017) Entrepreneurial marketing mix. In: Effective entrepreneurial management. Springer, Cham, pp 75–99
24. Kozinets RV, de Valck K, Wojnicki AC, Wilner SJS (2010) Networked narratives: understanding word –of-mouth Marketing in Online Communities. J Mark 74(March):71–89. https://doi.org/10.1509/jmkg.74.2.71
25. Levinson JC (2007) Guerrilla marketing: easy and inexpensive strategies for making big profits from your small business. Harcourt, Houghton Mifflin
26. Levinson JC (1989) Guerrilla marketing attack: new strategies, tactics, and weapons for winning big profits for your small business. Harcourt, Houghton Mifflin
27. Levinson JC, Godin S (1994) The guerrilla marketing handbook. Harcourt, Houghton Mifflin
28. Levinson JC (1993) Guerrilla marketing excellence: the 50 golden rules for small-business success. Harcourt, Houghton Mifflin
29. Evangelista F, Mac L (2016) The influence of experience and deliberate learning on SME export performance. Int J Entrep Behav Res 22(6):860–879. https://doi.org/10.1108/IJEBR-12-2015-0300
30. Yin RK (2013) Validity and generalization in future case study evaluations. Evaluation 19:321–332. https://doi.org/10.1177/1356389013497081
31. Johnson JM (2001) In-depth interviewing. In: Gubrium JA, Holstein JA (eds) Handbook of interview research: context and method. Sage, London, pp 103–120
32. Love JH, Roper S (2015) SME innovation, exporting and growth: a review of existing evidence. Int Small Bus J 33:28–48. https://doi.org/10.1177/0266242614550190
33. Antoniadis I, Koukoulis I, Serdaris P (2015) Social network Sites' usage among Greek students in Western Macedonia. Int J Strateg Innov Mark 2:52–65. https://doi.org/10.15556/IJSIM.02.03.005
34. Antoniadis I, Saprikis V, Poltitis K (2014) Investigating internet users' perceptions towards online shopping: an empirical study on Greek university students. In: Proceedings of the international conference on contemporary marketing issues (ICCMI), pp 873–879
35. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214
36. Sakas D, Nasiopoulos D, Kavoura A (2015) The development of Facebook's competitive advantage for brand awareness. Proc Econ Financ 24:589–597

The End of Marketing as You Know It. Or Not!

Dorin C. Coita, Adela L. Popa, Teodora M. Tarcza, Naiana N. Țarcă, Dinu V. Sasu, and Remus Roşca

Abstract The paper aims to analyze and synthesize the effects of the General Data Protection Regulation (GDPR) on the marketing of organizations. Currently, information is essential in marketing, and as a result, marketing is increasingly seen as a data-driven activity. Marketers are aware of the changes that information technologies have brought in their activities, offering the opportunity to develop innovative and creative customer-oriented strategies. This type of strategy is based on a deep understanding of customer profile and customer behavior materialized in collecting, storing and analyzing customer data. Will GDPR change this? What will be the problems associated with this regulation? How will they adapt their marketing activities to the new regulations? In this article, we looked at various aspects of the answers to these questions. Based on the analysis of the experts' opinions, we highlighted the changes companies will make to comply with the GDPR provisions.

Keywords General data protection regulation · GDPR · Marketing · Personal data

1 General Data Protection Regulation (GDPR): An Overview

GDPR is a legal framework and a set of regulations across the European Union applicable to organizations and other entities in order to protect the fundamentals right and freedoms of natural persons, and in particular their right to the protection of personal data [1].

The European Parliament voted GDPR—General Data Protection Regulation in May 2016 to take effects from May 25, 2018. GDPR forces organizations to approach information privacy concerns, changing the face of data regulation [2].

The definition of personal data is among the notable provisions of GDPR. It refers "to any information concerning an identified or identifiable natural person" [1]. Prior

D. C. Coita (✉) · A. L. Popa · T. M. Tarcza · N. N. Țarcă · D. V. Sasu · R. Roşca
University of Oradea, Oradea, Romania

to GDPR, the EU Data Protection Directive (95/46/EC) stated that an identifiable person "is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity".

The GDPR provisions illustrates with examples guides of what is, and what is not personal data making the term personal data significantly broader, and determining the scope of the regulatory regime [3].

Furthermore, the regulation defines the data controllers, the processors and processing under the GDPR. There are also provisions referring to personal data breach, to the consent of the subjects, to the right to rectification and erasure. GDPR contains also Data Minimization provision; it affirms the right of individuals to data portability and the right of individuals to object to processing his or her personal data [4].

The starting premises are centered around ideas like "the protection of natural persons in relation to the protection of personal data is a fundamental right" and "the right to the protection of personal data is not an absolute right; it must be considered in relation to its function in society and be balanced against other fundamental rights" [1].

GDPR legislation aroused in the context of the concerns about the security of the personal data in the new technological era with ubiquitous Internet across the EU, Social Media, Cloud Computing, mobile devices and things connected to the Internet. The updating of the older legislation on personal data protection—Directive 95/46/CE, was necessary due the extraordinary technological development, globalization, the great amount of personal data collected, processed and shared by public and private actors [1].

In this article, we analyzed the effects of the General Data Protection Regulation (GDPR) on the marketing of organizations, as literature, business experts and leaders, and managers in Romania, see them. We started from the idea of a dramatically change the way companies will work with information in this new context. We questioned what will be the marketing problems associated with GDPR and how will marketing activities be compliant with the new regulations.

1.1 The GDPR and Its Impact on Businesses

GDPR will affect not only the companies headquartered in European Union, but also all the companies handling the personal data of EU residents or those monitoring individual's behavior manifested in the European Union [5] regardless of the physical locations of where the data is hosted [6, 7].

Any company with an Internet presence and markets their products over the Web to EU citizens or just collects personal data for a marketing survey has to comply with the GDRP [8].

According to an expert in the field, GDPR will be one of the biggest disruptive forces impacting business models across industries—and its reach extends far beyond the EU borders [9].

Some authors [2, 6, 10] highlighted the perceived risks of non-compliance with GDRP and how should businesses avoid them. Among the risks, the hefty fines calculated based on the worldwide earnings of a corporate group, the potential lawsuits, and the loss of credibility with customers and damaged brand reputation. To avoid them organizations should implement appropriate technological and operational safeguards for securing data and privacy control, to consider data protection and privacy right from the beginning of the security planning process and to focus on the rewards of the compliance, rather than on the risks [2].

On the other hand, according to the results of a study offered by IBM, more than 50% of the organizations surveyed consider the context created by GDPR as an opportunity for improving privacy, data management and even for new business models, for developing more trusted relationships with customers. Gilbert [11] argues that the costs of compliance and the potential risk of fines for non-compliance are short-term problems, which will be forgotten soon in the wake of a more transparent, efficient data economy.

2 GDPR and Marketing

When it comes to understanding of what marketing is, scholars, experts and managers refer to Peter Drucker's understanding: "the aim of marketing is to know and understand the customer so well the product or service fits him and sells itself". This idea leads to the necessity of collecting and processing customers' data. Therefore, the development of the information technology has led marketers to see that a dream has come true: collecting and processing information about business environments and processes, markets, competition and customers has never been so easy before. The other side of the coin was the loss of trust of the customers—especially in the online businesses, tech companies and social media, and the feeling of the customers of not having complete control of their personal data [11, 12].

In the recent years, marketing has become a data-driven activity, enabling data-based strategies and allowing the development of important metrics capable to measure the results of implemented marketing strategies. However, the new GDPR EU legislation seemed to come to change the status quo the marketers enjoyed. After the "Era of Big Data", the "Era of Consent" seems to be the new status quo [13]. Under the impact of GDPR legislation, the businesses are in the situation of using customers' data only if they have their consent expressed in a clear and indubitable manner. If the customers gave their consent in the past, marketers must get the consent again [13].

2.1 The GDPR's Influences on Marketing

It seems there is a total consent among the specialists on the idea that the GDPR will influence organizations' marketing activities [3, 5, 8, 13, 14]. Moreover, most of the authors consider the influence will be positive.

The GDPR contains the term 'marketing' in nine instances, seven of them referring to direct marketing [1]. For ensuring compliance with GDPR, the direct marketing activities should consider mainly either the principle of legitimate interest or that of consent [15, 16]. At least at first sight, the whole framework in which marketing is approached should be reconsidered, even if is about the strategic dimension of marketing thinking or the analytic and operational dimensions of the marketing activities.

Some authors consider that the GDPR even offers marketers a "unique opportunity for reflection" and the context to reconsider core principles as true and trust in developing customer relationships [2, 14].

The impact of GDPR on the strategic dimension of marketing thinking is substantial especially for the companies that develop business strategies based on the usage of personal data [17]. For instance, segmentation and profiling are actions on which companies must ensure they are GDPR compliant when performing them for developing marketing strategies. Customer relationship management (CRM) is another part of the marketing activity on which the GDPR has an important impact, both considered on analytic and operational levels. Customer databases are by far the core of the CRM strategy and the manner of handling data stored in these databases must be under the GDPR compliance. As a result, these data collections could be not as large as before, but they could become richer and more significant in content. The GDPR can be a first step to gaining valuable insight, forcing businesses to manage information in a better way to obtain one view across all their information and to use analytics more holistically [2].

As marketing research mainly means collecting, storing and processing information, companies should also be aware of the GDPR guidelines. In general, the GDPR will not affect anonymous research. Anonymous does not necessary mean the collection of personal information; it means to eliminate any possibility to trace to the respondent [17]. At the operational level, personalization and customization will continue to be key components of the current marketing approach. Companies will even be more determined to offer personalized content, tailored products, individualized communication that will be able to make customer conscience of the benefits they will gain by sharing personal data [13].

2.2   Time to Put Data in Order and Share It with Customers

The GDPR will force businesses to put their information in order and to get greater clarity across enterprise data [2, 6] and even minimize the amount of data collected [3].

Besides, businesses should create and communicate a privacy policy in an easy to understand language [18]. Organizations should provide individuals with transparent information on who is processing, what type of data is collected, purpose of collection, the processes with data, the duration of storage, how to remove the personal data, who else will receive the data and the individual protection rights and other information applicable [19].

One of the rights the customers have is portability. Kolah et al. [20] mention that users have the right to extract personal data from service providers in a structured electronic format and later to move the same data to another provider. Mitchell [21] brings to light the idea of "midata", as the foundation of information portability. One of the uses of midata benefits will be allowing consumers to access their data in a safer and a more secure way alongside with making better decisions. On the other hand, the companies who use midata will be able to enhance their businesses by improving the dialogue with customers and by increasing their trust. They have the opportunity to innovate services and tools [20].

2.3   Criticism and Concerns Regarding GDPR

Critics question whether GDPR is necessary, complete, and adequate for today's digital societies and freedoms [22], or compatible with the age of Big Data [23].

Concerns appeared when some companies restricted the access of European customers to their offer [12]. Some managers had to change the way they used to share their online advertising budget, by moving ad budgets towards private marketplaces and rethinking the way they buy inventory programmatically [24]. Some publishers shut down their Open Exchanges [25].

Obtaining the consent of the customer appeared to be another concern. Kolah et al. [6] show that after the implementation of GDPR, the effectiveness of sales and marketing activities will depend on achieving client's permission and "this can only be achieved by building trust, rather than through exploitation".

Diminishing customers' fears and concerns about how companies use their personal data would be another expectation for the effects of the GDPR. Nevertheless, the results of recent research have proved the situation is far from that. According to the Chartered Institute of Marketing, 48% of consumers do not understand the way organizations use their personal data, compared with a percent of 31 resulted from a research conducted 2 years ago [26].

Despite all these, most of the authors associate GDPR with opportunities, challenges, and legitimate rights of the customers, with trust, with quality data, with

improved security and with protection of personal data. GDPR seems to be a new solution for the old problems. To use this solution and make it effective Gilbert [11] considers that "marketers will have to work harder".

3   Exploratory Research: The Effects of the GDPR on Romanian Businesses

In this paper we aimed to examine the effects of the General Data Protection Regulation (GDPR) on the marketing of organizations. Within the overall purpose of the paper, we investigated a sample of 122 Romanian managers of small and medium-sized enterprises (SMEs) to understand the influences of the GDPR they perceive on their own businesses. The research is exploratory in nature, so it is not intended to provide conclusive results. Based on an online Google Form, the research took place in June–July 2018, immediately after 25 of May 2018—the beginning of the GDPR enforcement.

The research hypothesis was that the implementation of the GDPR provision would have a significant impact on the companies determining them to rethink their business models and the way they do marketing. Questions aimed to highlight the preparation of the companies for the GDPR, concerns associated with it, the effects the GDPR had on their businesses, on customers and on marketing, what were the specific actions or changes in the businesses and especially in marketing to comply with the GDPR.

The results indicate more than 90% of the managers to have appointed at least an employee to examine the GDPR guidelines. When referring to the major concerns about applying GDPR, the managers mentioned hindering and slowing down operations and processes, data theft, loss or authorized access, difficulties of maintaining close relationships with customers and an unclear understanding of the regulation and possible fines. Regarding the degree of influence on marketing, managers consider there are no significant changes on how they design and implement the marketing strategy. The major marketing adjustments for getting the GDPR compliance are the following. 55% of the managers mentioned the need obtaining the consent of the customers, 50% the need to modify the contracts, 25% adjustments in the technical and IT domains, 37.5% better internal procedures, 12.5% the need of training for employers. Less than 20% mentioned terms like 'redeem', 'reform', 'reconsider', 'revision' but in association with the communication with customers, with the newsletter policy, with their Internet sites, cookies, with their contracts. All these actions and concerns are at the operational level.

4   Conclusions and Further Directions

Apparently, managers consider the GDRP more another requirement to do different things than to do things differently.

According to the results of our research GDPR is a notable event in the business environment but managers considered it far from be a revolutionary one. Despite the enthusiasm of scholars and business experts, no manager mentioned the GDRP as an opportunity to reshape the business in order to value the chance of coming closer to customers' needs of protection their personal data.

The limits of our research are obvious; they are the consequence of the exploratory nature of the research and of the sample of the respondents, which did not distinguish between types of the businesses. Another influence could have been the time: it might have been too early for an exhaustive research. There have not yet been any cases with fined companies and managers to have to think of more profound changes with their businesses.

In this exploratory study we aimed to investigate the effects of the General Data Protection Regulation (GDPR) on marketing as a data-driven activity. We questioned to what extent the GDPR provisions will reshape the data-based marketing strategies. According to the findings, the GDPR can create a new exchange framework between the companies and their customers. In this new framework, a new but old valuable asset is the personal data offered by the customers especially to the companies they trust. Therefore, the companies might understand that the most trust they can generate with the implementation of the GDPR provisions the more available, consistent, complex and valuable the data offered by the customers will be [27, 28]. On the other hand, once a company loose the trust offered by its customers, the most difficult will be to gain it back. Is it possible that this new situation to put a new emphasis on trust? If the answer is yes, marketing, at its essence, can only gain from this because the relationships between the companies and their customers will be stronger, and the valuable customers will be easier to identify.

References

1. General Data Protection Regulation (GDPR). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=EN
2. Garber J (2018) GDPR – compliance nightmare or business opportunity? Comput Fraud Secur 2018(6):14–15
3. Schwartz PM, Solove D (2014) Reconciling personal information in the United States and European Union. Cal L Rev 102:877
4. Posadas D (2018) The internet of things: the GDRP and the Blockchain may be incompatible. J Internet Law 21(11):20–29
5. Tikkinen-Piri C, Rohunen A, Markkula J (2018) EU general data protection regulation: changes and implications for personal data collecting companies. Comput Law Secur Rev 34:134–153
6. Krystlik J (2017) With GDPR, preparation is everything. Comput Fraud Secur 2017(6):5–8

7. Kolah A, Foss B (2015) Unlocking the power of data under the new EU general data protection regulation. J Direct Data Digit Mark Pract 16:270–274
8. Faitelson Y (2017) Yes, the GDPR will affect your U.S.-based business. https://www.forbes.com/sites/forbestechcouncil/2017/12/04/yes-the-gdpr-will-affect-your-u-s-based-business/#6d1281296ff2. Accessed 02 July 2018
9. IBM Study (2018) Majority of businesses view GDPR as opportunity to improve data privacy and security. http://newsroom.ibm.com/2018-05-16-IBM-Study-Majority-of-Businesses-View-GDPR-as-Opportunity-to-Improve-Data-Privacy-and-Security. Accessed 30 June 2018
10. Tankard C (2016) What the GDPR means for businesses. Netw Secur 2016(6):5–8
11. Gilbert D (2017) Why GDPR is great news for marketers and will create a more efficient data economy. https://www.econsultancy.com/blog/69399-why-gdpr-is-great-news-for-marketers-and-will-create-a-more-efficient-data-economy
12. The Guardian (2018) LA Times among US-based news sites blocking EU users due to GDPR. https://www.theguardian.com/technology/2018/may/25/gdpr-us-based-news-websites-eu-internet-users-la-times
13. Weiss E (2018) How to convince customers to share data after GDPR. Harvard Business Review 2018. https://hbr.org/2018/05/how-to-convince-customers-to-share-data-after-gdpr
14. Welz T (2018) Marketing under the GDPR: what's old is new again. Forbes. https://www.forbes.com/sites/forbesagencycouncil/2018/03/15/marketing-under-the-gdpr-whats-old-is-new-again/#245a1fbd7500
15. Crane D (2018) Understanding GDPR: consent vs. legitimate interest and what it means for ABM. https://www.business2community.com/marketing/understanding-gdpr-consent-vs-legitimate-interest-means-abm-02037343
16. Direct Marketing Association (2018) GDPR for marketers: consent and legitimate interests. https://dma.org.uk/uploads/misc/5b0523a0d1a2b-5ae1fbf5c60fd-gdpr-for-marketers%2D%2D-consent-and-legitimate-interest_5ae1fbf5c6066_5b0523a0d198f.pdf
17. Netigate.net GDPR: how will the new regulations affect your survey culture? https://www.netigate.net/articles/guide/gdpr-new-regulations-affect-survey-culture/
18. Renaud K, Shepherd L (2018) GDPR: its time has come. Netw Secur 2018(2):20
19. European Commission (2018) The GDPR: new opportunities, new obligations. What every business needs to know about the EU's general data protection regulation. https://ec.europa.eu/commission/sites/beta-political/files/data-protection-factsheet-sme-obligations_en.pdf
20. Kolah A, Foss B, Hickley M (2015) What should UK and US marketers do to prepare for the biggest threat to business continuity for a decade? J Direct Data Digit Mark Pract 17:86–92
21. Mitchell A (2016) GDPR: evolutionary or revolutionary. J Direct Data Digit Mark Pract 17:217–221
22. Poullet Y (2018) Is the general data protection regulation the solution? Comput Law Secur Rev 34:773–778
23. Zarsky TZ (2016) Incompatible: the GDPR in the age of big data. Seton Hall L Rev 47:995
24. Benes R (2018) How GDPR is moving Ad budgets toward private marketplaces. https://www.emarketer.com/content/how-gdpr-is-moving-ad-budgets-toward-private-marketplaces
25. Benes R (2018) The GDPR is leading some publishers to shut off open exchanges. https://www.emarketer.com/content/the-gdpr-is-leading-some-publishers-to-shutoff-open-exchanges-3
26. Vizard S (2018) Despite GDPR, consumers still don't understand how brands use their data. Marketing Week. https://www.marketingweek.com/2018/05/25/despite-gdpr-consumers-dont-understand-how-brands-use-data/?ct_5b3231a8572c6=5b3231a85737c
27. Tziogas C, Tsolakis N (2019) The dawn of GDPR: implications for the digital business landscape. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
28. Ferrag MA, Leandros Maglaras L, Helge Janicke H (2019) Blockchain and its role in the internet of things. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer

Categorization of Ambient Media Based on Identification of Common Signs of Selected Installations

Tomáš Šula

Abstract Ambient media are still perceived as an extremely efficient communication tool, mostly within social communication within specified types of commercial communication. It is possible to describe ambient media as non-standard, unusual and not very frequent medium, which is not used very often in the system of marketing communication. In the theoretical frame only general qualities and characteristics of ambient media are published, which define the qualities of these media and at the same time the categorization in the marketing communication tools, which can be considered as current, such as viral marketing, guerilla marketing, etc. However, these statements are too general and they do not focus on the nature of ambient media. This article has the aim to help conceptualize ambient media and define clear grounding and categorization of ambient media, where the base for categorization are common features of already published installations of ambient media. It is possible to use the final categorization in practice, where on its bases it is possible to identify specific category and subsequently create ambient medium according to the requirements of the advertiser of the communication claim. Considering the qualities of ambient media, this categorization is globally applicable.

Keywords Ambient media · Categorization · Conceptualization · Common signs · Marketing communication

1 Introduction

1.1 Aim of Study

The aim of this study is the conceptualization of ambient media via their categorization, which consists of finding common identification signs, which it is possible to

T. Šula (✉)
Tomas Bata University in Zlin, Zlin, Czech Republic
e-mail: sula@utb.cz

consider as common, at least for the minimum amount of ambient installations and subsequently gather these signs in a way, so that they create logical units and it is possible to proceed from this categorization in the future.

1.2 Current State of the Researched Issue

The term ambient media appeared in the 1990s of the last century for the first time and it is connected to the name of London communication agency Concorde, which described years 1995–1997 as a boom of ambient media and more specifically the EURO Championship in 1996 [1]. Daniela Krautsack established very important bases, she is considered as a leading expert on ambient media together with Thomas Aust for ESOMAR [2]. Based on her research she claims that: "Using a new form of media enables to create relationships and emotional interactions with customers." And she adds an information that the consumers like a good placement of a creative campaign and it improves urbanistic environment, which fully reflects the basis of ambient media. Given issue is also mentioned by Patalas [3]. He uses very generally the name ambient marketing and by this he describes different advertising formats for addressing target groups, or Levinson, who classifies ambient media in the guerilla marketing category, which is characteristic for the fact that within transferring of the message it tries to reach the highest possible communication effect with the lowest possible sources [4]. Among the important basis belong the evolution model of media by Lugmayr, who defines ambient media as the successors of new media and at the same time potential predecessors of bio media [5]. The basic element of this categorization is a division of media according to used media technology, media form and media instance and he speaks about ambient media as media, which assume that the functionality itself or alternatively technology define, if the given medium is or is not ambient medium. The basic categorization and characterization of these media is concerned by Shankar and Horton [6], who created a division in 1999, which is based on the dependence of environment, where given media can affect recipients. A or 4I characteristics state that ambient media must fulfil parameters: innovation, intelligence, interest, intimation..., which were described in an article by Keswani and Ghatawat [7].

2 Method

Within the process of characterization, categorization and hierarchy of ambient media, a content analysis was carried out at the end of 2016, the goal of which was to collect visual material in the form of samples of ambient media in both static and dynamic form. In total, there were 976 installations, where 500 of them were static visual examples and nearly 500 audio visual examples of using ambient media. The convenience sampling method was used for the choice. At the beginning, the

content of samples was analysed and subsequently a coding scheme (codebook) was defined, then coding sheet followed and based on the data gained this way, the interpretation was performed. The audio visual samples were used from you tube channel Ambientising [8] and static samples were used based on a broad match searching phrase within a full text Google search. Given samples were not influenced based on a geographical choice, so samples from all over the world were analysed. These samples were analysed and attributes were assigned to them, thanks to which it was possible to identify and unify them and thus also to generalise and define the category. Theoretical bases were subsequently applied to these attributes and a categorisation was developed in several forms so that it was possible to classify the various qualities differently. The categories depend on the basic parameters and they are mutually compatible in terms of the combination of sorting in the categories, i.e. chosen example of ambient medium can be classified within all types of categories.

3 Results and Interpretation

3.1 Introduction to Categorization

Considering the possibilities of content analysis, which is not strictly defined, the basis was the following goal: finding the parameters and qualities of various ambient media in a way that different types of categorisation could be derived on a basis of provable and perceptible elements, so that also other ambient media or installations could be categorised or potentially could expand these categories. The goal of categorisation was not suggesting the ultimate list of its parameters, but a definition of basic discourses and division. The description and characteristics of categories follows, according to the found.

3.2 Division Based on the Medium

Ambient Media Using Media Designated for Communication Ambient media belong to this category, the medium of which is standard communication medium commonly used for advertising campaigns. Considering that ambient media are classified as out-of-home formats, as standard media can be considered for example standard outdoor formats, such as billboards, megaboards, ultraboards and similar large-format media, kiosks in public areas or interactive posters. Frequently, those are areas at the bus stops or outside them, street furniture, areas on elements of transport infrastructure (e.g. on bridge constructions on a motorway), indoor digital and analogue advertising frames, mostly in the city public transportation environment of a static character and on the other hand moving surfaces located inside and

outside the public transport vehicles. In addition, classic floor graphic, various POS formats, shopping carts or billboards can be added to the above mentioned.

Ambient Media Using Media That Are Not Primarily Designated for Communication Within this category, it is possible to find a big amount of media that are not intentionally used for communication. With some of the non-standard media, their primary function disappears and it is replaced by the advertising function, so they are rather classified as the first category of media.

3.3 Division Based on a Location of a Medium

Outdoor Media Car parks, roads and pavements with plastic or flat ambient installation. The equipment of playgrounds, such as merry-go-rounds, swings, slides and similar. Waste bins, telephone booths, house construction. A specific element is the use of the features located in the public space: hydrants, barriers, crossing gates, drain covers, zebra crossings, pavements, underpasses, mailboxes, public lighting, construction of public transport stops and decorative elements in the street (functional, such as flower pots or esthetical, such as sculptures and fountains), as well as functional elements in terms of building structures, supports and components of transport, energy and other distribution infrastructure. To these locations belong also natural forms, such as rocks, beaches, ditches and water areas, plants/trees, generally speaking, all the elements of living and inanimate nature. Cars, trains, planes and ships, except these already mentioned, which are expected to be the advertising space media.

Indoor Media Basic indoor media, which are primarily not advertising media, are elements that serve the moving and relocating of people and goods. These are elevators, escalators, moving walkways, issue carrousels and other similar devices. Other elements include static components, such as stairs, handles, door handles, grips, door stops, holders, back rests and so on. Furthermore, it is possible to consider ambient medium in case of unusual use of the floor area, exceptionally the use of the ceiling surface. Other frequent installations are addition and extensions within public toilets, from the toilets themselves and urinals, through mirrors and wash basins, to hand dryers, soap dispensers, paper towels or water stands.

Combined Media Combined media are defined by a fact that they can be used indoors and outdoors and cannot be strictly separated, they occur very often in one or another category. Among the basic forms of these media we can classify an ordinary shopping bag, which meets the parameters of ambient medium, as well as cups, plates, dining boxes, etc. In the combined category it is possible to include also waste baskets or issue automats, which can be placed in outdoor or indoor environment. Similarly, this includes mechanisms of input and output, or more precisely dividing elements between the indoor and outdoor environment, such as carousel or rotary

doors, one-way rotary exit barriers, dividing barriers, guide rails and tapes or garage entries and gates. Division based on interaction.

Ambient Media Interacting with Surrounding/Environment A specific category of ambient media, where the interaction is obvious, are ambient media, which do not interact directly with the recipient of communication, but interact on the bases of predetermined key and a recipient is only a passive receiver, without the ability to get involved in the interaction. Typically, these are installations, which are dependent on surrounding effects from the perspective of transmission of the message. They are also very often influenced by natural phenomena, such as sunlight. It can also be a sea tide that uncovers and covers a message placed on a beach as it moves, a rain that reveals a message sensitive to water molecules, billboard that collects rain water and then produces drinking water from. Second, but very small group of this type are media that interact on the bases of non-natural and similar phenomena. In the most cases these are installations that are technologically advanced and use functional elements in various forms, which "start" the transmission of the messages to the recipient. An example of this is British Airways installation, which involves the company's own planes. All of the examples mentioned above are dependent on outer phenomenon and a human is not actively engaged in them.

Ambient Media Interacting with Recipient of a Message This category can be divided into groups that differ in the extent of involvement of the recipient of the message. The first category is passive category, where the extent of involvement of the recipient is the same in a situation when ambient medium is present and also when it is not. Some ambient campaigns or installations are on a border between passive and active interactions and cannot be categorized in either of the groups. In most of the cases the interaction is only a visual contact of a recipient with ambient medium.. The last category are ambient media actively interacting with the recipients. As one of the basic demonstration of an interaction it is possible to consider pushing a button or a surface in any form. This principle has often been used when creating many ambient installations. An activity from the side of recipient or recipients (there are installations that require more recipients for a perfect interaction and mostly in cooperative activity) are subject to various demands, both time and physical or even intellectual.

Ambient Media not Interacting Not interacting ambient media are such ambient media that use only basic principles of ambient media and can be considered as their "simplest" forms. They do not include passive or active participation by the recipients and they do not interact with them in any way. Mostly, these media are derived from classic standard media and they are often on a border of ambient medium and only creatively processed standard medium. The examples are handrails in buses, which are creatively processed as watches or dumbbells. Furthermore, it can be special extensions on bridge constructions or billboards, variously located enlarged products.

3.4 Division Based on Dimensions

Two Dimensional AM Two dimensional ambient media are media that use only 2D formats for communication—the message itself can be placed on a 3D format, but it alone is only two dimensional. Within this category, the emphasis is put on a content context and graphic design, which deals with a connection of given format with the required message.

Three Dimensional AM Three dimensional ambient media can be found in a form of classic 3D object. These objects can be divided into two categories, namely objects that are original, that is objects, which are not primarily advertising media, but that have been once (or repeatedly) used for this purpose. The second category uses objects that have been created for a specific purpose, as ambient medium. Within creating of these objects both graphical and industrial design, and in some cases also digital technologies are used.

Four and Multi-dimensional AM Multi-dimensional ambient media are a special kind of ambient media, but not quite unusual. These are media that have one of the dimensions extra. So a standard 3D object that, for example, based on some movement can blow a nice smell or a bad smell in the air, can be considered as a fourth dimension object.

3.5 Division on the Bases of Processing

Analogue Classifying ambient media as analogue is not entirely correct, but considering a group that defines the processing, this classification is relevant. Analogue media are media that do not contain any technological element in a form of an electronic system or any digital technology. It is also possible to include in this category ambient media that are interacting and their mechanism of a message transfer works on the bases of mechanical movements or external natural forces.

Digital Ambient media with digital elements are media that contain any element of digital technology. In a simplified way it is possible to call digital ambient media such media, part of which is any electrical or data "circuit" in any form. This way is possible to call this way also simple digital temperature indicator, counter, as well as complex system, which consists of sensors, a computer element, and a display, or even mechanical moving parts.

Combined To the category combined ambient media belong such installations that have multiple elements and are part of single installation, but are physically independent and are not connected in any way, complex installation they form only together. There are less of these installations in terms of quantification.

3.6 Division on the Bases of Location

Public Space Public space is defined as "a space of a life of a society, space of social communication. It is a place where the society "is happening", where there is a contact and a communication between people, sharing, inspiration and creation of everything that goes beyond individual". Currently we distinguish two basic types of public space: physical and virtual. Physical public space is classic public open space: squares, agora, streets, parks, public buildings. These are parts of the Earth's surface or artificially created space of buildings that are accessible to virtually anyone and without restriction.

Private Space Private space is a space always in ownership of a private person, access and movement is limited to the permission of the owner. From the point of view of the customer and implementer, the private space is considerably more advantageous for locating ambient installation, as it is subject to more moderate legislation, than the public space. At the same time, it has the advantage that if given installation does not contradict the legislation or is not subject to any specific regulation, it is possible, in the agreement with the owner, to make ambient installations easier and mainly quicker. Thus, for example negotiations about the acquisitions of public spaces that are in possession of the cities do not have to take place.

Semi-public, Semi-private, Pseudo-public Spaces and Spaces Transitional These spaces are border spaces between public and private spaces. Mostly, these are places, which are regulated in some way and restricted by rules. An example of semi-public space is a platform on a railway station, in which the public has the access, but under the condition that they purchase a valid ticket.

3.7 Division on the Bases of Message Object

Commercial Communication A classic commercial message distributed through ambient media, which show the elements of a standard advertisement and the communication goal of which is most often to increase profits in a form of increasing sales, or building an image of a brand or a particular product. Therefore, an example is any ambient medium that is a part of the communication of a commercial company.

Social Communication with Commercial Advertiser Commercial ambient installation with social advertisement features, when the installation itself communicates the social topics and, at the same time, it acknowledges the advertiser, including the form of a commercial brand/product and the goal of which is profit. This segment is very often used by sport brands, which appeal through the message in various ways for example to a healthy lifestyle and this way promote the brand. At the same time, this can be such campaigns that are purely social, but the advertiser is a commercial subject. Through a wide range of ambient media come projects that are

intended directly for communication of social issues and the advertisers are non-profit organizations, i.e. in case of the Czech Republic, these are subjects that fall in the given category: clubs, charitable trusts, institutions, foundations, foundation funds, registered legal entities and church non-profit organizations.

Artistic Expression Considering the evolution of ambient media and frequent opinions that ambient media originate in street art, some installations can be considered as artistic acts, executive form of which is ambient medium, which can be perceived as street art piece of work. This way such piece of work can be categorized. The features of artistic piece of work are specific and if we compare it with the features of ambient media, which carry certain information, it is possible to specify the features and characteristics that define such diversity.

4   Discussion

Given categorization does not reflect a fact that the spreading of a message via ambient media takes place in two forms. In the primary form, that is physical ad hoc, given medium affects recipient at given place, in given environment and time. The secondary form is viral spreading in the form of visual and audio visual materials, which are mostly spread via digital tools and forms that is via email messages, social and community networks, blogs, vlogs, different thematically focused portals, etc. In conclusion it can be stated that the categorization can lead to influencing manager decisions when building communication strategies. Always considering purpose and target of communication. Therefore, it is suitable to consider the applicability of categorization, whereas next step would be a communication campaign analysis in a sense of finding a motive communication when using ambient media.

References

1. Cook R, Wooglar T (1996) Ambient media: what is ambient media. Campaign, Haymarket Media Group, London. https://www.campaignlive.co.uk/article/ambient-media-ambient-media/51034. Accessed 11 Oct 1996
2. Krautsack D, Aust T (2006) Cows in jackets: can ambient media fight the effect of mass media fragmentation? In: Worldwide multimedia measurement, p 9. https://issuu.com/cowsinjackets/docs/ambient_media_dkrautsack
3. Patalas T (2009) Guerillový marketing: jak s malým rozpočtem dosáhnout velkého úspěchu. Grada, Praha, Marketing (Grada), 191 p. ISBN 978-80-247-2484-3
4. Levinson JC (2007) Guerilla marketing: Nejúčinnější a finančně nenáročný marketing. Computer Press, Brno, 326 p. ISBN 978–80–251-2472-7
5. Lugmayr A (2012) Connecting the real world with the digital overlay with smart ambient media—applying Peirce's categories in the context of ambient media. Multimed Tools Appl 58(2):385–398. https://doi.org/10.1007/s11042-010-0671-3
6. Horton B, Shankar A (1999) Ambient media: advertising's new media opportunity? Int J Advert 1999(3):18

7. Keswani R, Ghatawar M (2010) Ambient advertising: how long will it survive? Ambient advertising – report 2010, p. 15. http://www.scribd.com/doc/26980152/Ambient-Advertising-Report
8. Ambientising. https://youtube.com/channel/UCwbruY1w_3apQpiYQ8zyZNg/feed

The Dynamic Synergy in Communication and Tourism Development Is Calling the City of Katerini, Greece

Erasmia Patsiou

Abstract In an era that is characterized by the globalization, the digital communication and the economic crisis, modern cities are called upon to survive from the intensified competition between them. In this context, the local culture is at the focal point of the development planning and promotion of the modern city, as it gives the advantage of recognizability and it is regarded as an important comparative advantage. The aim of this research is to examine whether there is a comparative cultural advantage for the town of Katerini, Greece. In particular, the following aspects are being examined: (a) how the Organization for Education, Culture, Sport and Welfare of the Municipality of Katerini (OPPAP) organized, managed and communicated the artistic sculpture exhibition of Kalevras in a modern competitive environment, (b) the impact of the exhibition on the public, and (c) the interest of both sides, namely, OPPAP and the public, in giving it a boost through actions of support and making a good use of its prospects thereby increasing the number of visits. Although this is a case study and generalizations cannot be made which is a limitation of the research, this paper extends our knowledge in regard to how a sculpture exhibition can be incorporated in the city branding useful for cultural managers.

Keywords Dynamic synergy · City branding · Katerini municipality · Kalevra's sculpture exhibition

1 Introduction

The identity/image of the city is reinforced by supporting actions, which contribute to the improvement, elevation and promotion of its special local (cultural) characteristics, which distinguish it from the global totality, attracting its attention and revitalizing its cultural and local development [1–8].

E. Patsiou (✉)
Department of Management Planning of Human Resources and Support for Local and Regional Elected Officials, Katerini City Hall, Greece

The task of utilizing and highlighting this comparative cultural advantage is fulfilled through the creation of a competitive identity system (city branding). The term "city branding" means the dynamic tool of creating a city's specific impression/image in the individual's consciousness/response, capable of attracting visitors, investors, new residents, helping to strengthen its unique reputation and fame (brand) and producing the cultural and local development in an age of crisis [9–11].

This paper examines the case study of the dynamic synergy in communication and tourism development for the City of Katerini, Greece so as to be promoted as a branding destination with the contribution of the artistic sculpture exhibition of Kalevras. This paper explores how culture can be part of city branding. In doing so, public and private synergies can be created and enhanced in order to cooperate and bring the desired communication and promotion for the city and the area.

2 Methodology

The empirical part is based on the qualitative research method of the case study, which explores modern social situations in a real environment. The objectivity and validity of the research is ensured by the triangulation technique, which allows the use of more than one method in collecting data by combining the benefits of each method and by examining a situation/phenomenon from many points of view [12–14].

Therefore, taking into consideration the research questions, a qualitative survey with a personal semi-structured interview (open-ended questions) was carried out in depth with the OPPAP President of Katerini Municipality which was also supported by a quantitative social survey with questionnaires of close-ended questions in a convenient sample of 100 people in May 2016. The findings of the survey were ranked, combined, consolidated, tested and evaluated with the help of the SWOT investigation methodological tool through corresponding SWOT analyzes, leading to useful conclusions on the current status of the exhibition and the OPPAP, as well as suggestions for supporting and making further use of their potential in the great impact on the cultural and local development of Katerini, Pieria, Greece [15].

3 Cultural Activities and Cultural Organizations of Local Authorities: A Dynamic Alliance for the City

Acts of recognition of cultural heritage are enhanced and promoted through the cultural activities of each place, being an integral part of modern life. Cultural activities support the strategy for upgrading the recognizability of the city as they participate in its development. In addition, policies and impart values and principles reflect the uniqueness of its local cultural patterns, influencing its image/identity and reputation. Achieving a positive impact of cultural activities on the visitor's psychology is very important as it works in shaping the attractive image of the city by

the visitors, who in turn will gladly recommend it to others, attracting new stake-holder groups [1, 5, 16–18].

The interdependent relationship that develops between the city, the citizen and the culture is being employed, organized and strengthened with supporting actions, mainly by the institution of Local Government through the cultural policy it exercises. The Municipalities with their allied Cultural Organizations (COs) are called upon to plan and implement cultural activities that both identify and maintain, as a historical continuity, the specific features of the place and also encourage, organize, highlight and propagate the contemporary local cultural (artistic) creation and creators, helping in redefining the cultural identity of the place. In this effort, dynamic tools for reconstruction and promotion of the image/identity of the city are new media and technologies in marketing and communication [8, 19, 20].

The city branding as a system, highlights the "unusual" and "original" features (image, culture, history, architecture, economic/social development, landscape, environment, gastronomy, etc.) of the city and communicates them by creating a story about it, capable of transforming its identity and attracting its unique reputation but also reversing or even deleting any negative images/aspects of it. It is a strategic plan to improve the image and reputation of the city, capable of creating feelings, emotions and slogans about the city, attracting visitors, investors as well as new residents. The abundance of perspectives that approach it, give a multifaceted dimension, requiring multifactorial management, taking into account the current situation, history and prospects of the place [5, 8, 9, 11, 18, 21–23].

An important role in the above project plays the harmonization of COs in the digital technology with the use of new media and technologies in their communication strategy and marketing. The presence of the Internet on every corner of the earth and its rapid evolution has established a new environment of digital-communicative globalization in the provision, management, promotion and advertisement of culture while its social and participatory character has redefined the process of communication between the COs, the public and stakeholders [19, 24].

The implementation of the Internet, information technologies and social media (Facebook, Twitter, Instagram, YouTube etc) has transformed the external environment of the COs into a channel of communication, accessibility, participation and interactivity, giving a new marketing voice of the COs and making it necessary to create their "profiles" on their platforms. In order to be competitive, COs are required to respond to the need to connect the individual with the whole, individual consumers with other consumers and all together with the recognizability of the COs [20, 25–28].

In particular, social networking has made it possible to immediately approach and communicate with their global audiences, but also to re-inform them, by building active bidirectional relationships and groups, expanding their awareness with minimal cost. A simple reference on Facebook is enough to sensitize an unlimited audience in a minimum of time by displaying and rapidly spreading the products of COs [26, 29–31]. However, the most important achievement of the social media for COs is to promote opportunities for them to participate online with target groups of the international community, cultivating a sense of co-creation (co-ownership) in

the informative 'stories' of their cultural product and elevating the value of the interaction, the sharing of the promotion of their message by the users/the public, which functions decisively in influencing the public opinion [19, 20, 25, 32–34].

The above synergies contribute to the fact that in the passage of time, that place will shape itself by acquiring its own cultural competitive advantage, its personal cultural image/identity, creating the conditions of its progress and prosperity, attracting new stakeholders interested in its sustainability and prosperity, and achieving a beneficial impact on the entire local community [4, 24, 35]. It should be taken into consideration that competition should be seen as a critical factor for strategic planning in services and tourism to promote a destination [36, 37] and thus, cities need to differentiate themselves accordingly.

4   Case Study: Katerini Municipality

OPPAP's cultural public mission is linked, among other things, to the emergence and spreading of local contemporary cultural (artistic) creation and local creators/artists as well as to the management and promotion of municipal artwork. The 21 sculptures and 56 hand-drawn paintings, permanently housed since 2013 at the Urban School of Katerini, tell and portray, in a worldwide exclusivity, Kalevra's half-century's man-centered artistic creation. His distinguished art dictates the essential exploration of the utilization and promotion of the exhibition in the present, seeking its fertile reconstruction and management, which collaborates in shaping the new "personality"/identity of Katerini, which distinguish it from the global wholeness, strengthens the unique reputation (brand), revitalizing cultural and local development.

Katerini is a town in Greece and the capital of the Prefecture of Pieria. It has got a competitive advantage due to its geographical position as it is adjacent to the second largest urban center of the country, Thessaloniki, but also in close vicinity of one of largest towns in Greece, Larissa. It also has a central position with regard to the country's road and railway networks that are part of the international transport system. It is located only 69.72 km from Thessaloniki and 99.61 from its international airport. The location of Katerini provides easy and direct access to the coastal areas of Pieria (77 km coastline) while it is connected to the main highway with Larissa (88.24 km) and Athens (436.43 km). In 2017, the tourists who visited Pieria were 253,403, of whom 165,373 were foreigners mainly coming from Balkan and Eastern European countries [38–40].

4.1   Survey Results

The results from the triangulation of the survey (qualitative survey with interview, social quantitative survey with questionnaire, SWOT analysis) highlight the following evaluation findings:

4.2 Positive Rating

The exhibition presents a fresh look at Katerini, as a destination for acquainting the public with the distinguished art of Kalevras. It adds a reason for visiting Katerini. It attracts the interest of educational visits. It creates the cultural competitive advantage of presenting Kalevra's project in a global exclusivity in the town of Katerini. It opens the dialogue of Katerini's cultural fame (brand). Parallel events enhance the economic and social development of Katerini. The comparative advantage of the Urban School, since its restoration work is being carried out and the expansion of the exhibition to the entire Urban School by developing participatory, interactive/complementary actions. There is a combined comparative advantage since Katerini is already a popular tourist destination ready to be associated with cultural tourism. In 2017, the tourist overnight stays reached 1,265,024 in Pieria, of which 567,774 were registered in hotel accommodation/establishments in the Municipality of Katerini. In 2017, Pieria occupied the 22th place among the 74 Regional Districts of the country in terms of tourist arrivals and the 14th place in the number of overnight stays [39, 40].

4.3 Negative Rating

There is absence of (visual) communication at the outside of the Urban School (banner), inaccessibility for the disabled to the Urban School, it is closed at weekends (when people have free time available), there is indirect use of new media and technologies (from the municipality and not from the OPPAP), there is no presentation of the exhibition on social media (lack of re-information, propagation, etc.), there is not provision of audiovisual material in its real environment, which enhances participation/interaction, absence of an individual website for the exhibition and its development in a virtual reality environment, lack of specialized personnel (cultural management, new technologies), absence of participation/interactivity (sculpture workshop, conferences, seminars) and complementary actions (coffee shop, souvenir shop) in its real environment, the Urban School (work of art) is not included in a (funded) restoration program of the Ministry of Culture, it has not carried out a public survey and consequently, it does not capture the satisfaction rate of the public's needs/wishes for the exhibition.

5 Discussion: Dynamic Synergies Are Calling the City of Katerini—Start off!!

OPPAP, in order to attract its heterogeneous and multicultural public and to increase its recognizability as well as maximize the number of visitors to the exhibition, is called forth to give feedback to the planning of its communication strategy by using the new media and technologies that ensure its participation in the society of digital-

communicative globalization (website, social media, etc.) creating ideal conditions for the promotion and the increase of visits to the exhibition in both real and virtual reality environments, causing attractiveness and creating new relationships with the public. With regard to the exhibition, the (worldwide) exclusivity of Kalevra's sculptures seems to offer the competitive cultural advantage that every (provincial) city seeks to stimulate/project/promote its local identity/image. The exhibition in conjunction with Katerini seems to create a rejuvenating atmosphere—due to the economic, social and cultural advantages it can bring—and a challenge for OPPAP to activate it in a competitive environment of crisis, promoting the symbolic value of the place, attracting its unique reputation (brand) and producing local development.

It creates: (a) prestige to OPPAP as an organization whose cultural activities combined with the appropriate support actions attract global attention and local development, (b) prospects to integrate reconstruction of the exhibition into funded (European) cultural programs in the context of enhancing modern artistic creation at a provincial city level.

The following dynamic synergies by OPPAP are proposed which are capable of strengthening, supporting and utilizing the cultural competitive advantage of the dynamic alliance: OPPAP and Kalevra's exhibition for the upgrading of the image/identity of Katerini, based on the standards of modern cultural management and communication. The first focuses on the modernization of the communication strategy of the exhibition and the OPPAP with the emphasis on the use of new media and technologies, the second in the relocation of the exhibition and the establishment of a Museum of "Modern Art of Pieria" in Katerini with new perspectives for the exhibition and the city, and finally the third in the promotion of Katerini with a fresh look (brand), as a destination for acquainting the public with the distinguished art of Kalevras. The first synergy is associated with the modernization of communication strategy OPPAP/exhibition, the utilization of the Internet and Social Media (creation of the OPPAP website/individualized exhibition website/profiles on social networks), well—designed message for the exhibition (both in printed and digital forms), banner/poster/sign placement at the Urban School, busy central areas and city entrances, the creation of a bilingual brochure/creation of audiovisual material, parallel—concurrent events/co-organization/sponsorship, accessibility for disabled people in the exhibition area, cooperation with the Regional Unity of Pieria and the Region of Central Macedonia both for the exhibition and for the creation of complementary actions/interactivity, which will link and provide benefits to all areas of the Prefecture of Pieria, expanding tourism (seasonality, average stay). The second synergy is associated with the exhibition relocation/a Museum establishment of "Modern Art of Pieria". The relocation of the exhibition and its enhancement with interactivity and the development of complementary activities (sculpture workshop, study room/free wi-fi, coffee shop, co-organizing of cultural events etc.) contributes to the increase of its visitation. Along with the relocation of the exhibition, it is proposed the establishment of a museum of "Modern Art of Pieria" in the former Tsalopoulos mansion, a building whose restoration work has been completed and is regarded "as a work of art [...], suitable to house cultural activities". The third synergy is associated with the creation of

Katerini'scultural reputation brand. Starting from the newly established museum of "Contemporary Art of Pieria" by OPPAP in Katerini, where the sculptural art of Efthimis Kalevras will be permanently displayed in a worldwide exclusivity, a clear message is emerging towards the Greek/European and international market that Katerini as a destination has added cultural value (acquaintance of the general public with Kalevra's art) to its already existing tourist product (Pieria Riviera, mythical Mount Olympus). This fresh promotional look at Katerini's image (city branding), being able to redefine its cultural identity, contributes in its distinction from global wholeness, enhances its extroversion and recognizability and creates favorable conditions for its cultural and local development in times of crisis, making the (provincial) city a paragon.

This research illustrated that culture can be part of city branding as previous work has shown [11, 35, 41, 42] thus, extended our knowledge in regard to a peripheral city 436.43 km away from the capital city center. In doing so, public and private synergies can be created and enhanced in order to cooperate and bring the desired communication and promotion for the city and the area.

6   Conclusion

The uncertain competitive environment of the modern era puts flexibility and alertness at the center of the cultural and communicative management of OPPAP so that, in every instance, inability is turned into capability and also threat converted to opportunity, while making good use of the opportunities presented in order to attain its goals. Synchronization with the new media and technologies in management and communication, the obtainment of alternative sources of funding, the adoption of strategic innovative marketing in communicating and promoting the exhibition creates dynamic synergies and generates hopes of viability of the exhibition and the OPPAP. Its targeted communication strategy, based on modern technologies, methods and media, will generate the value of interaction, multiplying the interest of the public and achieving the joint promotion and projection of the exhibition and consequently of Katerini, Pieria. It is a case study, generalizations cannot be made and this is a limitation of the research. Nonetheless, this paper extends our knowledge in regard to how a sculpture exhibition can be incorporated in the city branding.

The development of a realistic cultural policy project by the OPPAP of Katerini Municipality, designed according to modern standards of cultural management and communication, which utilizes and highlights the exhibition of Kalevra's sculptures through the creation of a competitive identity system for the town of Katerini (city branding) will improve and elevate the image/identity and its reputation. The exhibition, together with its local multicultural resources, tourism, the sights of Katerini and Pieria, can be a "flagship project" for Katerini and Pieria adding value to its tourist product and redefining its position in the national and international tourist map.

References

1. Romao J, Kourtit K, Neuts B, Nijkamp P (2018) The smart city as a common place for tourists and residents: a structural analysis of the determinants of urban attractiveness. Cities 78:67–75. https://doi.org/10.1016/j.cities.2017.11.007
2. Clark CBE, Moonen T, Nunley J (2018) Milan and Turin: competitiveness of Italy's great northern cities. Urban Land Institute, Washington, DC
3. Karolak M (2018) Destination place identity, touristic diversity and diversification in the Arabia Gulf. In: Mishrif A, Al Balushi Y (eds) Economic diversification in the Gulf region, vol I. The political economy of the Middle East. Palgrave Macmillan, Singapore, pp 183–208
4. O'Callaghan C, Lawton P (2016) Temporary solutions? Vacant space policy and strategies for re-use in Dublin. Ir Geogr 48(1):69–87. https://doi.org/10.2014/igj.v48i1.526
5. Karachalis N (2011) The regeneration of inner city neighbourhoods and the role of cultural industries: the case of Psiri in Athens. Changing places, urbanity, citizenship, and ideology in the new European neighbourhoods. Techne Press, Amsterdam, pp 142–159
6. Pratt AC (2011) The cultural contradictions of the creative city. City Cult Soc 2(3):123–130. https://doi.org/10.1016/j.ccs.2011.08.002
7. Zukin S (2010) Naked City: the death and life of authentic urban places. Oxford University Press, New York
8. Joo YM, Seo B (2018) Transformative city branding for policy change: the case of Seoul's participatory branding. Environ Plann C Polit Space 36(2):239–257. https://doi.org/10.1177/2399654417707526
9. Kavaratzis M, Warnaby G, Ashworth GJ (2014) Rethinking place branding: comprehensive brand development for cities and regions. Springer, Cham
10. Zavattaro SM (2012) Place marketing and phases of the image: a conceptual framework. J Place Manag Dev 5(3):212–222. https://doi.org/10.1108/17538331211269620
11. Pelkonen AM (2018) Success factors of city brands-a millennial perspective. Aalto University, Helsinki
12. Maxwell JA (2013) Qualitative research design: an interactive approach: an interactive approach. Sage, Thousand Oaks
13. Punch KF (2013) Introduction to social research: quantitative and qualitative approaches. Sage, Thousand Oaks
14. Lipowski M, Pastuszak Z, Bondos I (2018) Synergy of quantitative and qualitative marketing research-Capi and observation diary. Econometrics 22(1):58–67. https://doi.org/10.15611/eada.2018.1.04
15. Helms MM, Nixon J (2010) Exploring SWOT analysis – where are we now?: a review of academic research from the last decade. J Strateg Manag 3:215–251. https://doi.org/10.1108/17554251011064837
16. Nursanty E, Syahbana JA, Suprapti A (2018) Using city branding as the part of the intersection point of modernization and tradition. Case study: Surakarta City (Solo). In: SHS web of conferences EDP sciences, p 04001
17. Grodach C, Foster N, Murdoch J (2018) Gentrification, displacement and the arts: untangling the relationship between arts industries and place change. Urban Stud 5:807–825. https://doi.org/10.1177/0042098016680169
18. Imamelina MI, Ananda Sabil HA, Afnan TE (2018) The role of city branding on visitors' revisit intention: a study in Malang. Indones KINERJA 22(1):79–94. https://doi.org/10.24002/kinerja.v22i1.1239
19. Wu Y, Stewart M, Liu R (2018) Social networking sites and marketing strategies. In: Social media marketing: breakthroughs in research and practice. IGI Global, Hershey, pp 39–72
20. Kasemsap K (2018) The roles of social media marketing and brand management in global marketing. In: Social media marketing: breakthroughs in research and practice. IGI Global, Hershey, pp 425–453

21. Gavra, DP, Bykova EV, Savitskaya AS, Taranova YV (2018) Communication strategies of megacities in the new digital reality. In: Communication strategies in digital society workshop (ComSDS) IEEE, pp 19–21
22. Lazzeretti L, Oliva S (2018) Rethinking city transformation: Florence from art city to creative fashion city. Eur Plan Stud 26(9):1856–1873. https://doi.org/10.1080/09654313.2018.1478951
23. Basaran U (2016) Examining the relationship of cognitive, affective and conative destination image: a research of Safranbolu, Turkey. Int Bus Res 9(5):164–179
24. Sarabia-Sanchez FJ, Cerda-Bertomeu MJ (2018) Expert stakeholders' expectations of how the public sector should act in place branding projects. J Place Manag Dev 11(1):78–96
25. Kavoura A, Stavrianea A (2014) Economic and social aspects from social media's implementation as a strategic innovative marketing tool in the tourism industry. Procedia Econ Financ 14:303–312. https://doi.org/10.1016/S2212-5671(14)00717-5
26. Goyal R, Dhyani P, Rishi OP (2018) Marketing and social media. In: Social media marketing: breakthroughs in research and practice. IGI Global, Hershy, pp 90–97
27. Chatzithomas N, Boutsouki C, Hatzithomas L, Zotos Y (2014) Social media advertising platforms: a cross-cultural study. Int J Strateg Innov Market 1(2):74–90. https://doi.org/10.15556/IJSIM.01.02.002
28. Kavoura A (2016) The creation of online communities and social networking sites based on constitutive elements of identity. In: Encyclopedia of e-commerce development, implementation, and management. IGI Global, Hershy, pp 1970–1984
29. Kolb BM (2016) Marketing strategy for creative and cultural industries. Routledge, London
30. Manzoor A (2018) Using social media marketing for competitive advantage. In: Social media marketing: breakthroughs in research and practice. IGI Global, Hershy, pp 21–38
31. Milović B (2018) Developing marketing strategy on social networks. In: Social media marketing: breakthroughs in research and practice. IGI Global, Hershy, pp 73–89
32. Shih HP (2016) Electronic word-of-mouth communication. In: Encyclopedia of E-commerce development, implementation, and management. IGI Global, Hershy, pp 1985–1996
33. Webster GB, Hume M (2018) Analyzing the role of social media in dialogue marketing and management as a contemporary franchising local area marketing technique. In: Social media marketing: breakthroughs in research and practice. IGI Global, Hershy, pp 176–205
34. Bryson JM (2018) Strategic planning for public and nonprofit organizations: a guide to strengthening and sustaining organizational achievement. Wiley, Hoboken, NJ
35. Kavaratzis M (2018) Place branding: are we any wiser? Cities 80:61–63
36. Kavoura A, Andersson T (2016) Applying Delphi method for strategic design of social entrepreneurship. Libr Rev 65:185–205. https://doi.org/10.1108/LR-06-2015-0062
37. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214
38. INSETE (2015) Marketing plan of tourism product in Central Macedonia road map 2015–2020. http://regional-tourism-plans.insete.gr/?page=region&r=pkm
39. INSETE (2018) Statistical data for regions, (Key figures of Central Macedonia region). http://www.insete.gr/en-gb/SETE-Intelligence/Statistics/Statistical-Data
40. Hellenic Statistical Authority (2018) Hotels, rooms for rent and tourist campsites/2017. http://www.statistics.gr/en/statistics/-/publication/STO12/2017
41. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Driving tourism through creative destinations and activities. IGI Global, Hershy, pp 45–66
42. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia. Austria Tour Int Interdiscip J 61:289–312

Collaborative Problem Solving as a Critical Transversal Skill for the Transition from the School Environment to the Workplace

Panagiota Argyri

Abstract The problem-solving and communicative skills are part of the so-called "transversal skills", referred to as the ability of transferring the knowledge from one context (school) to another context (workplace). A review to policy makers' reports highlights the importance of the development of transferable skills for determination the competitiveness and the innovation in social communities. Transversal skills are required by each occupation individually and are considered necessary for the establishment of an integrated professional, social and individual profile. Today's workplaces require people who can solve problems in collaboration with others. With starting point the assessments' results for Collaboration Problem Solving (CBS) of the Organization for Economic Cooperation and Development [(OECD) PISA 2015 results; OECD Publishing (2017)], this paper reviews the challenges and recommendations for the development of transversal skills, as critical and necessary in educational setting and workplaces, with the basic aim the further scientific re-search under the framework of connecting education with workplaces.

Keywords Transversal skills · Collaboration problem solving

1 Introduction: Transversal Skills

We are living in era of rapidly changing global economy and the demand of equipped people with right skills, who use their abilities with confidence as active citizens, is a key component for the progress the social prosperity. For improving the productivity and competitiveness in European Union provided the need of staff with right skills for job vacancies. Educational community called to prepare young the next generation of researchers, equipped with the 21st skills and competencies. There are many frameworks, which describe the skills and competencies that this twenty-first century world demands [1–4]. Problem solving, critical thinking,

P. Argyri (✉)
National and Kapodistrian University of Athens, Athens, Greece

creativity, innovation, collaboration and communication are the core of 21st skills [5]. The framework of development twenty-first century skills including problem-solving skills is often tackled through collaborative approaches [6]. The European Reference Framework of Key Competences for Lifelong Learning defines key competences as knowledge, skills and attitudes applied appropriately to a given context [7]. Under this framework eight key competences are identified as necessary for personal fulfilment: active citizenship, social inclusion and employment; communication in the mother tongue; communication in foreign languages; mathematical competence and basic competences in science and technology; digital competence; learning to learn; social and civic competences; sense of initiative and entrepreneurship; and cultural awareness and expression. Each has a concise definition of its scope and all emphasize critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, communication and constructive management of feelings. The latter are also known as 'transversal skills'. There are many definitions of Transversal Skills [8–12], which are interrelated and linked to other categories of skills and competence definitions (Basic Skills, Employability Skills, Key Competences, 21st Century Skills etc.). Transversal Skills are those typically considered as not specifically related to a particular job, task, academic discipline or area of knowledge but as skills that can be used in a wide variety of situations and work settings [13]. These skills are increasingly in high demand for learners to successfully adapt to changes and to lead meaningful and productive live [14]. People need transversal skills, such as the ability to solve problems, communicate ideas and information effectively, be creative, show leadership and conscientiousness, and demonstrate entrepreneurial capabilities in order to be able to adapt to different work environments and so improve their chances of staying in gainful employment [15].

The set of core competences every student must master before the end of high school is the critical thinking and problem solving (the ability to ask the right questions) and collaboration across networks and leading by influence [16]. Many educational professionals emphasize the enhancement of problem solving skills as a core competence in public education in the 21st highly advanced technology society [17]. In addition, collaboration is increasingly identified as an important educational outcome [18–20]. Increasing awareness of the importance of participation in the workplace [21] and the link between problem solving and critical thinking with increased productivity [22] have led to the realization that Collaborative Problem Solving (CPS) has a central role in learning and working in the twenty-first century. Due to the transition from an industrial economy to an economy based on knowledge and information, there is a growing demand for workers who have developed skills of cooperation, collaboration, critical thinking, information technology and problem solving [23–25]. Business continues to evolve requiring more cross-functional teams that work across international and cultural borders and possess complex cognitive, collaborative, and critical thinking skills [26]. Under the challenges mentioned above, the aim of this paper is to provide recommendations and methods to enhance the school systems capability of providing their students with CPS and, in general, with those transversal skills that are crucial to transfer knowledge and know-how

from the school environment to the workplace, thus to connect these two fields. This article tends to fill the gap in the research literature on the strategic methods of developing the transferable skills that are the critical link for transferring the knowledge of the school environment to practical applications in the workplace. The first part of this paper describes the contexts and definitions of transversal skills including the review in term of CPS and it continues with a critical view of proposals for development CPS based on OECD research.

2 Definition of the Term of Collaborative Problem Solving

As workplaces are social spaces where two or more co-exist, it is clear that needed to solve problems in collaboration. This means that the term of CPS includes two critical transversal skills (collaboration and problem solving) and this combination increases the interested in the research field. After the short introduction on the definition of transversal skills and a brief and concise literature review explaining why it is reasonable to focus on CPS transversal skill, it is essential the determination the term of CPS in order to be clear how to promote it as an educational outcome and important skill for life and work. The Organization for Economic Cooperation and Development (OECD) included in 2015 collaborative problem solving in terms of the skills that students acquire, through its Program for International Student Assessment (PISA). Collaborative problem solving competency defined as the capacity of an individual to effectively engage in a process whereby two or more agents attempt to solve a problem by sharing the understanding and effort required to come to a solution and pooling their knowledge, skills and efforts to reach that solution [27]. The Assessment and Teaching of 21st Century Skills (ATC21S) project focuses on defining skills, developing ways to measure them, researching for new approaches, methods and technologies for measuring the success of twenty first-century teaching and learning in classrooms around the world [18, 28]. ATS21 defined CPS as a composite skill arising from the links between critical thinking, problem solving, decision making and collaboration, that requires the developing skills to work both inductively and deductively in partnerships, to reach agreements on ideas, to form and test hypotheses, and to agree on strategies their team will use.

3 Methodology

The starting point of the research was the study of (CBS) of the Organization for Economic Cooperation and Development [27]. For getting more scientific results in this topic there was an extensive bibliographic search under the term CPS. It was found that CPS has increased attention and growing of interest through to demand of development of transversal skills at the changing nature of both the workplace and national labor markets. The most researchers referred most for two categories

"problem solving"; "collaboration". The research, held via google search machine and databases such as emerald and Scopus from January 2018 to April 2018. The search of the world "CPS" provided only two basic reports but adding the world "problem solving" and "collaboration" the results were more than 50. The methodology provided results for learning environments with problem solving methodologies" and "collaborative learning using ICT tools", for instance, the role of Web2.0 tools in cooperative learning [29]. As collaboration and problem solving include in the transversal skills the way to make someone enable someone to evolve into rapidly evolving workplaces and society that the basic characteristic is complexity and uncertainty, the research was extended in recommendations of development in these skills [30, 31]. Furthermore, information and Communication Technologies (ICTs) may drive the introduction and use of plethora of inventive activities in education including teamwork and experiential learning that follow the development of social skills [32]. The articles that were collected were reviewed in order to collect the best practices to foster the development of key transversal skills for the transition from the school environment to the workplace among school students to secondary schools. The articles (at least ten articles) that analyze the framework of transversal skills to vocational education and in universities departments through to internship, thus these didn't take under consideration, because this paper focus to the transition from school environment to worksplaces, focusing in particular on collaborative problem solving (CPS) as an essential transversal skill to be acquired. Finally, in the proposals the framework Responsible Research and Innovation, European Initiates of Projects (i.e. Play4Guidance, Desci, Scientix), publications of National Kapodistrian University of Athens and reports of European Commission were taking under consideration.

4 Strategies Adopted and Recommendations Made by Stakeholders of School Systems

4.1 Teaching Transversal Competencies

The ERI-Net 2013 [33] research project presents a review and analysis of education policies in the Asia-Pacific region with recommendations and proposals of how to extent transversal skills into educational systems. The first phase of research also identified three major modes of integrating transversal competencies: (i) subject-specific integration, where transversal competencies are introduced as a standalone subject within the formal curriculum; (ii) cross-subject integration, where transversal competencies are incorporated into traditional school subjects; and (iii) extra-curricular integration, where transversal competencies are embedded into non-classroom activities [14]. The research of ERI-Net Regional Study on Transversal Competencies in Education Policy and Practice (Phase III) [14] reviewing the ways for teaching practices for development transversal skills and competencies:

(i) teachers need to adopt student-centred instruction methods such as project-based learning, and design-based learning. Such methods equip students with the skills to learn and inquire for themselves, while also encouraging student teamwork, drawing on complex real-world problems and questions that students are concerned about and enabling lifelong learning [34]: (ii) Researchers advise for professional development to teachers in enabling the learning and integration of transversal competencies. The programmes need to be: sustained, experiential, grounded in teachers' own questions and work, school-based and collaborative, with a maximum of peer-to-peer learning [34–38]; (iii) The positively effect of using ICT for many transversal competencies learning frameworks suggests for developing teachers' skills and knowledge of ICT [39–41].

In National Research Council report (2012) setting the priority the importance for transfer knowledge and skills gained in education to real work places, it used the definition of "deeper learning" as the process through which an individual becomes capable of taking what was learned in one situation and applying it to new situations (i.e., transfer) [42]. The same report provides many recommendations for deeper learning that they could lead in better performance in CPS. The Play4Guidance (P4G) [43] project includes many of the priorities described above and it introduces an innovative Business Game with the aim to train and guide students and young unemployed on entrepreneurial, transversal and mathematical skills. This innovative learning method reinforces managerial, entrepreneurial, digital and collaborative competences, and promotes critical thinking, problem solving and leadership. Taking under consideration that in particular for Greece tourism sector forces the economic system, as increases the productivity in many fields, studies have shown that combined skills from the tourism sector have important implications for marketing, management, and educational issues in tourism and employability skills need to be evaluated and developed [44–46].

4.2 Formal Apprenticeships Support the Development of Transversal Skills

Development transversal skills means the efforts for making secondary education more relevant to the world of work and strengthening the links between school and work. Apprenticeships (as part of alternative training) succeed in bridging the schooling system and the labour market: they facilitate the acquisition of skills relevant to employer needs, and provide youth with workplace experience. As a typical European initiative is the DESCI European project [47] which aims to improve the capacity of secondary school to prepare students, intercepting the needs of the labor market, and encourage the development of a European working methodology in secondary schools to ensure equal quality standards, at European level, in the management of the alternating training. DESCI is focused on the improvement of European methodological standards of alternating training in

secondary technical and professional School system, through the development, at European level, of a kit of methodological tools for teachers, students and tutors.

5   Conclusions

All school systems should include among their goals the preparation of their students for labor market, thus the aim of providing them with adequate transversal skills. Although, European education and training systems are still lagging behind in ensuring adequate employability skills, while not working adequately with business or employers to bring learning experience closer to the realities of the working environment. These skills mismatches are causing growing concern about the competitiveness of European industry. Closer cooperation between education providers and employers. This can be achieved by designing school programs, involving professionals in teaching, creating opportunities for students to experiment with real work in companies, and creating training academies from larger companies.

References

1. Binkley M, Erstad O, Herman J, Raizen S, Ripley M, Miller-Ricci M, Rumble M (2012) Defining twenty-first century skills. In: Griffin P, McGaw B, Care E (eds) Assessment and teaching of 21st century skills. Springer, Dordrecht
2. Delors J (ed) (1996) Learning: the treasure within. UNESCO, Paris
3. Gordon J, Halasz G, Krawczyk M, Leney T, Michel A, Pepper D, Putkiewitcz E, Wisniewski J (2009) Key competences in Europe: opening doors for lifelong learners across the school curriculum and teacher education. CASE network report, no. 87, Warsaw, Center for Social and Economic Research. https://www.econstor.eu/bitstream/10419/87621/1/613705459.pdf
4. Lippman LH, Ryberg R, Carney R, Moore KA (2015) Key "Soft Skills" that Foster youth workforce success: toward a consensus across fields. Workforce connections, (2015), child trends. http://www.childtrends.org/wp-content/uploads/2015/06/2015-24AWFCSoftSkillsExecSum.pdf
5. Kay K (2010) 21st Century skills: why they matter, what they are, and how we get there. In: Bellanca J, Brandt R (eds) 21st century skills: rethinking how students learn. Solution Tree, Bloomington, IN
6. Fadel C, Trilling B (2012) Twenty-first century skills and competencies. In: Encyclopedia of the sciences of learning. Springer, New York, NY, pp 3353–3356
7. Pepper D (2011) Assessing key competences across the curriculum — and Europe. Eur J Educ Res Dev Policy Spec Issue Key Compet Eur 46:335–353. https://doi.org/10.1111/j.1465-3435.2011.01484.x
8. CEDEFOP and ELGPN. http://www.elgpn.eu/elgpndb/view/251
9. Cedefop B (2000) Cedefop, Tissot, 2000. Found in Europass glossary
10. Cedefop (2004) European parliament and council of the European union, 2006
11. ESCO – Development of skills. https://ec.europa.eu/education/policy/strategic-framework/skills-development_en
12. Skills Panorama – Inspiring choices on skills and jobs in Europe. http://skillspanorama.cedefop.europa.eu/en/content/transversal-skills

13. International Bureau of Educatio (UNESCO-IBE) (2013) Glossary of curriculum terminology. http://www.ibe.unesco.org/fileadmin/user_upload/Publications/IBE_GlossaryCurriculumTerminology2013_eng.pdf

14. UNESCO (2015) Transversal competencies in education policy and practice (phase I). Asia-Pacific education research institutes network (ERI-NET). UNESCO, Paris. http://unesdoc.unesco.org/images/0023/002319/231907E.pdf

15. UNESCO (2014) The Asia and Pacific regional Bureau's education support strategy 2014–2021: learning for peace and sustainable development. UNESCO, Paris. http://unesdoc.unesco.org/images/0023/002310/231083e.pdf

16. Wagner T (2010) The global achievement gap: why even our best schools don't teach the new survival skills our children need-and what we can do about it. Basic books, New York

17. Rychen S, Salganik H (eds) (2003) Key competencies for a successful life and a well-functioning society. Hogrefe & Huber, Göttingen

18. Griffin P, Care E, McGaw B (2012) The changing role of education and schools. In: Griffin P, McGaw B, Care E (eds) Assessment and teaching of 21st century skills: methods and approach. Springer, Dordrecht, pp 1–15

19. Pellegrino JW, Hilton ML (eds) (2012) Education for life and work: developing transferable knowledge and skills in the 21st century. National Academies Press, Washington, DC

20. Organisation for Economic Co-operation and Development (OECD) (2010) PISA 2012 field trial problem solving framework. www.oecd.org/dataoe cd/8/42/46962005.pdf

21. Economist Intelligence Unit (2015) Driving the skills agenda: Preparing students for the future. https://www.eiuperspectives.economist.com/sites/default/files/Drivingtheskillsagenda.pdf

22. World Economic Forum (2016) What are the 21st-century skills every student needs? https://www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-students

23. Greiff S, Holt DV, Funke J (2013) Perspectives on problem solving in educational assessment: analytical, interactive, and collaborative problem solving. J Probl Solv 5:71–91. https://doi.org/10.7771/1932-6246.1153

24. Griffin P, Care E, McGaw B (2012) The changing role of education and schools. In: Griffin P, McGaw B, Care E (eds) Assessment and teaching of 21st century skills. Springer, Heidelberg, pp 1–15

25. O'Neil HF, Chuang S, Chung GKWK (2003) Issues in the computerbased assessment of collaborative problem solving. Assess Educ Principles Policy Pract 10:361–373. https://doi.org/10.1080/0969594032000148190

26. American Management Association (2010) AMA 2010 critical skills survey. Executive summary. http://www.amanet.org/training/articles/3727.aspx

27. Organisation for Economic Co-operation and Development (OECD) (2017) PISA 2015 results, vol V: collaborative problem solving, PISA. OECD, Paris. https://doi.org/10.1787/9789264285521-en

28. Hesse F, Care E, Buder J, Sassenberg K, Griffin P (2015) A framework for teachable collaborative problem solving skills. In: Griffin P, Care E (eds) Assessment and teaching of 21st century skills: methods and approach. Educational assessment in an information age. Springer, Dordrecht, pp 37–56

29. Smyrnaiou Z, Moustaki F, Yiannoutsou N, Kynigos C (2012) Interweaving meaning generation in science with learning to learn together processes using web 2 tools. Themes Sci Technol Educ 5:27–44

30. Valente A, Tudisca V, Pennacchiotti C, Smyrnaiou Z, Kotsari K, Monsonís-Payá I, Garcés J, Branchini B, Ricci F, The DESCI Consortium (2018) Actors and practices in living lab for alternating training. In: Responsible research and innovation actions in science education, gender and ethics – cases and experiences, SpringerBriefs in research and innovation governance. Springer, Cham, pp 27–33

31. Smyrnaiou Z, Petropoulou E, Menon S, Zini V (2017) From game to guidance: the innovative evaluation approach of the P4G simulation business game. IEEE, pp 148–154

32. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 3827–3838

33. Asia-Pacific Education Research Institutes Network (ERI-Net) (2013) Regional study on regional synthesis report. Transversal competencies in education policy & practice (Phase I)

34. ERI-Net (2015) Research framework for integrating non-cognitive/transversal competencies in education policy and practice (Phase III). UNESCO, Bangkok

35. Schneider SH (1997) Defining and teaching environmental literacy. Trends Ecol Evol 12 (11):457

36. Fullan M (2009) Introduction to the challenge of change: purposeful action at work. In: Fullan M (ed) The challenge of change: start school improvement now! 2nd edn. Corwin, Thousand Oaks, CA, pp 3–8. https://us.corwin.com/sites/default/files/upm-binaries/28661_Fullan_Ch1.pdf

37. Bernhardt PE (2015) 21st century learning: professional development in practice. Qual Rep 20:1–19. https://nsuworks.nova.edu/tqr/vol20/iss1/1

38. Pacific Policy Research Center (2010) 21st century skills for students and teachers. Honolulu, Kamehameha schools, research and evaluation division. http://www.ksbe.edu/_assets/spi/pdfs/21_century_skills_full.pdf

39. Cradler J, Freeman M, Cradler R, McNabb M (2002) Research implications for preparing teachers to use technology. Learn Lead Technol 30:50–54. https://eric.ed.gov/?id=EJ661401

40. Voogt J, Roblin NP (2012) A comparative analysis of international frameworks for 21st century competencies: implications for national curriculum policies. J Curric Stud 44(3):299–321. https://doi.org/10.1080/00220272.2012.668938

41. Voogt J, Pelgrum H (2005) ICT and curriculum change. Hum Technol 1(2):157–175. http://www.humantechnology.jyu.fi/articles/volume1/2005/voogt-pelgrum.pdf

42. National Research Council (2012) Education for life and work: developing transferable knowledge and skills in the 21st century. The National Academies Press, Washington, DC. https://doi.org/10.17226/13398

43. Play 4 Guidance (P4G) European Project. http://play4guidance.eu/

44. Asonitou S, Vitouladiti O (2017) Core skills as marketing and management tools: evidence from the tourism sector. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing, Springer proceedings in business and economics. Springer, Cham. https://doi.org/10.1007/978-3-319-33865-1_

45. Asonitou (2015) Barriers to the teaching of skills in the Greek higher education accounting courses: insight from accounting teachers. Int J Strateg Innov Mark 3. https://doi.org/10.15556/IJSIM.02.03.002

46. Asonitou S (2015) Employability skills in higher education and the Case of Greece. Procedia Soc Behav Sci 175(10):283–290. https://doi.org/10.1016/j.sbspro.2015.01.1202

47. Development and evaluating skills for creativity and innovation (DESCI) European project. www.desci.eu/

Seeking for a Better Fitting: Understanding the Tour Operators for Cruises on Sao Miguel Island

Sandra Dias Faria, Ruben Andrade, and João Couto

Abstract A good management/organization of the entire cruise system, which helps in adequate marketing of the destination and proper development of the ports' infrastructure, would result in a functional environment for the tourist. Further, these measures would positively influence the attractiveness of the destination [Gračan (Pomorski zbornik 51:103–116, 2016)]. As far as entertainment is concerned, cruise ships are very similar to each other, creating more and more on-board activities, shopping and other quality services, as well as the sale of products and services on land. These can be all summarized in one common factor: being considerably more expensive on-board than when purchased off the ship [Clancy (Cruise ship tourism. CABI, 2017)]. Therefore, this study focuses on the role of tour operators of large nautical cruises in activity on Sao Miguel Island (Azores, Portugal), in order to understand their commercial adaptation to the type of tourism expanding in the archipelago, as well as discusses the advantage of the existence of a Commercial Office to concentrate all the offers of all tour operators in Ponta Delgada's port.

Keywords Cruise tourism · Tourism destination · Clustering initiative · Strategic management

1 Introduction

Over the last few decades, tourism has shown continued and diversified growth, making it one of the largest economic sectors in the world. Maritime Tourism is a branch of comprising many activities, such as sports, namely, recreational navigation, which includes all the large size equipment provided with sail prepared for a cruise, and nautical sports ranging from light sailing, such as windsurf, surf, body

S. D. Faria (✉) · R. Andrade · J. Couto
University of the Azores, Ponta Delgada, Portugal
e-mail: sandra.mc.faria@uac.com

boarding, rafting, kayaking, water skiing, motor boating, sport fishing, deep sea fishing, and diving.

Maritime Tourism also embraces leisure activities through boat trips, which are divided into those with small boats, mostly used for local excursions; those with medium-sized boats destined for river or coastal traffic, which may or may not be prepared for overnight stay of passengers; and finally those with large vessels, where belong the Nautical Cruises that cross the oceans and dock in several ports around the world [1]. Cruising has become one of the fastest growing tourism sectors. It is an industry intensely chosen for its ability to create a unique experience [2].

For large-scale nautical cruises, Portugal, Lisbon, and Funchal are the most sought-after ports (approximately 200 cruises a year), and to a lesser extent are other ports throughout the country, including the Ponta Delgada port with less than a hundred cruises per year. Activities and tourist attractions represent an important component of not only the cruise tourist experience, but also of the image conveyed by the destination, since it will induce the tourist's opinion and, consequently, affect the word of mouth factor; since activities such as excursions represent a significant part of their revenue [3].

2   Agglomeration and Collaborative Strategies

Tourism is a highly agglomerated industry. Most visibly, traditional, sun, sand, and beach package tourism typically clusters in sharply delimited local zones. These tourism zones can be observed, for example, in well-known Mediterranean tourist destinations such as Antalya, Turkey; Ayia Napa, Cyprus; Sousse/Monastir, Tunisia; or Palma de Mallorca, Spain [4].

Considering the high relevance of agglomeration economies in the tourism sector, there is a strong case for refining agglomeration-oriented approaches of regional development, such as cluster policy and smart specialization, in view of their application to tourist destinations [5].

Adopting a stakeholder position, it is valid to see a destination as an open-social system formed by interdependent and multiple stakeholders. The observed interdependence can be explained through several causes. The first cause stands as the scarcity of the financial resources required to generate an adequate budget for the development of a tourism marketing strategy capable of communicating messages about the destination, persuading tourists to visit the destination as an alternative of others. The second cause is related to the level of the destination's presence in the network. In a networked society, the impact from sudden disasters and events is felt much more intensely. The third cause is related to the paradox present in the tourism industry, where we see a fragmentation of supply simultaneously with the "all-in-one experience" model. Despite the perspective of each agent, destinations are dependent on the ability to find the balance between sharing and accumulating either resources or knowledge [6].

Over time, the interest in this concept with regard to tourist destinations has intensified. Hence, this justifies the need to revisit the literature on organizational coopetition matters. Most of the existing models report the basis of coopetition to be the behavior of the agents, it being a reflection of the different tendencies to cooperate or to compete [7]. Other authors present models focusing on the different positions and contexts in the productive chain, capable of breeding coopetition [8–10]. Nevertheless, it is important to emphasize the importance of the resource heterogeneity of the companies involved, since it constitutes the driving force of the coopetition relations. In cases where the company operates alone, this heterogeneity may translate into competitive advantages, but in cases where access to these resources depends on a joint effort, coopetition presents itself as the solution, since the resources are not available to all [8]. As a result, the critical success factors in management strategies based on coopetition are a recent research object, as well as the effect of coopetition on the level of competitiveness of a region or destination [11, 12].

3 Case Study: Tour Operators in the Cruise Activity in Ponta Delgada

In terms of methodological approach, this study was carried out through a qualitative research method, in which the data resulted from semi-structured interviews with 23 questions, of collaborators of tourist animation companies, with activity in Ponta Delgada, covering different sectors such as cultural tours, excursions, pedestrian trails, and marine activities. Several data were collected regarding the activity of tourist cruises registered in Sao Miguel since the opening of the current cruise terminal in Ponta Delgada to the present time. The interviews took place in the beginning of 2018, covering a purposive sample with one company of each type.

In pursuit of the objectives of this study we decided to resort to qualitative research, through the elaboration of case studies about seven companies that act on the tourist market on the Sao Miguel Island, and more exactly in Ponta Delgada, having been selected since it represents different typologies. Two companies act with a broader offer, which includes some diversity of customer activities and four companies that are more specialized. With these companies we wanted to address in detail the opportunities and challenges of this market and the possibilities for improvement of the service provided.

Analyzing the tour operator's activity, we can verify as regards the spoken language that all are dominated by English. It should be noted that Portuguese and English are the only ones dominated by the company in Case 2 and Case 4. With regard to the company in Case 7, there is the addition of the French language. The companies in Case 1 and Case 5, in addition to all the aforementioned, also speak German and Spanish, respectively. As for the company in Case 3, in addition to their mother languages—English and French—they speak two more languages—Spanish

Table 1 Companies' characterization: TripAdvisor

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7
Rating			5.0	5.0	4.5	4.5	5.0
Comments			61	40	309	828	6
Great (%)			92	85	79	64	100
Very good (%)			6	13	12	25	0
Medium (%)			1	2	3	7	0
Weak (%)			1	0	1	2	0
Terrible (%)			0	0	5	2	0

and Italian. The company in Case 6 is one that has a greater linguistic diversity, with housing employees who predominantly speak French, Spanish, German, Italian, Dutch, and Estonian.

In view of the global phenomenon that is the Facebook social network, one would expect that all the companies in this study would be present on this platform. Analyzing the interviews outcomes, we can conclude that only a company, Case 1, is not present in this social network. However, in other platforms, like Instagram, you can only find four of the seven companies under study. With regard to YouTube, five of the seven companies used this platform as a means of disseminating their videos, sharing them on social networks.

Only five of the seven companies are present on the TripAdvisor comment platform, highlighting Cases 5 and 6 by the number of comments they have (see Table 1).

All the companies in the study have their own website, where one can book their products/services. Only five of the seven companies use other agencies to disclose their products/services as a means of increasing their reach to tourists. Regarding the dissemination of their products/services on the online booking sites Viator and GetYourGuide, only three of the seven companies use the former to disclose their services, whereas only one of the seven companies uses the latter platform.

As for marketing campaigns, they are utilized by six of the seven companies, Case 7 being the exception, which due to its size would make the costs of such campaigns higher than the benefits. With regard to the six companies that invest in marketing campaigns, these are held at a regional as well as a national, and four of the six companies extend their campaigns internationally.

Through Table 2, it is possible to verify that only three of the seven companies in the study have some activity in common, namely the companies in Cases 3, 4, and 6-T01—All Terrain Tours and T20-Other Activities. The companies in Cases 4 and 6 have yet another common activity, that is, T02-rides on mountain bikes, 4-wheel motorcycles, and others. From another perspective we can see that five of the seven companies can be considered as specialized in a particular activity, whereas the other two companies, namely those in Cases 4 and 6, may be considered as general companies, offering a more diversified range of products/services.

According to the interview, five of the seven cases of companies do not have specific products for tourists from cruises, so they make slight adjustments to their

Table 2 Companies available services

	C1	C2	C3	C4	C5	C6	C7
A01—Travel agency	✓						
B01—Rent-a-car					✓		
M01—Boat rental						✓	
M03—Boat tours						✓	
M04—Canoeing, windsurfing, etc.						✓	
M05—Diving		✓					
M06—Diving center		✓					
M07—Diving school		✓					
M09—Diving equipment		✓					
M10—Touristic and sport fishing							
T01—All terrain Tours			✓	✓		✓	
T02—Mountain biking, 4-wheel Motos				✓		✓	
T10—Trekking						✓	
T11—Speleology, mountaineering, etc.						✓	
T17—Sightseeing Tours				✓			
T18—Event organization				✓			
T20—Other activities			✓	✓		✓	

existing products/services for this type of customers, since they are not their target market. The company in Case 1, in addition to its scope, operates directly in the sale of products on board the ship, so all its products are directed to that market. On the other hand, the company in Case 4 has a product/service that is used solely for customers coming from cruises.

Since tourism through cruise ships is expanding in the Azorean market, one would expect a completely different result than was exposed by the companies' responses. Analyzing the data, six of the seven companies in the study stated that they do not want to bet on this target market, because they would need to be able to restructure their products/services for these types of customers. In contrast, the company in Case 5 revealed that the creation of packages with "target" products/ services for tourists from cruises is under development.

When asked about the improvements needed for the activity, the companies highlighted the lack of tourist animation with the arrival of a cruise ship, which would not give the opportunity the tourist to get to know a little of the local culture. Another aspect mentioned are the installations that are not adequately suited to the different practices of the different tour operators, as well as the difficulty of access to the marinas at certain times of the year. A common concern of some operators is the other companies that offer activities that compete with those provided by the tour operators, for example, excessive fishing or fishing in natural reserves, which harms diving activities.

It was also mentioned that there is a deficiency in the signaling or indications transmitted to tourists by the ports entity as to the exact location of the different tour

operators with their offers. This phenomenon leads to another difficulty: the disorganization of the tour operators in their designated area.

In fact, when tourists arrive in this area they are often approached in an "aggressive" manner, pressured to acquire a certain product, which hinders the business of tourism. There is also the difficulty in initiating certain businesses, as the incentives provided to the entities are scarce or reduced, thus creating a barrier to the entry of new players.

Through the interviews with these seven companies, it was possible to perceive their sensitivity to the image of the city of Ponta Delgada, which they argue is something to take into account by the town Council itself, and therefore there should be an increased concern with the schedules of solid waste collection from the city, which sometimes prove insufficient, resulting in a bad image for the city.

Finally, one of the largest concerns of some tour operators is the question of whether it is advantageous to come from the cruises to the Azores destination and to take into account the commercial balance, that is, the fact that since cruise tourism is often bought in "all inclusive" arrangements, these tourists do not consume as many products as air tourists.

On this issue, one of the companies highlighted the difficulty in satisfying all applications when there is more than one ship in Ponta Delgada, due to the shortage of some types of equipment; on the other hand, the question arises: can the revenue from accommodating the additional tourists compensate the companies if they make large investments to buy more equipment, considering that this type of passage by Ponta Delgada is a seasonal activity? There is a lack of more marine reserves or areas only for tourism activities, which also leads to a lack of supervision by the authorities in relation to these areas.

In view of the need of some companies for suitable areas for parking or dissemination of their products/services, some operators reference the need for the municipality to provide more specific areas for this purpose.

Another key point of any business is correct licensing; that is something that has been pointed out as very difficult, since it is not a single process, with several requirements being necessary until it is approved. Another point still to be highlighted is the lack of specialized staff to carry out licensing activities.

Two of the companies in the study pointed out that it would be interesting to have a common sales point for all companies, so it is easier for all tour operators to display and sell their products/services.

As previously mentioned, there is some difficulty on the part of the tour operators to reach the tourists from cruises, since tour operators are located at a specific area; that is, if the tourist does not pass from that common point, the tour operators do not think they can sell their products/services.

In the part of the population who are frequent cruisers, there is a greater predominance of people of a more advanced age, often with reduced mobility, and it is necessary to have certain aid accessories. However, the infrastructure is not totally suitable for their purpose, and there is no product/service provided by the municipality for this type of people with reduced mobility.

Finally, there is a poor maintenance of the facilities, which can lead to accidents for any type of passers-through, whether these are tourists or not—for example, the maritime pontoons that serve as access to the boats for activities related to nautical tourism.

4   Discussion and Conclusions

Several articles present the opinion of tourists and the population, but this study is based on the perspective of tour operators, showing the impact of this type of tourism on their activity, as well as the relevance of this touristic market, and the opportunities and challenges. In this way, it is possible to learn about the Maritime Tourism on the island of Sao Miguel at the Ponta Delgada port and the improvement measures that can be undertaken in the infrastructure and human resources.

Utilizing the data provided by the company *Portos dos Açores SA*, it is possible to identify the growth rate of the tourist cruise lodges in Ponta Delgada, as well as the main players who choose this port as a stopover, and also draw the profile of these nautical cruises. Through a qualitative research method, we interviewed the tour operators, and it is possible to comprehend if the cruises market segment offers advantages leading to investment in specific packages for maritime passengers, as well as the opportunities and gaps faced on expansion of this type of tourism and the difficulties that may arise [13].

In addition, it is also possible to understand the opinion of tour operators regarding the development of collaborative strategies that can help promote and organize their activities, as for example the construction of a Commercial Office, where they can exhibit their services—an initiative that tour operators were very interested in and are in favor of its creation. They are in favor of this creation because they concluded that there is a lack of organization regarding the sale of products/ services in *the Portas do Mar* terminal, namely on the upper platform.

These interviews also show us the marketing strategies of these operators, namely, their online platforms presence, whether they have a website of their own and if their employees are fluent in other languages, and it was clear that only a small number of people are trained in other languages in order to increase the spectrum of tourists who visit Ponta Delgada, and there does not exist client orientation so that the client feels welcome.

Among the points mentioned is that there is no creation of packages with products/services for customers coming from cruises, with only an adaptation of the existing products/services for these tourists. This allows one to conclude that tour operators are not geared towards this target market.

New forms of cooperation are emerging between cruise ports and agencies, which include marketing and promotion strategies to attract cruise lines and the inclusion of these ports in their itineraries [14]. Coordination with other actors, such as local actors, in order to increase interest in the destination is also relevant. In this way, there should be greater fundraising in order to develop the maritime tourism sector,

by investing in the port facilities as well as in the services offered to the maritime passenger [14].

The interviewees also referred to the fact that there is some concern from tour operators about the garbage left by cruises when they dock in Ponta Delgada. The lack of biological and geological reserves by responsible entities is another issue, since these reserves can encourage an active tourism and tourists looking for a taste of nature to come and explore the reserves, and finally there is the lack of non-target structures for people with reduced mobility or special abilities needs.

This study emphasizes the importance of the port of entry in Sao Miguel, the port of Ponta Delgada, which until now has not been as valued as the airway, since it is a more recent development area for the region, but with potential expansion. All the companies have said that they do not have strategies to address the difficulties previously pointed out and refer to the need to develop a collaborative strategy between the Port of Azores Authority, the municipality, and the tour operators to discuss and address these problems and improve the quality of the services offered to cruise tourists.

Future research on this issue should focus on analyzing the tourist perspectives regarding their scale in Sao Miguel and the facilities and services provided at the cruise terminal but also in the city, and evaluate the offers and services provided by local tour operators and identify improvement measures that could be implemented.

References

1. Gamito TM (2009) Desenvolvimento da economia do mar turismo marítimo. Nação e defesa
2. Polat N (2015) Technical innovations in cruise tourism and results of sustainability. Procedia Soc Behav Sci 195:438–445
3. World Tourism Organization and Asia-Pacific Tourism Exchange Center (2016) Sustainable cruise tourism development strategies – tackling the challenges in itinerary design in South-East Asia. UNWTO, Madrid
4. Benner M (2013) Towards a policy to promote tourism clusters. MPRA paper no. 43924, Munich Personal
5. Benner M (2017) Smart specialization and cluster emergence: building blocks for evolutionary regional policies. In: Hassink R, Camberley DF (eds) The life cycle of clusters: a policy perspective, 1st edn. Edward Elgar, Cheltenham, pp 151–172
6. D'Angella F, Go FM (2009) Tale of two cities' collaborative tourism marketing: towards a theory of destination stakeholder assessment. Tour Manag 30(3):429–440. https://doi.org/10.1016/j.tourman.2008.07.012
7. Lado AA, Boyd NG, Hanlon SC (1997) Competition, cooperation, and the search for economic rents: a syncretic model. Acad Manag Rev 22:110–141
8. Bengtsson M, Kock S (2000) Coopetition in business networks – to cooperate and compete simultaneously. Ind Mark Manag 29:411–426

9. Garraffo F (2002) Types of coopetition to manage emerging technologies. In: II Annual conference of Euram on: "Innovative Research Management". Track: "Coopetition strategy: towards a new kind of interfirm dynamics", Stockholm, May, pp 9–11
10. Luo Y (2004) A coopetition perspective of MNC-host government relations. J Int Manag 10 (4):431–451. https://doi.org/10.1016/j.intman.2004.08.004
11. Chin K, Chan BL, Lam P (2008) Identifying and prioritizing critical success factors for coopetition strategy. Ind Manag Data Syst 108:437–454
12. Della Corte V, Sciarelli M (2012) Can coopetition be source of competitive advantage for strategic networks? Corp Ownersh Control 10:363–379
13. Kvale S (1996) Interviews: an introduction to qualitative research interviewing. Sage, Thousand Oaks, CA
14. Pallis AA, Rodrigue JP, Notteboom TE (2014) Cruises and cruise ports: structures and strategies. Res Transp Bus Manag 13(1):5. https://doi.org/10.1016/J.RTBM.2014.12.002

Impact of the Economic Crisis on Health Indicators in Greece and the Need for Primary Health Care Services

George Pierrakos, Dimitra Latsou, and Aspasia Goula

Abstract According to literature, economic crisis has had a direct effect on Gross Domestic Product (GDP) and personal income. This situation impacted negatively on health indicators and increased demand for public health care. Due to the overall public expenditure reduction, the health care system is unable to meet the needs of the population, leading to a vicious cycle. This paper aims to investigate the impact of the economic crisis on key health care indicators in Greece and to provide suggestions on the organization of primary health care services. Socio-economic data for Greece spanning the period of 2007–2017 were obtained and analyzed from the Eurostat database. Correlations were observed between public health expenditure and self-reported unmet need for medical care (r = −0.918), self-perceived health as being good/very good (r = 0.789) and self-perceived long-standing limitations in usual activities due to some/severe health problem (r = −0.954). Public health expenditure has been reduced by 41% between 2009 and 2016 in Greece. However, it is noted that 38.7% of overall health expenditures are private payments, when in 2009 was 31%, where the largest share is for outpatient services. Additionally, the hospital central orientation of the Greek public health care system causes obstacles to the access and continuity of care; secondary and tertiary health care is overburdened as it also provides primary health care services. Thus, the health care system needs to be more patient-centric, providing services in the local community through primary health care networks and improving home care services.

Keywords Economic crisis · Health indicators · Primary health

G. Pierrakos (✉) · D. Latsou · A. Goula
Health and Social Care Management, University of West Attica, Athens, Greece

1 Introduction

In accordance with the findings of research and the resulting bibliography, it is widely accepted that the economic crisis has a negative impact on Gross National Product (GDP). This negative impact correlates with rising unemployment while research from Ricahrd Wilkinson and Kate Pickett has shown that it also directly correlates negatively with the quality of life indicators [1]. Unemployment is also likely related to the adoption of unhealthy habits such as smoking, and to mental disorders, psychosomatic disorders and suicides [2]. It has been shown that for every 1% increase in unemployment, there was a 0.8% increase in suicides for ages under 65, and 0.8% increase in homicides [3].

Additionally, according to the researchers, the economic crisis has an impact on the health of society as a whole (despite the objections of other researchers) [4] and not only on the health of the poorer sections of society. In general, it is safe to say that the economic crisis affects the overall health indicators. They also mention that both the overall level of health in the general population and the dissemination of good health equally among all members of the population, depend on the influence of individual risks (nutrition, behavior), the social and cultural context as well as the collective health risks (environmental pollution, disposal of hazardous products, infectious diseases) and, finally, the way the health care system is organized and operates, that determines the access and quality of services [5]. As far as the Mental Health is concerned it has been found that it is directly affected by the economic crisis [6].

This finding holds true in the whole of the recent history of humankind, since the great 1929 crisis in the United States of America and over time in other countries that have experienced a financial crisis and more specifically in countries that requested financial assistance from the International Monetary Fund IMF [7].

In particular, it is noted that unemployment as a direct result of the economic downturn is correlated with the negative evolution of health indicators. Simultaneously, the insurance system weakens by affecting negatively public spending and shifting the burden of meeting health needs to private expenditures [8].

The chain of events can be described as follows:

(a) Reduction of GDP, growth of unemployment and reduction of investments,
(b) Reduction of personal income and simultaneous reduction of state resources,
(c) Increasing demand for public health services,
(d) Deterioration of personal health,
(e) Reduction of provided public health services due to government cuts in public health expenditures.

The same survey found that among the European countries that experienced the economic crisis in 2008–2009, although there is no correlation between GDP reduction with the overall mortality and other health indicators, rising unemployment appears to have a significant effect in health and quality of life.

A similar effect of rising unemployment has also been observed in Greece and, moreover, it has been found that a reduction in wages which has resulted in a general reduction in the personal income, also contributed towards this effect [9]. At the same time, there was a significant reduction in public health expenditures with significant effects on the functioning of the health system and on the effective response of the insurance system in covering people's needs [10].

This paper aims to investigate the impact of the economic crisis on key health care indicators and risk behaviours in Greece and to provide suggestions on the organization of primary health care services.

2 Methodology

2.1 Study Design

A time-trend design approach was applied to compare health indicators both over time (observation period 2007–2017). The time trend design is an exploratory approach that provides a dynamic view of a population's health status for trends and changes and can be used to generate hypotheses for further research.

2.2 Data Collection

All data were extracted from international databases such as EUROSTAT and OECD, as well as national databases such as ELSTAT and IOBE foundation [11–14]. As indicators of the economic crisis in Greece, gross domestic product, public health expenditure, and unemployment are selected as exposure variables in this study. Health indicators include healthy life years and life expectancy at birth, mortality (covering all causes of death), self-reported unmet need for medical care, self-perceived health, people having a long-standing illness or health problem, self-perceived long-standing limitations in usual activities due to health problem, at-risk-of-poverty rate and suicides. Risk behaviours include tobacco and alcohol consumption. The above variables have been selected based on the literature, as the main mediating mechanisms between economic crisis and health. The year 2007 has been selected as starting point in order to show the trends before and during crisis in Greece.

2.3 Data Analysis

The strength of the association between macroeconomic and health indicators was assessed using Pearson correlation analysis. Additionally, linear regression analysis

was used to evaluate the influence on health indicators of macroeconomic factors. Data analysis was conducted using the SPSS 25 statistical package.

3   Results

According to the available Eurostat data, the GDP per capita in 2007 was 21,100 million euros, which decreased in 16,660 million euros in 2017. Health expenditure decreased from 22,490.92 million euros in 2009 to 14,727.32 million euros to 2016. For public health expenditure between 2009 and 2016 there is a reduction by 6377.48 million euros and private payments by 1386.12 million euros. Particularly by function there is an expenditure reduction to 30% for inpatient curative care, 49% for outpatient care, 31% for medical good and 31% for preventive care. However, private payments as percentage of overall health expenditures was raised from 31% in 2009 to 38.7% in 2016, which is the highest in Europe (e.g. 34% was in Portugal, 26% in Italy, 20% in UK, 16% in Sweden and 15% in Norway). In Greece during 2016, inpatient care was approximately 40% of total health expenditures, 26% was outpatient care, 31% medical goods and 1% preventive care.

During the period 2008 (earliest available data)–2017, unemployment was increased by 639.1 thousand. Also, the unemployment rate increased by 13.7% from 2007 to 2017, long-term unemployment by 11.4% and youth unemployment (15–24 years) by 3.9% respectively.

Regarding the effects of economic crisis in health indicators, Fig. 1 presented the comparative effect sizes of health indicators between 2007 and 2016 (before and during crisis). It is noticed that an increase was observed in self-reported unmet need for medical care due to financial reasons, waiting list and too far to travel by 7.7 units. Additionally, healthy life years and self-perceived health were decreased more than 2 units. The percentage of people having a long-term illness or health problem was increased by 1.9 units and self-perceived long-term limitations in usual activities due to health problem (some or severe) by 6.3 units. Mortality per 1000 persons was raised in 1.7 as well as infant mortality in 0.7 between 2007 and 2016 (latest available data). Furthermore, death due to suicide per 100,000 inhabitants was increased by 0.49 units between 2011 and 2015.

It is important to mention that decreases were observed in tobacco and alcohol consumption, −728 g per capita and −3.2 L per capita respectively. However, the official data from the IOBE foundation showed that the consumption of illegal tobacco raised dramatically, taking an increasing share of total consumption (from 4.2% in 2008 to 23.7% in 2016). Specifically, the consumption of illegal tobacco was 1360 million cigarettes in 2008, which increased to 5014 million in 2016.

The correlation between GDP per capita and health indicators showed positive correlations with healthy life years, life expectancy at birth, self-perceived health as very good or good and negative correlations with self-reported unmet need for medical care, people having a long-standing illness or health problem, self-perceived long-standing limitations in usual activities due to health problem (some or severe).
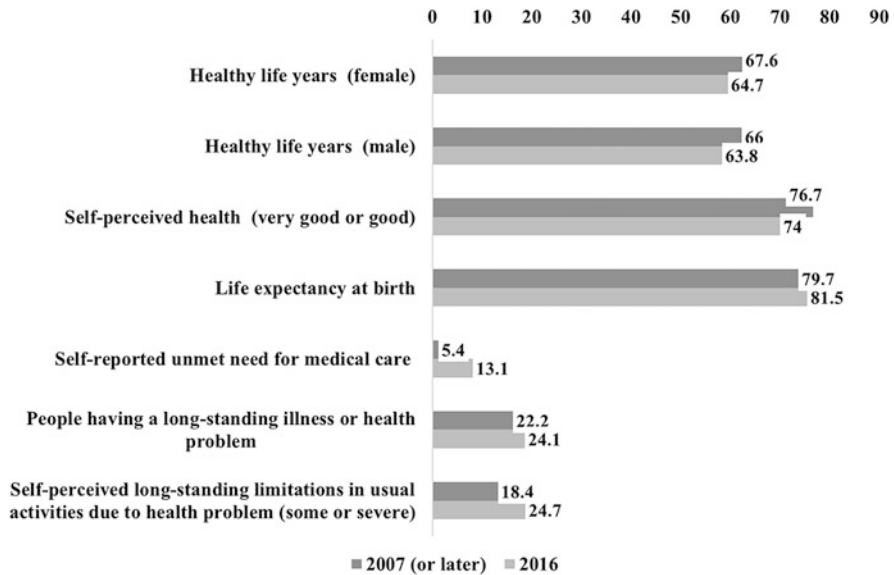
Fig. 1 Comparative effect sizes of health indicators

Similar were the results regarding public health expenditure and out of pocket. However, unemployment correlated negatively with healthy life years, life expectancy at birth, self-perceived health as very good or good and positively with self-reported unmet need for medical care, people having a long-standing illness or health problem, self-perceived long-standing limitations in usual activities due to health problem (some or severe). This means that macroeconomic indicators have a strong effect on health indicators (Table 1).

4 Discussion

According to the above analysis it is noted that in the previous decade—during economic crisis in Greece—there is a decrease in GDP with a significant increase in unemployment. At the same time, there is a decline in public health expenditure, while the share of private spending has increased. Especially unemployment seems to have a significant effect on the health indicators of unmet health needs, due to the reduction of the possibilities of easy access to the health system through primary health care for preventive health examinations as well as the reduction of rates of self-reported good health. Finally, there is a gradual increase in the number of people in need of long-term care.

Table 1 Correlation coefficients of the association between macroeconomic indicators and health indicators (2007–2017)

	GDP per capita	Public health expenditure	Out of pocket expenditure	Unemployment
Healthy life years (female)	0.839[a]	0.899[a]	0.837[b]	−0.782[b]
Healthy life years (male)	0.857[a]	0.914[a]	0.840[b]	−0.779[b]
Life expectancy at birth	0.889[a]	0.894[a]	0.773[b]	−0.872[a]
Deaths	−0.826[a]	−0.727	−0.728	0.736[b]
Self-reported unmet need for medical care	−0.893[a]	−0.918[a]	−0.784[b]	0.791[b]
Self-perceived health (very good or good)	0.828[a]	0.789[b]	0.670	−0.778[b]
People having a long-standing illness or health problem	−0.970[a]	−0.931[a]	−0.961[a]	0.958[a]
Self-perceived long-standing limitations in usual activities due to health problem (some or severe)	−0.914[a]	−0.954[a]	−0.862[b]	0.848[a]

[a]Correlation is significant at the 0.01 level
[b]Correlation is significant at the 0.05 level

That analysis is being concluded in other studies that economic crisis in Greece has negatively affected the health indicators in Greece with significant effects on the general health of the population [15, 16].

As well according to the Health Profile of 2017 for the OECD and the European Observatory on Health Systems and Policies for the European Commission, [17] one of the major challenges of the Healthcare system in Greece is the access to healthcare. The difficulties and obstacles to access proper healthcare lead to high rates of unmet health care needs. Economic crisis has also influenced companies in Greece [18]. Also, in the same study it is noted that private health expenditures, which characterized of the health system in Greece for many years, now has a larger share in total expenditures. This may also be related to increasing rates of unmet needs, especially among the long-term unemployed. At the same time, chronic care of diseases such as cancer and diabetes are additional challenges for the health care system. Furthermore, among the general finding of this study is that there is an urgent need to focus on the goal of creating a network of primary care services to act as a gatekeeper of the system by supporting policies to rationalize costs and decentralize resources and to address the peoples' health needs.

5   Limitations

There is a lack of some publication data for our frame time. Also due to the change in Hellenic Statistical Authority classifications, there is lack in some data (eg. expenditures) before 2009. However, our results seem not to be underestimated, since the latest available data from the most valid international and national databases were used and investigated in the present analysis. The range of examined indicators was limited and could be expanded and verified in prospective studies in order to improve the accuracy of estimates.

6   Conclusion

The general conclusion is that crisis increases the burden of health care to private health care expenditures. However economic crisis seems to affect health indicators, particularly services related to the prevention and care. The health care system needs to be more patient-centric, providing services in the local community through primary health care networks and improving home care services. Moreover, the development of the patient's personal health record and telemedicine network are required. Furthermore, the benefits of creating this network for Chronic Health Care is to support the health care workers and the healthcare system stakeholders, in order to offer improved personalized healthcare services and reduce their costs, while eliminating medical errors during the treatment of patient with the support of IT solutions and services. Focusing on patients can bring added value to all stakeholders, because of increasing quality (effective and better treatment for patients), efficiency (less administration for doctors), affordability (patients can decide for reasonable standard services use prevention programs provided by doctors), maintain accessibility (single point of access—one common platform for patients and doctors) and sustainability.

References

1. Wilkinson RG, Pickett KE (2006) Income inequality and population health: a review and explanation of the evidence. Soc Sci Med 62:1768–1784. https://doi.org/10.1016/j.socscimed.2005.08.0361
2. Giotakos O (2010) Crisis and mental health. Psychiatry 21:195–204
3. Stuckler D, Basu S, Suhrcke M, Coutts A, McKee M (2011) Effects of the 2008 recession on health: a first look at European data. Lancet 378:124–125. https://doi.org/10.1016/S0140-6736(11)61079-9

4. Saunders P (2010) Beware false prophets: equality, the good society and the spirit level. Policy exchange
5. Mackenbach J (2006) Health inequalities: Europe in profile. An independent, expert report commissioned by the UK Presidency of the EU, London Department of Health
6. Deaton A (2008) Income, health and wellbeing around the world: evidence from the Gallup world poll. J Econ Perspect 22:53–72. https://doi.org/10.1257/jep.22.2.53
7. Peabody JW (1996) Economic reform and health sector policy: lessons from structural adjustment programs. Soc Sci Med 43:823–835. https://doi.org/10.1016/0277-9536(96)00127-X
8. Ruckert A, Labonte R (2012) The financial crisis and global health: the International Monetary Fund's policy response. Health Promot Int 28:357–366. https://doi.org/10.1093/heapro/das016
9. Economou M, Peppou LE, Louki E, Komporozos A, Mellou A, Stefanis C (2013) Economic crisis and mental health. What we know for the current situation in Greece? Encephalos J 50:22–30
10. Stuckler D, McKee M (2012) There is an alternative: public health professionals must not remain silent at a time of financial crisis. Eur J Pub Health 22:2–3. https://doi.org/10.1093/eurpub/ckr189
11. Eurostat Database. http://ec.europa.eu/eurostat/data/database
12. OECD Statistics. https://stats.oecd.org/
13. IOBE, Foundation of Economic and Industrial Research. http://iobe.gr/
14. ELSTAT. http://www.statistics.gr/
15. Falagas ME, Vouloumanou EK, Mavros MN, Karageorgopoulos DE (2009) Economic crises and mortality: a review of the literature. Int J Clin Pract 63:1128–1135. https://doi.org/10.1111/j.1742-1241.2009.02124.x
16. Triantafyllou K, Angeletopoulou C (2011) Increased suicidality amid economic crisis in Greece. Lancet Correspond 378(9801):1459–1460. https://doi.org/10.1016/S0140-6736(11)61638-3
17. OECD, European Observatory on Health Systems and Policies Greece: State of Health (2017) State of Health in the EU. OECD/European Observatory on Health Systems and Policies, Paris/Brussels
18. Kavoura A, Sahinidis A (2015) Communicating corporate social responsibility activities in Greece in a period of a prolonged economic crisis. Procedia Soc Behav Sci 175:496–502

Voters' Behavior: What Drives Political Consumption in Cyprus? An Analysis of the Behavior of Young Voters

Harry Ph. Sophocleous and Andreas Masouras

Abstract Substantial corresponding has been established between politics, communication and marketing. Through the years there is application of consumer behaviour decision making to voter decision making; there is also parallel consideration of production and consumption of political communication and in particular pre-election period that has gained the interest of many scholars. Still this is an important research focus and a research gap upon the specific field. The electoral output in many national cases indicates that the attendance between young adults tends to be lower than in the general electorate, suggesting lower level of voting participation. In this manner, the paper attempts to measure the involvement of young adults in voting affairs and to investigate a parallel deliberation on the changing pattern of consumption of political communication. Data have been collected from structured questionnaire that conducted with a sample of 160 young adults from all over Cyprus. Accordingly, the actual impact of the campaigns might differ from the impact as this is appreciated by the participants, a fact that it suggests that future research, may consider the use of another tool, which is likely to give a more accurate measurement of the "Impact" of the pre-election campaigns.

Keywords Production/consumption of political communication · Voting behaviour · Pre-election campaigns

1 Introduction

Many similarities have been documented between politics communication and marketing. Through the years there is relevance of consumer behaviour decision making to voter decision making; there is also a parallel deliberation of production and consumption of political communication and in particular pre-election period

H. P. Sophocleous (✉) · A. Masouras
Neapolis University Pafos, Paphos, Cyprus
e-mail: c.sophocleous@nup.ac.cy

that has gained the interest of many scholars. Therefore, this insists an important research focus and a research gap upon the specific field. Results from general elections around the world show that the attendance between young adults tends to be lower than in the general electorate, suggesting low interest and involvement in politics, and therefore lower level of voting participation. This paper central aim is to evaluate the participation of young adults in voting affairs and to examine the criteria of voting of young voters in Cyprus, as well as to consider a corresponding reflection on the changing pattern of production and consumption of political communication [1].

2   Literature Review

The aforementioned research aim and objectives derive from the fact that the electoral case of Cyprus as this is reported by previous national and local elections and is illustrated by previous research [2], indicates a declined level of participation, which may suggest a change in social trends and therefore the impact of communicational campaigns over the voter, is changing. More specifically the level of abstention in presidential elections is gradually increased from around 9% in the elections of 2003 and 2008, to 16.86% in 2013 and 28.12% at the first and second round of 2018 presidential elections respectively a fact that may suggest a changing electoral environment and thus is generating the need for further study the voting behaviour of younger generations of voters, which, more or less are determine the voting behaviour nowadays has been changed significantly.

2.1   The Changing Environment and Its Impact Upon Political Communication

The chancing social environment and the chancing social trends have their impact upon the function of political communication and therefore are directly linked to the scope of the study. According to Blumler and Kavanagh [1], the recent trends and the relations of social change to media change are multifaceted and mutual. Over the post-war period, political communication has been responsive (though also contributory) to the following series of exogenous/eternal change:

Modernization—that is, increased social differentiation and specialisation, fragmenting social organization, interests, and identities; proliferating diverse lifestyles and moral stances; and fuelling identity politics [3–5]. This complicates tasks of political aggregation and communication, supports markets for minority media, and may explain the appeal of talkshow explorations of divergent personal and sexual behaviours, conflicts, and aberrations.

Individualization—[1], implemented the elevation of personal aspirations, consumerism, and reduced conformity to the traditions and demands of established institutions, markedly political parties, the nuclear family, mainstream religion, the workplace, and neighbourhood and social-class groupings. In approaches to politics, citizens have become more like consumers (instrumental, oriented to immediate gratifications, and potentially fickle) than believers. Accordingly, politicians must work harder to maintain their interest and support.

Secularization—the notion of **Secularization** [1], concerning the loss of institutional avenues to the sacred and the reduced status of official politics, reflected initially in weaker party identifications but spreading subsequently to most other facets of political authority. The diminished parties face increased competition for media and public attention from the rise of hard-lobbying interest and cause groups. Relations of elites to masses are transformed by the evaporation of deference and increased scepticism about the credentials, claims, and credibility of authority holders in many walks of life.

Economization—the increasing influence of economic factors and values on the political agenda and other areas of society, including culture, arts, and sports [6]. The subordination of formerly more autonomous spheres (e.g., higher education, publishing and journalism) to economic criteria of performance is encouraged.

Aestheticization—in Ulrich Beck's [7] sense of people's increased preoccupation with stylishness, image, presentation, and appropriate tastes, especially in fashion and music. This encourages closer associations of politics with popular culture [8].

Increasing rationalization of all facets of purposive organization and administration. This favours argument backed by systematically gathered evidence in forums of relatively sustained policy debate (conferences, quality press, signed columns, specialist political programs, analytical journalism, weekly magazines of news and comment). Policymakers, think tanks, and pressure groups are encouraged to commission pragmatically oriented research, strengthening the hands of experts whose claims to be able to conduct and interpret it are widely accepted. But it also supports the emergence of "the instrumental rationalization of persuasion," based on the techniques, values, and personnel of (a) advertising, (b) market research, and (c) public relations [9].

"**Mediatization**" [1] the media moving toward the centre of the social process. This promotes the concept and practices of a "media-constructed public sphere," inspiring the communication function and the role of communication experts in a wide range of institutions.

The highlighting of aforementioned notions, which refer to the trends and the tendencies of the social environment in which political communication is performed, it might be relevant to the scope of the study. Accordingly, those notions are influencing and shaping the environment in which electoral campaigns are produced and taking place, and in the same manner, they might influence way in which those campaigns are consumed by the voter.

2.2 Uses and Gratifications

Another basic notion that we consider as relevant to the scope of the study, is what mass communication researchers today refer to as the uses and gratifications (U&G) approach is generally documented to be a subtradition of media effects research [10], and is directly linked to the notions of production and consumption of political communication that concern the proposed study. Until the 1970s, U&G research concentrated on gratifications sought, excluding outcomes, or gratifications obtained [11]. During the 1970s, U&G researchers intently examined audience motivations and developed additional typologies of the uses people made of the media to gratify social and psychological needs. Another vital suggestion that is foundational to the uses-and-gratifications approach is that audiences can gratify their needs in a variety of ways using both media and nonmedia sources such as family and friends. These alternative sources are in competition with each other as potential sources of audience need gratifications [10].

2.3 Agenda Setting, Priming and Framing

Accordingly, as the major scope of the study partly deals with the consumption of political communication and the consumption of political campaigns, it has been considered as essential to make a reference to the political/cognitive effects of a pre-electoral campaign and in particular the notions of agenda setting, priming and framing. Electoral campaigns are the competitive efforts by candidates and political parties to win voter support in the period preceding an election. Candidates use a variety of techniques to reach the voters, from public appearances and rallies to the use of mass media advertising. Campaigning for public office is usually done for a longer period than the 'official' campaign period specified in the electoral calendar, when candidates may receive special treatment, usually in the form of access to public media or public funds for campaign purposes [12–15].

3   Methodology and Data Analysis

In order to respond to the basic research questions of the proposed research issue and to facilitate the accomplishment of its central research aim, it has been considered as essential to deploy some quantitative research in favor of the gathering of some related data. More specifically, the selected research methodology, involved the deployment of a basic statistical analysis, which assisted in the measurement of the voting behavior and the attitudes of the research population, as well as the illustration of their electoral perceptions and their anticipation and reactions against

electoral communication campaigns, as they reported by the survey that took place in August 2018, for the purpose of the specific paper.

3.1 Research Population and Sample

The population of the proposed research was composed by the total of Cypriot young adults, who are eligible to vote for national, European and Local Elections. Moreover, the questionnaire has been given randomly to—young adults (Males and Females) from all over Cyprus, within the wider age group of 18–35 and approximately was composed 70% from the urban areas and 30% from Countryside of the Republic of Cyprus). The final sample of 160 interviewees has been selected on a stratified random basis by considering the geographical spread of the population (Approximately 30% from Nicosia, 25% from Limassol, 20% from Larnaca, 18% from Pafos and 10% from Famagusta area, as well as the wider demographic illustration of the research population and the three age groups. A stratified random sampling engages dividing the total population into uniformed groups which are called strata (singular is stratum). A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to form a random sample. When a sampling pattern is appropriately represented by all subpopulations in the sample, then it is possible to achieve a smaller dispersion for population parameter estimates than we have from a simple random sample of the same size that does not take into account the probability of discrimination of the population in subpopulations. Moreover, in order to obtain a clearer representation, the chosen sample was stratified almost equally into three more specific age groups: −20, 20–30, and 30–35, in order to thoroughly examine the political and voting perceptions and the tenancies of young adults in different stages of their young adulthood.

Questionnaire Structure The design of the method has been accomplished by the deployment of a structured questionnaire comprised by nine basic questions relevant to the political involvement, the voting attitude and the perceptions against political campaign, as well as the gathering of the basic demographic data, which assisted the accomplishment of an effective and representative sampling. The eight out of the nine questions have been structured and rated with the use of Likert [16]—Style rating.

3.2 Data Analysis

At the first question the interviees have been invited to declare the extend to wich they considered as essential their involvment in pupblic affairs. The answers where varying al over the five point scale, with the vast majority to state that they consider as essential a moderate to hich level of invovment in puplic affairs. In a similar way,
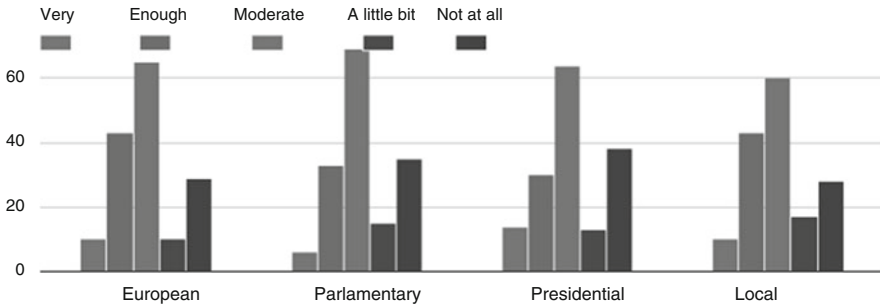
Fig. 1 How trustworthy/representative of the political positions of parties or candidates (generally acknowledged) are their electoral communication campaigns?

when the participants have been requested to state the extent to which they consider their participation in the right to vote, the vast majority (approximately 90%) was spread from the middle to the "right end" of the rating scale, while only the 10%, considered their participation as either completely unimportant, or a little bit important. However, when the interviewees requested to declare the extent to which they considered their participation in the right to stand for election, their response was speared all over the rating scale. Moreover, when the respondents have been asked to state whether they have voted in political elections at local, regional, national or European level, the vast majority stated "Yes" for all the levels of elections, with the Presidential elections, to have the greatest number of positive answers and the European elections the smallest, however 75 interviewees (almost have of them) still answered "Yes". Furthermore, when the participants have been invited to declare how trustworthy/representative of the political positions of parties or candidates did they considered communication/campaign campaigns (see Fig. 1), their answers were speared all over the scale, however the majority of the interviewees stated a moderate level of trustworthiness for every single level of electoral communication campaigns.

When the interviewees have been asked to state the extent to which they think that their participation or non-participation (as a voter) has been affected, from the communication/election campaigns, again the answers were spread all over the scale), in a similar way for every single level of elections (European, Parliamentary, Presidential and Local), while the vast majority of the respondents has replied either "Moderate" or "Not at all". In a similar manner, when the respondents have been requested to state what kind of impact did they believe that the electoral campaigns of the parties or candidates, had upon their electoral perceptions/aspirations (generally acknowledged), the vast majority answered "Neither positive nor negative". Additionally, when the interviewees asked to state the extent to which this impact (impact from election campaigns) has affected their final voting decision/choice, their answers where spread all over the scale, while the vast majority was speared between "Moderate" and "Not at all". On the other hand though, when the respondents have been requested to declare the first criterion upon which will they give
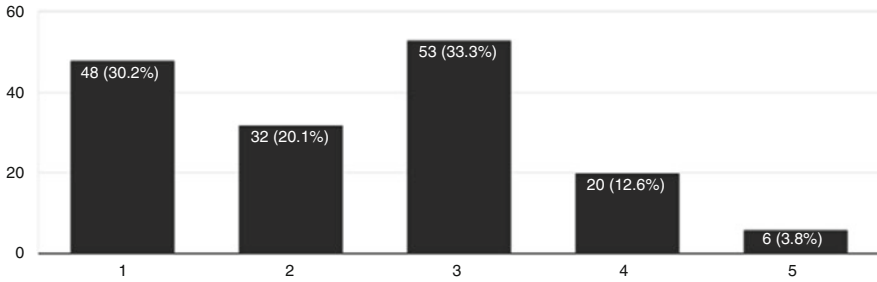
Fig. 2 To what extent have the election campaigns of the parties or candidates influenced/shaped your voting criterion?

their vote, their answers where varying according to the level and the nature of the elections. Finally, at the last basic question of the servey, where the interwees have been asked to claim the extent to which the election campaigns had influenced/ shaped their voting criterion, the vast majority placed their answer from the left end, to the middle of the scale. More specifically, 30.2%, answered "Not at all" (1), 20.1%, "A little bit" (2) and 33.3%, "Moderately" (3), while only the 12.6 and the 3.8% respectively, replied "Enough" (4) and "Very" (5) (see Fig. 2).

4   Discussion Upon Data Analysis

It might be essential to proceed to a further discussion upon the specific findings, in order to further support the accomplishment of the research aim. In this manner the following sub-sections attempt to formulate a discussion of highlighting the basic research outcomes, as well as by stressing some related limitations and recommendations. As it has already been mentioned, the primary research purpose of the project was dealing with the production and consumption of political communication in relation to the voting behaviour of young Cypriot adults. Moreover, the way in which the communication mix of a political party or a candidate, is consumed by the voters, illustrates the criteria upon which they are voting, this fact comprise the other vital parameter measured by the given survey. The specific research illustrates that the voting criteria of Cypriot young adults is varying according to the level and the kind of elections. More specifically the proposed research makes an attempt of clarifying the pure relation between the positions produced by the parties and the ideological/political desires perceived and consumed by the voters both in local, state and European level. An Important finding that is illustrated by this specific point, is the fact that in general lines the criterion of the average young voter, as it is reflected by the current research, appears to be healthier from the national average, since it does not reflecting the "Customer oriented" relationship that dominates between the Cypriot Voter [16, 17] and the Political Parties. Therefore, the specific statement might indicate that the younger generation of Cypriots moves away from

the present "pathogenicity" of the Cypriot society [2, 18]. The level of involvement of young adults in public and more specifically in voting affairs, formulates the first fundamental factor that is measured by the given survey. More specifically, the first three questions of the survey indented to examine the level in which young are involved in public affairs, as well to overview the importance of voting among the research population, as well as to examine their participation in voting/electoral activity. Moreover, the first question indicates that by their vast majority the young Cypriots consider as essential a moderate to high level of involvement in public affairs. This is ensured and by the fact, their vast majority (approximately 90%) was spread from the middle to the "right end" of the rating scale, which is translated that they consider voting as relatively important. In addition, the aforementioned facts are confirmed by the actual illustration of the importance of voting activity, as it is illustrated by the second question, where the vast majority of the respondents appeared to consider the participation in voting as very important. However, this finding is not highly reflected by the actual participation in various levels of elections, as this is illustrated by the third question. The difference of those to findings (the appreciation of the importance of voting activity and the actual reflection of voting), indicates that the young adults understand the importance of voting, however, their absence of participation to a certain extent is, either a result of disproving the political system, or a result of the general appreciation that their vote will not manage to change the present situation [12]. The impact that the communication campaigns of the parties or the candidates may have upon young adults voting behaviour sets the second basic factor that is measured by the given survey. More specifically, questions four to seven of the given questionnaires are dealing with the measurement of the impact and trustworthy/representativeness of the communication campaign, upon young adult voters' perceptions. However, as it is clearly reflected by the proposed survey, the vast majority placed their answer from the left end, to the middle of the scale, a fact that indicates that the average appreciation of the Cypriots young adult is that they are not influenced by the communicational campaigns of the parties or the candidates. However, this may reflect the fact that the so called "Impact" is not understood and perceived correctly and coherently.

5   Suggestions and Recommendations

The fact that the "Impact" is not perceived coherently reflects a limitation of the research. Therefore, the actual "Impact" of the communication campaigns might differ from the "Impact" as this is appreciated by the participants, a fact that it suggests that future research, may consider the use of another tool (e.g. Focus Group), which it is likely to give a more accurate and objective measurement of the "Impact" of the pre-election campaigns". The aspect of political clarity and consistency thought a pre-election period; it could formulate a helpful tool in anticipating further research, therefore it is suggested that future research may find

the way to measure the level of the political clarity of campaigns. Finally, the contrast between some major findings of the survey, may suggest that a future research may consider using research tools that will manage to examine the afore-mentioned aspect more consistently.

References

1. Blumler JG, Kavanagh D (1999) The third age of political communication: influences and features. Polit Commun 16:209–230
2. Andreadis I, Chadjipadelis T (2006) Differences in voting behaviour. In: Proceedings of the 20th IPSA world congress, Fukuoka, Japan, 9–13 July 2006, pp 1–13
3. Luhmann N (1999) The paradox of form. In: Baecker D (ed) Problems of form. Stanford University Press, Stanford, CA
4. Swanson D, Mancini P (1996) Patterns of modern electoral campaigning and their conse-quences. In: Swanson D, Mancini P (eds) Politics, media, and modern democracy. Praeger, London, pp 247–276
5. Butler D, Ranney A (2005) Electioneering: a comparative study of continuity and change (Introduction and conclusion). Clarendon Press, Oxford
6. Beck U (1994) The reinvention of politics: towards a theory of reflexive modernization. In: Beck U, Giddens A, Lash S (eds) Reflexive modernization. Polity Press, Cambridge, pp 1–55
7. Cloonan M, Street J (1997) Politics and popular music: from policing to packaging. Parliam Aff 50(2):223–234
8. Mayhew DR (2002) Electoral realignments: a critique of an American genre. Yale University Press, New Haven, CT
9. McQuail D (1994) Mass communication theory an introduction. Sage, London
10. Rayburn JD (1996) Uses and gratifications. In: Salwen MB, Stacks DW (eds) An integrated approach to communication theory and research. Lawrence Erlbaum Associates, Mahwah, NJ, pp 97–119
11. Kervin JB (1992) Methods for business research. HarperCollins, New York
12. Lazarsfeld PF, Berelson B, Gaudet H (1948) The people's choice: how the voter makes up his mind in a presidential campaign. Columbia University Press, New York
13. Berelson BR, Lazarsfeld P, McPhee WN (1954) Voting: a study of opinion formation in a presidential campaign. University of Chicago Press, Chicago, IL
14. Benoit WL, Hansen GJ, Verser RM (2003) A meta-analysis of the effects of viewing U.S. presidential debates. Commun Monogr 70:335–350
15. Kavoura A (2018) Socio economic processes, user generated content and media pluralism. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, PA, pp 7270–7280
16. Luhmann N (1997) Die Gesellschaft der Gesellschaft. Surhkamp, Frankfurt am Main
17. Blumler JG (1998) Public spheres in contention: reflections from Britain, 1997. Westdeutscher, Wiesbaden
18. Swanson D, Mancini P (1996) Politics, media, and modern democracy: introduction. In: Swanson D, Mancini P (eds) Politics, media, and modern democracy. Praeger, London, pp 1–26

An Examination of Consumers' Attitudes Towards Genetically Modified-Food: The Greek Case

Lambros Tsourgiannis, Theodoros Markopoulos, and Vasilis Zoumpoulidis

Abstract This study aims to explore consumers' buying attitudes towards Genetically Modified food products (GM Food) in Greece taking into consideration that Generations X and Y have an active role in purchasing decisions and are also included in the survey sample. Field interviews conducted in a randomly selected sample consisted of 540 consumers in autumn of 2017. Principal components analysis (PCA) was conducted in order to identify the factors that would affect people in purchasing GM Food. These factors are: (a) products' quality and characteristics (b) curiosity, (c) packing and (d) low price. Furthermore, cluster and discriminant analysis identified four groups of consumers: (a) those are marketing orientated, (b) those who are interested in product's quality and characteristics, (c) opportunists and (d) those who are interested in packing issues. Non parametric statistical bivariate techniques including chi-square analysis were performed to profile the identified groups of consumers regarding their demographic characteristics including age, education, marital status etc. This study indicates that even there is a potential market for GM food in Greece, Greek consumers are still skeptical towards these products. The relative stakeholders including agricultural producers, food retailers and wholesalers, local government etc. need to know the attitudes of consumers towards those products for their decision making process.

Keywords GM food · Consumer attitudes · Consumer purchasing behaviour

L. Tsourgiannis (✉)
Directorate of Public Health and Social Care of Regional District of Xanthi, Region of Eastern Macedonia and Thrace, Xanthi, Greece

T. Markopoulos
Regional District of Kavala, Region of Eastern Macedonia and Thrace, Kavala, Greece

V. Zoumpoulidis
Eastern Macedonia and Thrace Institute of Technology, Kavala, Greece

1   Introduction

In Europe, there is a rather widespread contention that consumers are opposed to genetically modified (GM) food and this has been used to support the prevailing restrictive policy. However, the 2010 Eurobarometer survey [1] suggested that Europeans have now become more optimistic about biotechnology in general, due to increased concerns about energy and sustainability [2]. Consumer behaviour and the views and choices of other actors in the food value chain provide signals to the decision-making process [3]. However, little is known about how consumer choices regarding application of biotechnology in agriculture and food production are affected by stances taken by the main food value chain actors, including regulators, farmers, food processors and retailers.

Previous studies identified that most among consumers are concerning about the possible effects of GM food: health hazards from consuming GM food, including long-term effects, negative ecological impacts, effects on future generations, and limited purchasing options that may result from uncontrolled dominance of GM food [4]. On the other hand, consumers also consider the possible advantages of GM food, including helping to keep down the overall cost of food, reduced waste, and longer shelf life [3]. Moreover, consumer resistance to GM food may stem from uncertainty and/or unwarranted concern associated with GM technology and its use in the production of GM [5]. In Japan, people have negative feelings or attitudes toward GM food whilst in U.S. only 37% of consumers believe that GM food is safe to eat; in contrast, 88% of scientist members of the American Association for the Advancement of Science believe GM food is safe to eat [5, 6]. The gap between public and scientific assessment of GM food safety was the largest among all issues studied, including vaccines, climate change, and fracking [7]. There are several psychologic and behavioral-economic factors that may cause the public to form beliefs inconsistent with those of scientists [6].

Furthermore, American consumers (a variety of ages was surveyed) are more accepting of genetically modified foods than European consumers, which sets the framework for overall perception of GMOs by Millennials (Generation Y) in the U.S. versus Europe [8]. Millennials in general are technology-savvy and like incorporating technology in their daily lives [9]. An inference from this characteristic of Millennials would be that they would approve of the use of genetically engineered organisms and genetically modified food. Millennials are also seeking healthy alternatives to so-called fast food. They are turning to fruit and vegetables, and prefer to buy these at farmers markets versus conventional grocery stores [10]. Millennials do so because the prices at farmers market may be more affordable and there is a greater variety and better quality of produce. On the other hand, there is evidence that in many places, consumers may be willing to pay more for organic foods, particularly if they are regarded as safer than GM foods. On the other hand, consumers seem largely unwilling to pay more for GM foods, even if there is better flavor and nutritional value [11]. Looking deeper into the traits and preferences of Generation Y, and based on the available research, females are more likely to pay

attention to labels on food products and to be aware of organic, green or healthy attributes associated with the particular food [12].

This study aims to explore consumers' buying attitudes towards Genetically Modified food products (GM Food) in Greece taking into consideration that Generations X and Y have an active role in purchasing decisions and are also included in the survey sample.

2　Methodology

This study aims to investigate the relationships between factors affecting consumers' behaviour in Greece towards Genetically Modified Food.

The null research hypotheses this study aimed to reject were:

- H_o1: Consumers cannot be classified into similar groups according to their potential purchasing behaviour towards Genetically Modified Food.
- H_o2: Consumers' Demographic Characteristics are not associated with a particular purchasing behaviour towards Genetically Modified Food.
- H_o3: Consumers' attitudes towards Genetically Modified Food are not associated with a particular purchasing behaviour towards those products.

A survey with face-to-face interviews was conducted throughout Greece to gather the necessary information. Cluster sampling method was used to form the sample. In particular, the general population was stratified into two levels: regions and prefectures. Based on the methodology presented by Oppenheim [13], in order to have representative sample for the geographical area of Greece, 9 regions were randomly selected from a total of 13. In the second stage, one prefecture was randomly selected from each studied region. The sampling took place at the capital of each prefecture at highly utilized areas such as shopping malls and supermarkets. Based on a random systematic sampling, every sixth person that was visiting the sites was questioned [14]. The total number of consumers that were questioned at each sampled prefecture was 60 consumers. An effort was made to reach consumers at the same time and place where actual purchase decisions are made hoping to better elicit their true preferences about products. Data were collected in locations frequented by consumers such as supermarkets, groceries, green groceries, open markets. Interviews took place throughout the day to reduce time of shopping related bias [15]. Hence, one quarter (25%) of the interviews were conducted between 9:00 and 15:00 during the week (Monday–Friday), one quarter between 15:00 and 21:00 during the week and 50% during Saturday (9:00–19:00). This survey methodology developed according to the results of the pilot survey into which the respondents indicated the day and time they make their shopping.

In this survey, a systematic stratified sampling method was chosen to form the sample due to the fact that the authors wished to generalize their findings beyond the sample of consumers covered by the survey. As Errington [16] argued, the only way in which this can be achieved is to ensure that the units for survey are selected at

random from the larger population about which generalization are to be made. A total productive sample of 540 consumers came up from the survey methodology. Prior to the main sampling, a pilot survey took place in September 2017 to evaluate if the research objectives were met by the designed questioner. The preliminary survey was performed for a total of 30 consumers in the Regional District of Xanthi. Based on the analyzed results, the survey sample was considered adequate to conduct the final survey with no further modification. The main survey took place in October and November of 2017. The size of the sample is considered reasonable regarding the total population of the area as this size of samples were mostly used by other researchers in Greece regarding consumer behaviour towards food purchases [17]. The representativeness of the sample immunized by checking the proportion of the consumers of the sample who declared that they would buy GM food with those of the pilot survey following the methodology proposed by Siardos [18]. In particular, the proportion of consumers (p) in the pilot survey who indicated that they would buy GM food at least once is 45%. Therefore, in order to achieve a representative sample the sample size should be 380 consumers (in order have $z = 1.96$ and $d = 5\%$). As the researchers decided to a sample size of 540 consumers (about one and half times more than what was needed) in order to have similar size samples with other surveys presented above, and the proportion of consumers who would purchase at least one time GM food in this sample is about 45%, the sample is considered representative.

Multivariate analysis techniques were applied in three stages to the responses for the total of 540 consumers to reveal the key information these contained. Principal Component Analysis (PCA) was used to identify the variables that accounted for the maximum amount of variance within the data in terms of the smallest number of uncorrelated variables (components). The anti-image correlation matrix, as well as, the Bartlett's test of sphericity and the Measure of Sampling Adequacy (MSA) were used in order to check the fitness of the data for subsequent factor analysis. The variables with a high proportion of large absolute values of anti-image correlations and MSA less than 0.5 were removed before analysis. An orthogonal rotation (varimax method) was conducted and the standard criteria of eigenvalue $= 1$, scree test and percentage of variance were used in order to determine the factors in the first rotation [19]. Different trial rotations followed, where factor interpretability was used to compare the reduced through PCA variables related to consumers' purchase behaviour towards GM food to a smaller set of underlying factors. These PCA scores were then subjected to cluster analysis to group consumers with similar patterns of scores into similar clusters of buying behaviour. Both hierarchical and non-hierarchical methods were used [19] in order to develop a typology of the consumers' buying behaviour. Quadratic Discriminant Analysis (QDA) was performed to assess how accurately the key identified factors could predict and discriminate cluster membership through factor analysis. Furthermore, the chi-square analysis was performed to develop the profile of each consumer's group regarding their demographic characteristics as well as to explore the association between consumers' attitudes towards Genetically Modified Food their purchasing behaviour towards those products.

3 Results-Discussion

3.1 Factors and Attitudes Affecting Consumers' Buying Behaviour Towards GM Food

Principal components and factor analyses (through a varimax rotation) were conducted to identify the key consumption preference variables, and the latent root criterion (eigenvalue = 1), and the percentage of variance were used to determine the number of factors. Several different trial rotations were conducted to compare factor interpretability as suggested by Hair et al. [19]. PCA identified four components (eigenvalue of fourth component = 1.051 and cumulative variance in fourth component = 70.711, KMO MSA = 0.715 Bartlett test of Sphericity = 1439.600, P < 0.001). PCA identified four key factors that affect consumers' preferences towards GM food as followed: (1) Products' quality and characteristics including quality (factor loading = 0.830), health safety issues (factor loading = 0.748) and product characteristics (factor loading = 0.679), (2) Curiosity including curiosity (factor loading = 0.804), cultivation techniques (factor loading = 0.735) and advertisement (factor loading = 0.636), (3) Packing including brand name (factor loading = 0.782) and packing issues (factor loading = 0.758), (4) Low price including low price (factor loading = 0.743) and labelled as GM food (factor loading = 0.709).

In the next stage, hierarchical and non-hierarchical clustering methods were used to develop a typology of the buying behaviour of the Greek consumers towards GM food [19]. Cluster analysis was conducted on the 540 observations, as there were no outliers. It identified four groups of consumers that were named according to their buying behaviour patterns towards GM food (Table 1). These are: (a) those are marketing orientated, (b) those are interested in product's quality and characteristics, (c) opportunists and (d) those who are interested in packing issues.

In particular, the **marketing orientated consumers** comprise the 17% of the sample. They are influenced in their buying decisions by the quality of the product,

Table 1 Characteristics of the four consumers' groups

Key consumption dimensions	Marketing orientated consumers	Consumers interested in product's quality and characteristics	Opportunists	Consumers interested in packing issues	P
Products' quality and characteristics	0.55831	0.28416	−2.27505	−0.22766	0.001
Curiosity	1.13478	−0.33933	−0.35402	0.13542	0.001
Packing	−0.64938	−0.19513	−0.81466	1.43440	0.001
Low price	−0.81552	0.40320	−0.06757	0.38797	0.001
Number of consumers (n = 540)					

health safety issues and the products characteristics including cleanness, freshness and taste. They also affected by their curiosity in trying those products, the cultivation techniques that might have a positive impact on the environment (i.e. less use of pesticides) and advertisement issues. They do not pay attention to packing issues and the low price of the products. On the other hand, **the consumers who are interested in products' quality and characteristics** consist of the 54% of the sample and are influenced in purchasing GM food by the possible low price of the product while they pay attention to the fact that the product will be labelled as GM food as well as to quality of the product, health safety issues and the products characteristics including quality of the product, health safety issues and the products characteristics. They are not affected by curiosity and packing aspects. Besides, **the opportunists** are the 9% of the sample and are not influenced by any of the aforementioned factors indicated in Table 1. Finally, the consumers who are interested in packing issues comprise the 20% of the sample. They pay attention to the low price of the product, its label as GM food, the brand name of the products and its packing issues. Furthermore, they are influenced in their decision in buying those products by their curiosity, cultivation techniques and products' advertisement. They are not affected by the quality of the product, health safety issues and the products characteristics.

Moreover discriminant analysis was conducted to evaluate the prediction of group membership by the predictors derived from the factor analysis. The summary of the cross validation classification derived by the quadratic discriminant analysis indicated proportion of correct classification 96.6% for the marketing orientated consumers, 97.6% for the consumers who are interested in products quality and characteristics, 95.8% for the opportunists and 97.2 for the consumers who are interested in packing issues. To proportion of correct classification in all above groups of consumers are 97.2%. Thus, the four consumption dimensions could accurately predict and discriminate consumers' group membership.

Therefore, the hypothesis H_o1: Consumers cannot be classified into similar groups according to their potential purchasing behaviour towards Genetically Modified Food may be rejected.

3.2 Profiling Each Consumer Group According to Consumers' Demographic Characteristics

A chi-square analysis was also performed for each consumer group in order to develop the profile of the consumers who have a particular buying behaviour towards GM food regarding their demographic characteristics. According to the chi-square analysis most of the marketing orientated consumers and those who are interested in product's quality and characteristics belong to generation Y ($\chi^2 = 65,623$, $P < 0.001$), male ($\chi^2 = 11.078$, $P < 0.05$), married ($\chi^2 = 15.599$, $P < 0.001$) and finished the high school ($\chi^2 = 102.815$, $P < 0.001$). On the other hand, most of the

opportunists are more than 55 years old, male, half single and half married and well educated. Finally, most of the consumers that are interested in packing issues belong to generation X, are male, married and hold a bachelor degree. Therefore the hypothesis H_o2: Consumers' Demographic Characteristics are not associated with a particular purchasing behaviour towards Genetically Modified Food may be rejected.

3.3 Exploring the Association Between Consumers' Attitudes Towards GM Food and Their Purchasing Behaviour Towards Those Products

A chi-square analysis was also conducted for each consumer group in order to explore the association between consumers' attitudes towards GM food and their purchasing behaviour towards those products. The analysis indicates that the vast majority of the consumers from all the identified in this study groups do not intent to buy GM food ($\chi^2 = 8.322$, P < 0.001) and prefer to read the products' labels ($\chi^2 = 33.296$, P < 0.001). On the other hand, about 49% of the consumers who are interested in product's quality and characteristics, 50% of the opportunists, 46.7% of the marketing orientated consumers and one third of those who are interested in packing issues declare that would purchase GM food ($\chi^2 = 8.322$, P < 0.001) which means that there is a potential market of GM food in Greece. Hence, the hypothesis H_o3: Consumers' attitudes towards Genetically Modified Food are not associated with a particular purchasing behaviour towards those products may be rejected.

4 Conclusions

The results of this study contribute significantly to the understanding of the consumers' potential purchasing behavior towards GM food in Greece. In particular, the study indicates that even most of the Greek consumers shows high scepticism towards GM food there might be a substantial potential market in Greece for GM food. Marketing issues including quality of the product, products 'characteristics, curiosity, packing issues, advertisement and low price influence consumers in their potential purchasing decisions towards GM food. They also affected by health safety issues and the cultivation techniques that might have a positive impact on the environment (i.e. less use of pesticides). This study also classified consumers into four groups according to their buying behaviour patterns towards GM food. These are: (a) marketing orientated consumers, (b) the consumers who are interested in product's quality and characteristics, (c) opportunists and (d) those who are interested in packing issues.

In general, age, marital status, sex and educational level affect consumers' purchasing behavior towards GM food. In particular most of the consumers of

generation Y and X are either marketing orientated consumers or interested in product's quality and characteristics, or in packing issues. Furthermore, most of the consumers of all the identified groups are male and married. At this point has to be mentioned that one limitation of the study is the fact that the sample is comprised by 60 consumers that have been surveyed in the capital of nine prefectures whilst the population of each town is not the same.

Although GM food are not widely available in Greek market, scientifically based information on the anticipated purchasing behavior of consumers is extremely important both for developers and policy makers. For the developers such information is important, because the expectation of viable markets will motivate investments. For the policy makers, this type of information will help them to respond more adequately through regulation tools and programs. In this respect, the empirical results of this pioneer study should trigger further investigation, both in Greece and other parts of Europe. On the other hand, because consumers' perceptions towards GM food might be culturally specific, the results are mainly applicable in the Greek market and cannot be fully generalized in other countries, but they offer significantly contribution to the literature on GM foods. Whilst most of the past researches mainly focused on the perceived risks and benefits of GM food, this study explores the factors that affect consumers purchasing behavior towards those products.

References

1. Eurobarometer (2010) Biotechnology report. http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_341_en.pdf
2. Gaskell G, Stares S (2013) Have GM crops and food a future in Europe? In: Bennett DJ, Jennings RC (eds) Successful agricultural innovation in emerging economies: new genetic technologies for global food production. Cambridge University Press, Cambridge, pp 331–347
3. Fischhoff B (2008) Assessing adolescent decision-making competence. Dev Rev 28:12–28
4. Hoban TJ (1997) Consumer acceptance of biotechnology: an international perspective. Nat Biotechnol 15(3):32–234. https://doi.org/10.1038/nbt0397-232
5. Komoto K, Okamoto S, Hamada M, Obana N, Samori M, Imamura T (2016) Japanese consumer perceptions of genetically modified food: findings from an international comparative study. Interact J Med Res 5(3):e23. https://doi.org/10.2196/ijmr.5850
6. McFadden BR, Lusk JL (2015) Cognitive biases in the assimilation of scientific information on global warming and genetically modified food. Food Policy 54:35–43
7. Funk C, Rainie L, Page D (2015) Public and scientists' view son science and society. Pew Res Cent. http://www.pewinternet.org/2015/01/29/public-and-scientists-views-on-science-and-society
8. Le Marrea KN, Witteb CL, Burkinke TJ, Grünhagend M, Wellse GJ (2007) A second generation of genetically modified food: American versus French perspectives. J Food Prod Mark 13:81–100
9. Jonas-Dwyer D, Pospisil R (2004) The millennial effect: implications for academic development. In: Proceedings of the 2004 annual international conference of the Higher Education Research and Development Society of Australasia (HERDSA), pp 356–366

10. Detre JD, Mark TB, Clark BM (2010) Understanding why college-educated Millennials shop at farmers markets: an analysis of students at Louisiana State University. J Food Distrib Res 41(3):11
11. Loureiro ML, Bugbee M (2005) Enhanced GM foods: are consumers ready to pay for the potential benefits of biotechnology? J Consum Aff 39:52–70
12. Furlow N, Knott C (2009) Who's reading the label? Millennials' use of environmental product labels. J Appl Bus Econ 10:85
13. Oppenheim AN (2000) Questionnaire design, interviewing and attitude measurement. Continuum, New York
14. McCluskey J, Grimsrud K, Ouchi H, Wahl T (2003) Consumer response to genetically modified food products in Japan. Agric Resour Econ Rev 32:222–231
15. Krystallis A, Chryssohoidis G (2005) Consumers' willingness to pay (WTP) for organic food: factors that affect it and variation per organic product type. Br Food J 107:320–343
16. Errington A (1985) Delegation on farms: an examination of organisation structure and managerial control on farms in the vale of the white horse. PhD thesis, University of Reading
17. Tsakiridou E, Boutsouki C, Zotos Y, Mattas K (2008) Attitudes and behaviour towards organic products: an exploratory study. Int J Retail Distrib Manag 36:158–175
18. Siardos G (1997) Methodology of agricultural sociological research. Ziti Publications, Thessaloniki
19. Hair JF, Anderson RE, Tatham RL, Black WC (1998) Multivariate data analysis. Prentice Hall, Upper Saddle River, NJ

App Store Optimization Factors
for Effective Mobile App Ranking

**Makrina Karagkiozidou, Christos Ziakis, Maro Vlachopoulou,
and Theodosios Kyrkoudis**

Abstract In recent years, mobile technology has made a great progress, resulting in a transition from conventional to smart mobile devices, the capabilities of which are equal to or surpassing those of computers. With the proliferation of smart mobile devices and the development of technology, applications for these devices have also become widely known. There are millions of free or paid mobile applications available to download and the publishers compete each other for the greatest prevalence in the app stores, since improved rankings in app markets affect highly the sustainability of the mobile apps. This leads to the need for App Store Optimization (ASO) in order to improve or maintain their ranking position. Beyond that, ASO also refers to the processes that convert app views into downloads to users' mobile devices, procedures defined by the term "Conversion Rate Optimization" (CRO). This paper aims to perform a literature review of criteria that affect the app's optimization in the stores and to highlight the main factors that contribute to the ranking of an application in the app markets' search results. In order to achieve this goal, a collection and analysis of academic papers were conducted. Our research identified that ASO can be achieved through the keyword optimization process and through the improvement of the conversion rates. It has been shown that the main traits of an app that affect its ranking are the number of downloads, the reviews and the ratings. Simultaneously, the importance of mobile app advertising is highlighted as it helps to increase users' reach and app's popularity which activates better rankings in the app markets.

Keywords Mobile application ranking · App store optimization · App markets · Mobile app sustainability

M. Karagkiozidou (✉) · C. Ziakis · M. Vlachopoulou · T. Kyrkoudis
University of Macedonia, Thessaloniki, Greece
e-mail: it1414@uom.edu.gr

479

1 Introduction

The rapid increase of the internet has been followed by a tendency to use smaller devices that offer same capabilities as personal computers, resulting in the use of "smart" mobile phones to exceed the use of personal computers. The widespread use of such devices by both consumers and companies [1] has led to the development of new software applications compatible with them, and companies offering mobile app development and marketing services. Mobile applications that allow the communication with the consumer [2] were made available through online app stores such as Google Play, App Store and Windows Phone Apps Store, increasing the competition to appear in the top search results. Thus, mobile marketing evolved and the development of the App Store Optimization, or ASO, was essential for the promotion of a brand, a campaign or an application itself. App store optimization could be achieved by using techniques that aim to short an application into the results of the store for specific keywords or place it in the section with the top/suggested applications. Although this science is still in the embryonic stage, its use by both businesses and developers is expected to increase, due to the continuous evolution of the web content for mobile devices.

In this paper, a literature review is conducted, which includes the main factors for the classification of an application in the top search results of a store. Thus, companies and owners can succeed by adopting better strategies for developing and promoting their applications.

2 Methodology

To accomplish the study, scientific databases were searched to find articles on the subject of application store optimization. The keywords that were used in our research of articles are "ASO", "App Store Optimization", "application ranking", "app ranking" as well as the combination of the first word with criteria to explore more targeted results. Successful results from this process have emerged.

More specifically, we applied the PRISMA methodology [3] to scan all similar academic papers that have been published during 2010–2018, by using the aforementioned keywords in the search section of the digital libraries of (1) Science Direct, (2) Springer and (3) Google Scholar during February and March of 2018. We started with 614 citations including duplicates (472 unique) and by following the PRISMA ruleset we excluded 397 articles after title and abstract screening, thus retrieving 75 articles for a full-text screening from which we selected nine articles that we used for the discussion of our results (Fig. 1).

Due to the fact that ASO is quite recent, we did not want to ignore some criteria that emerge from the application of ASO in companies and are found on whitepapers or on authorized websites. Therefore, the literature review was enriched with additional material that resulted from searching the web for the same keywords.
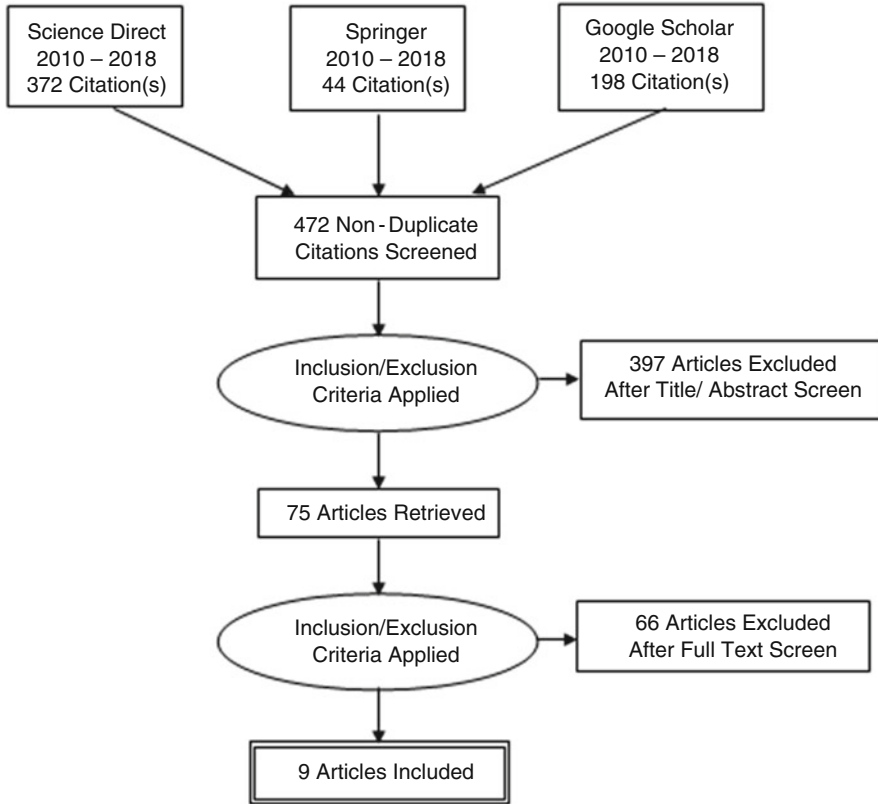
Fig. 1 Application of PRISMA methodology

Subsequently, the articles were carefully studied, the views of the authors were identified and the relevant information was recorded.

3 Literature Review

In order to correctly record the main factors that affect both the ranking of search results for a particular keyword in an app store and the top application section, a literature review was conducted.

Cocco et al. [4] studied, analyzed and modelled the best strategies that could be implemented for application store optimization. It's a system that includes developers and users as they interact in application stores leading to the maximization of the applications efficiency and profit. Shen et al. [5] attempted to investigate the appropriate strategy for mobile app upgrades based on the application's current condition and how or when they should be performed in order for them to be user-

friendly. In addition the developers must have a more concise view of the changes that need to be made before releasing a new version. These are features that affect both the number of downloads and the reviews. Lim and Bentley [6] using the AppEco Artificial Intelligence Model, explored the best organizational tactics for Top and New apps in the Apple Store. More specifically, they studied the influence of the different ranking algorithms and how the upgrading frequency affects the results. It turns out that the store's home page depends on these two factors. Similarly, the same authors Lim and Bentley [7] studied subjects such as what strategy a developer should follow to succeed in high rankings and if it is preferable to pioneer or imitate an already successful application. Tian et al. [8] studied 28 factors to understand the difference between high and low rated applications. Through their survey of 1492 total applications, they noticed that the highest ranked apps are significantly different from the low rated in 17 out of the 28 criteria, such as the size of the app and the number of promotional images of the app in the store. Kadam et al. [9] developed an application to detect spam reviews and help users have a better overview of each application of their interest. In addition, the application contains a security feature for personal data protection and private information. Ruiz et al. [10] wanted to check if app stores can record the changes in an app's reviews for each new version by recording daily the total reviews of more than 10,000 applications for a year. The results showed that even if the reviews are better and give a more positive feedback through new releases, the app store cannot differentiate them. Bobade et al. [11] dealt with app store fraud, as some applications are not working or don't respond to the user's needs. In their attempt to detect and overcome fraud they created a method that combined evidence from ratings, reviews and rankings. Vaishnav and Varaprasad [12] showed a brief example of incorrect ranking and described an interface that detects fraud in the results of application stores. This process is divided into three main segments; identifying fraud in rankings, identifying spam, and proposing suggestions for other applications. Ganguly [13] and Sefferman [14] in their articles, present the most basic criteria and factors that influence and synthesize a good ASO strategy, such as user ratings of each application. Each author focuses on different features, due to the fact that ASO techniques have been upgraded through the period between their studies.

4   Findings

We have identified the following criteria that highly impact the position of mobile applications in the search results of app stores:

4.1 C1: Installs Volume

A criterion that can be considered particularly important for ranking an application in an app store is how many times the app has been installed or downloaded by users. Search engines assume that if an app has multiple downloads means it is popular and so it has to be ranked higher. However, this is a criterion that cannot be controlled by the application owner. It is basically a feature that although it strongly represents the value of the application, is influenced only by the users.

4.2 C2: Ratings

Most users, before downloading an application, tend to read the opinions of other users. For this reason, there are features where users actually have the ability to rate the application based on their personal experience. If the overall rating of an application is good, search engines consider the app more valid and rank it higher in the results, so that users can find easier an application that has a good score and can fulfill their needs. This is also a factor determined by the users.

4.3 C3: User Reviews

Beyond ratings, another way for visitors to judge an app before downloading it on their mobile phone is to read the personal annotations and criticisms of the existing users. Each user has the ability to accompany his rating with a text in which he states his honest point of view. Thus, the visitor of a page in an application store can form an even more comprehensive view of the application. However, the user reviews are also difficult to be controlled by the application developers as it is a metric that derives from users.

4.4 C4: Screenshots & Videos

Displaying screenshots and videos may not directly affect the app's ranking but is an important part of the broader strategy with the ultimate goal of a visitor to eventually download the app. This will increase the total downloads of the app which is a characteristic that is most likely to contribute to its final ranking in the results. Specifically, App Store allows an application page to include up to 5 screenshots with the analogous screenshots for Google Play being up to 8. In both cases, however, only the first 2–3 screenshots are visible on the homepage. Therefore, the order in which the images are uploaded should be taken into consideration as the

ones visible must represent the basic idea and persuade the visitor to download the application.

4.5   C5: Description

An application description is also important for the ASO. Its goal is to convert visitors into users. For this reason, keywords targeted by the application should be included in the description field. In addition the description of the application and especially the first three rows is a very good way to convince the visitor to download the application. For even better results, the description should change for each app version including its newer features.

4.6   C6: App Localization

An indispensable element for attracting visitors to an application is to adapt the content to the specific features of the target countries. Because of the wide use of the English language, many can assume that making their application available only in English is adequate. However, the availability of an application in multiple languages leads to an increase in users who access foreign language versions of the store. Additionally, if the application targets a specific country, localization is considered critical for both visitors and users. App Store and Google Play offer the ability to localize apps in order to make it easier for the app to be found in the search results.

4.7   C7: Application Name & Title

One of the most important factors affecting the ASO is the title of the application. This feature includes the name of the app as well as targeted keywords that represent its content. Of great importance is the selection of keywords that correspond to plenty of queries. Usually, up to 255 characters can be used in this field. Only the first 23 characters in the App Store and 30 on Google Play are visible.

4.8   C8: Application Icon

The first impression of an application is the one that is triggered by its icon. The optical material, especially when accompanied by appropriate colors, raises the interest of a potential user. All app stores require a specific size, shape, and geometry

Table 1 Previous research on ASO factors

Author (year)	C1	C2	C3	C4	C5	C6	C7	C8
Cocco et al. (2014) [4]	✔							
Shen et al. (2017) [5]	✔	✔						
Lim and Bentley (2013) [6]	✔							
Tian et al. (2015) [8]		✔						
Kadam et al. (2016) [9]		✔	✔		✔			
Ruiz et al. (2017) [10]		✔						
Bobade et al. (2017) [11]		✔	✔					
Lim and Bentley (2012) [7]	✔							
Vaishnavi and Varaprasad (2016) [12]		✔	✔					
Ganguly (2013) [13]	✔	✔	✔					
Sefferman (2016) [14]		✔		✔	✔	✔	✔	✔

for the icon. Even when the application is installed on a smaller device, the icon must remain unallocated and distinct. Each application owner must know that the image must include details of the main functions in order to stimulate the interest of the visitors (Table 1).

5   Conclusion

The intense competition between businesses in the field of mobile applications, leads them to apply new methods of mobile marketing, like App Store Optimization techniques. The ranking of the mobile applications in the first result pages for specific keywords is immense, and therefore a multifaceted optimization strategy is required. A strategy that adopts a holistic approach to the ranking criteria, taking into account critical factors is needed. Our review revealed that an optimized application has many users and is highly rated by them. Actions that increase the visitor-to-user conversion rate are considered as significant elements for a successful ASO strategy. Although this field is still developing, some factors have been identified as crucial for the achievement of higher rankings such as the number of downloads, the application ratings and the user reviews. ASO strategy is expected to evolve significantly in the next years, meaning that further metrics and criteria will be taken into account.

This study is an attempt to capture the most important factors as they were recognized from the bibliography and can act as a trigger for future research that aims to prioritize them based on their significance.

References

1. Rajurkar N, Shirsagar P (2017) Impact of smartphones on society. Int J Res Sci Eng 3 (2):143–150
2. Bauer HH, Reichardt T, Barnes SJ, Neumann MM (2005) Driving consumer acceptance of mobile marketing: a theoretical framework and empirical study. J Electron Commer Res 6 (3):181
3. Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009) Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. Ann Intern Med 151:264–269. https://doi.org/10.7326/0003-4819-151-4-200908180-00135
4. Cocco L, Mannaro K, Concas G, Marchesi M (2014) Simulation of the best ranking algorithms for an app store. In: International conference on mobile web and information systems. Springer, Cham, pp 233–247
5. Shen S, Lu X, Hu Z, Liu X (2017) Towards release strategy optimization for apps in Google play. In: Proceedings of the 9th Asia-Pacific symposium on Internetware. ACM, p 1
6. Lim SL, Bentley PJ (2013) Investigating app store ranking algorithms using a simulation of mobile app ecosystems. In: Evolutionary computation (CEC), 2013 IEEE congress on. IEEE, pp 2672–2679
7. Lim SL, Bentley PJ (2012) How to be a successful app developer: lessons from the simulation of an app ecosystem. ACM SIGEVOlution 6(1):2–15
8. Tian Y, Nagappan M, Lo D, Hassan AE (2015) What are the characteristics of high-rated apps? A case study on free android applications. In: Software Maintenance and Evolution (ICSME), 2015 IEEE international conference on. IEEE, pp 301–310
9. Kadam MB, Sawant KB, Chavan AD, Khedekar VP, Ghadge S (2016) Detecting imposture in mobile application. In: Computing for sustainable global development (INDIACom), 2016 3rd international conference on. IEEE, pp 1952–1957
10. Ruiz IM, Nagappan M, Adams B, Berger T, Dienst S, Hassan A (2017) An examination of the current rating system used in mobile app stores. IEEE Softw 33:86–92. https://doi.org/10.1109/MS.2017.265094809
11. Bobade DA, Gangwani VS, Student ME (2017) Mobile app recommendation based on rating review & ranking. Int J Eng Sci 7(5):11913
12. Vaishnavi P, Varaprasad G (2018) Elimination of fraud by optimization to integrate evidences in mobile play store applications. Int J Comput Sci Eng Sci Technol 10(1)
13. Ganguly R (2013) App store optimization – a crucial piece of the mobile app marketing puzzle. https://blog.kissmetrics.com/app-store-optimization/
14. Sefferman A (2016) The app store optimization checklist: top 10 tips. https://moz.com/blog/app-store-optimization-checklist

Websites and Facebook Profile Communication of Dentists in Oradea, Romania

Felicia Constantin and Androniki Kavoura

Abstract The tools of the internet can become valuable assets in the permanent competition that exists in an area that generates a constant competitive market. The medical market, specifically that of dentistry, in a frontier city in full economic development, Oradea, Romania is subject to the rules of free market. Professional competence must be complemented by a communication effort that must reach a large number of people, in order to transform them into loyal patients. Physicians can benefit from the expertise of specialized companies in medical marketing for the creation of websites, but they can also use accessible instruments such as Facebook. A comparative study on a 3-year period, 2015–2018, which aims to examine the online presence and the use of communication tools for all the registered dentists in Oradea, Romania, reveals insignificant variation of resources used such as websites or Facebook. Policy and managerial implications are discussed.

Keywords Websites · Facebook · Professional profile · Personal profile · Communication · Entrepreneurship · Medical tourism

1 Introduction and Background Research

More and more specialized companies provide advice to improve the online visibility of a firm. They provide an action plan and a medium and long-term strategy to ensure the efficiency and profitability of a firm.

More specifically, practitioners activating in healthcare and medical area perform in a free market. Marketing issues need to apply in the whole process of promoting services where the well-known Ps cover the service of medical tourism as well and are searched in the current study via online communication that is initiated by

F. Constantin (✉)
University of Oradea, Oradea, Romania

A. Kavoura
University of West Attica, Egaleo, Greece

owners of dental offices. Information on price, available services, promotion issues and distribution are under examination since outbound tourism is the target market. As far as dental tourism is concerned, as part of medical tourism, it involves those individuals who seek dental care in another country while on vacation, yet issues need to be managed related to regulations, policies visa requirements to name a few [1].

Despite the asymmetries that exist among different health care systems across Europe and around the world, medical tourism is brought at the forefront where people travel abroad, as already mentioned, to find low cost quality medical services thus, creating a medical tourism industry [2, 3]. Dentists aim to attract people from foreign countries who come as health visitors [4]. To do so, communication tools need to be used to make their services known to the public.

An exhaustive literature research made via a co-word analysis on medical tourism on a longitudinal study from 1931 till 2016 by de la Hoz-Correa et al. [5], revealed that themes under study were associated with ethics, health, wellness, tourism and medical treatment, sensitive practices in medical tourism, destination marketing based on medical tourism and globalization. Research has mainly focused on medical tourism from patients' perspective in relation to destination marketing. More limited research has been made on dental tourism—which is under the umbrella of medical tourism—more specifically the research on practitioners' perspectives [6] and even fewer studies on whether and which online communication tools dental practitioners employ [3].

A company like MarketDent [7] starts from the idea that potential patients seeking a dental office on the internet rarely exceed the first page of search engines. This is where marketing professionals take over, as they know the optimization methods for online and offline searches (keywords, links, specific Google tools) that can help a website be on the top-ranking positions on the page research. Other means are also proposed to enhance the visibility of a firm: blogs, informative medical articles and especially the social media. The advice of specialized firms is clear "Communicate to patients that you publish the activities of the dental clinic on social networks such as Facebook, Twitter and LinkedIn. In addition, if you constantly update your profile, there is a good chance that you will not lose any new customers". With all these elements, the specialized agency provides clients with professional help.

So far, the role of social media has been discussed in several studies [8]: the impact of social media influencers in tourism [9], the social media in tourism and hospitality [10] or the impact of social media on the consumer decision process and the implications for tourism marketing [11]. According to Surej et al. [12] "social media is perceived to be an effective communication channel for both tourists and tourism providers, and empirical analysis of how social media is used for medical tourism marketing are rare".

The present study provides a practical contribution regarding the dental practitioners who operate in the city of Oradea by examining their communication activities on the web, for a 3-year period. To the authors' best knowledge, an

analysis on dentists' websites and Facebook profiles in Oradea, as communication tools of their profession, has not taken place before.

2   Study Settings and Methodological Considerations

The authors aim to analyse trends in Romanian dentistry, with a view to opening up internationally. We chose the particular case of the main city of Bihor county, a cosmopolitan and multi-ethnic city in full economic expansion, located on the border with Western Europe [13] which we considered relevant for the identification of viable trends.

Nowadays Oradea has a great medical tourism potential, which is acknowledged also by the local management authorities. The Bihor County Council together with other partners [14] understood that the expansion of tourism offers must include a new sector not yet advertised by Romania—the medical tourism—a niche sector that can be developed only through an integrated approach and implementation. The specialists found that there are some issues related to the recognition of medical certificates, the reimbursement of costs by European insurance companies and the foreign language skills of physicians (or identifying certified translators specialized in medical field).

Dentistry is one of the areas of interest because of the obvious demand for such services, the state-of-the-art equipment used and the remarkable professional quality of specialists. Among the target groups mentioned there are Romanian citizens working abroad who often spend their holidays at home, and different groups of potential Bihor tourism customers favoured by international flights on the local airport.

The authors of this paper have identified that there already exist some initiatives of individual dentists to boost their businesses by medical tourism, using the facilities of various web technologies. Constantin and Kavoura [3] examined in 2015 the online presences of dentists in Oradea employing content analysis for a period of 5 months and concluded the there is a need to reach more generalizable results because of the limited number of websites analysed. This research tries to overcome this deficiency, by conducting a comprehensive analysis of internet communication in the field of dentistry in urban areas, taking the case of the same Romanian city. The collection and analysis of data took place between April and July 2018 based on the complete List of dental practitioners provided by the College of Bihor Dentists [15].

The College of Bihor Dentists issued 479 authorizations of practitioners for dental offices till 2018 for the main city Oradea; if we regularize the number of physicians (some dentists having double or triple authorizations) we count 449 doctors. Compared to the number of the approximately 200,000 inhabitants of the city and the growing number of issued licenses it could be easily observed a constantly increasing competition.

After reviewing the licensed doctors' authorizations for dental offices in Oradea, we began an exhaustive research, by making an inventory of each website and personal/professional Facebook profile. The goal was to analyse their presence on the internet—on the websites and on the most popular social media—to make themselves known to Romanian and foreign patients.

For the websites we applied a detailed analysis that included the following items: reference to a regulatory framework on the site, Multilingual Communication English/German/French/Hungarian/Italian/Other Language of the site; existence of Social Media on the site be it Facebook/Twitter/LinkedIn; possibility of online communication via email; existence of testimonials; reference to amenities regarding travel, accommodation, airport transfer etc; reference to links of specialized tourism providers who organize the trip; Google Map; videos; diplomas or certificates of doctors for articles, conference programs; Google+; articles on sites and blogs; possibility for direct communication; photo gallery; tariffs; treated cases; online registration/programming; link to official institutions; application for SmartPhone; links exchange; Newsletter; section for kids; dental tourism. We awarded points (1 point for each item) and the results allowed us to observe the variations between the image of the sites in 2015 and respectively in 2018.

The analysis of Facebook profiles followed two directions: the identification of the personal and of the professional profiles for each of the authorized doctors. Many situations were identified: dentists with FB personal profile and FB professional profile; dentists having only a personal FB profile; dentists with professional FB profile only; dentists with FB profile impossible to identify or dentists without FB profile.

2.1 Data Filtering

In 2015, there were 21 active sites, of which we analysed the top 10 best indexed by Google at that moment. In 2018, we have 26 active sites and the following situation: 17 sites analysed in 2015 are found too in 2018; 4 sites analysed in 2015 disappeared in 2018 and 9 new sites appeared since then.

There have been some special cases, which were not regarded as websites capable to attract Romanian or foreign patients in Oradea's dental offices and which were ignored in the analysis: a site in French belonging to a doctor who keeps Romanian authorization but who works in France; the site of a multinational company that offers medical services in several fields, which hosts the presentation of a dentist who works for this large multinational company; the website created by a software for finding health and beauty businesses worldwide, where the doctor's page is framed by other various medical offers from the county; we met equally a blog site fed in a basic way.

Compared to the number of authorizations, 4.9% of the doctors had an active site in 2015 whereas 5.9% of the authorized doctors have an active site in 2018. The growth in the number of sites in a 3-year period is surprisingly only 1%.

3 Results and Discussion

Three typical situations have been identified in the construction of sites: a site for an individual practice; a site for several people—the case of clinics, larger or smaller, where 2–3 or more doctors work; a site for a family business, offering medical services in several medical fields (dentistry and internal medicine or gynaecology). We observed that few firms have improved their websites (approximately a quarter), whereas most of the sites remained completely unchanged and even that a site gave up certain sections.

Regarding the nine new sites, we noted that a third of websites at a percentage of 35% are professionally produced, with a real achievement from an aesthetic, functional and informative point of view. The others are created by modalities which do not seem to imply much effort or financial investment; however, a less developed site is better than a non-existent one.

3.1 Dental Tourism

The concept of Dental Tourism which appeared explicitly detailed in 3 of the websites identified in 2015, does not appear in any of the new sites of the research in 2018. In direct relation with the potential foreign patients and the internationalisation, a bilingual or a multilingual image of the office was identified in 2015 for a quart of the sites analysed, but it disappeared completely in the new sites created since than (only one site has an original section Learning—with paid trainings—presented in English). Even in the sites already examined in 2015 there is no new information related to the medical tourism or multilingual communication.

Several explanatory hypotheses could be formulated to understand why the Dental Tourism is not a promising issue for dentists. They consider that administrative problems are too cumbersome: invoices must be issued abroad, and the potential legal disputes related to claims must be managed with more effort and time. A lot of dentists do not have the necessary infrastructure to systematically provide these services for foreign patients, which are considered usually as more demanding. On the other hand, most dentists do not speak or speak poorly one or more foreign languages and this inconvenient does not encourage them to insist on the development of this highly profitable niche. If the literature on medical travel consider patients' mastery of languages as an element that helps their recovery [16], it ignores usually the doctors' need to master foreign languages themselves to make their relationship with foreign patients more effective.

3.2 Social Media and Dentistry

The question that remains in this context is: if dentists do not use the communication potential of the website, question which is not far from a trend observed in literature [17], will they go towards simpler, more accessible, free and highly visible means of information and promotion? Is the social media—Facebook especially—the preferred option for the creation of a visual identity?

The study of almost 450 dentists in Oradea included not only the research of the websites, but equally the research of the personal and/or professional profile on the social network Facebook.

Nearly 50% of all dentists do not have a Facebook profile or they do not have urgent and visible concerns to be identified as a physician, because their profiles are impossible to be recognized as belonging to a doctor (21.8% from the cohort analysed, respectively 27.3% from the cohort analysed). Even if Facebook abounds in suggestive photos which could clarify the status of a person, in this mentioned situation the image does not help, because the profile picture includes usually the image of a child or family, not an image related to a doctor or a dental office. Regarding the languages, the information on Facebook is in Romanian language, except some doctors with Hungarian as native language which can be identified with Hungarian words (for example, "fogorvos" which means "dentist").

Most of the researched dentists, 36%, have a personal profile, with or mainly without indication of their profession. Relatively few persons, almost 11% from all the dentists analysed, have equally a personal profile and a professional profile; on the personal account there is always the mention of the place of work and a link to the professional page that contains medical information. Only 3.8% from the dentists have only a professional profile, with images and messages specifics to dentistry.

3.3 Communicational Online Strategy in the Dentistry of Oradea

These results of the research allowed to establish a relation between the existence of the dental office website and the personal/professional Facebook profiles, as an indication of an integrated communicational online strategy, which could be deepened in the future.

Compared to the large number of almost 450 active professionals, the number of dentists working to improve communication and to build a personal or a professional image is disappointing. In 2018, a percentage of only 4% of dentists in Oradea has at the same time 1 website, 1 personal Facebook profile and 1 professional Facebook profile; 2.6% of all the physicians examined have 1 website and 1 personal Facebook profile, while 0.4% of them have 1 website and 1 professional Facebook profile. In a few cases, 1.8%, dentists have a website for their dental offices, without a presence

on Facebook; for 1.1% it was impossible to identify certainly the Facebook profile associated to a website.

Two types of causes have been identified in terms of communication: first at the level of dentists and second at the level of communication professionals. Regarding the doctors, they do not know the terms "advertising", "health marketing" or "branding". They do not have the financial resources or the time to develop the website or the personal/professional profile on social media; they do not know specialists in medical marketing or they are not ready to look for them. It is easy to understand that they feel vulnerable if they expose their lives or their work; sometimes they simply do not open up abroad for fear, related to the difficulty of accounting and bills for foreigners or low level of foreign languages' mastery. The benefits of communication are mostly ignored even in the case of several family members working in the same office. The original cause of this situation is probably related to the fact that dentistry students have not studied marketing and communication skills at university and have not participated in entrepreneur training courses; therefore, they do not know how to communicate and sell their skill.

It seems unlikely, but it could be possible that a lot of physicians are not concerned about the competition, considering that they have patients enough.

In terms of communication professionals, successful companies offer overpriced services to the city's average dentist, who works alone in his office. They do not know how to come to doctors with a speech suited to their needs and they do not know how to explain the benefits of investing in communication. The major disadvantage is that they do not have statistical data that could convince the potential beneficiaries. If in Oradea the collaboration between the dental office and a company specialised in health marketing is at the beginning, it is more visible in large cities and in Bucharest, the capital city.

The lack of studies in the region does not establish a reliable relationship between the financial effectiveness and the online presence. Dentists who have implemented an online strategy are not open to disclosing profitability developments based on websites and Facebook communication. However, it is clear that those who invest in professional websites, constantly updated and maintained, make a follow-up of the impact on the turnover. The specialized companies that have created these sites constantly communicate to the beneficiaries the dynamics of the visitors and can guarantee by contract the improvement of the turnover. Modest websites have nevertheless the quality that they exist, show some interest but reveal the financial limit or understanding of the owner. Regarding Facebook, users generally do not know how to distinguish between personal and professional accounts. Few accounts are well organized, endowed with original, interesting and updated content. In general though, there is a lot of potential with the implementation of social media in different sectors [18–21].

4 Conclusion

The detailed analysis of websites and Facebook profiles leads to some very interesting conclusions. Dentists who work in a multi-cultural, multi-lingual environment and extremely dynamic city generally act in a timid and often retrograde way in the field of online communication. And that though for the Romanian patients, the foreign or Romanian patients working abroad, coming for medical tourism from neighbouring countries or from remote countries, individually or in organized ways, the internet is often the first and the most important source of information for dental services.

References

1. Sandhu R (2018) Dental tourism: a review. Int Healthc Res J 2:55–58. https://doi.org/10.26440/IHRJ/02_03/172
2. Adams K, Snyder J, Crooks V, Berry N (2018) A critical examination of empowerment discourse in medical tourism: the case of the dental tourism industry in Los Algodones, Mexico. Glob Health 14:70. https://doi.org/10.1186/s12992-018-0392-33
3. Constantin F, Kavoura A (2016) Multilingual online communication in Romanian dental practices' websites and their application to health tourism. In: Katsoni V, Stratigea A (eds) Tourism and culture in the age of innovation, Springer proceedings in business and economics. Springer, Cham, pp 185–197
4. Hanefeld J, Lunt N, Smith R, Horsfall D (2015) Why do medical tourists travel to where they do? The role of networks in determining medical travel. Soc Sci Med 124:356–363. https://doi.org/10.1016/j.socscimed.2014.05.016
5. de la Hoz-Correa A, Muñoz-Leiva F, Bakucz M (2018) Past themes and future trends in medical tourism research: a co-word analysis. Tour Manag 65:200–211. https://doi.org/10.1016/j.tourman.2017.10.001
6. Lovelock B, Lovelock K, Lyons K (2018) The impact of outbound medical (dental) tourism on the generating region: New Zealand dental professionals' perspectives. Tour Manag 67:399–410. https://doi.org/10.1016/j.tourman.2018.02.001
7. https//www.marketdent.ro/articole/marketing-clinica-stomatologica/noi-idei-de-marketing-pentru-medicii-stomatologi
8. Hays S, Page SJ, Buhalis D (2013) Social media as a destination marketing tool: its use by national tourism organisations. Curr Issue Tour 16(3):1–29
9. Magno F, Cassia F (2018) The impact of social media influencers in tourism. Anatolia 29(2):288–290
10. Leung D, Law R, van Hoff V, Buhalis D (2013) Social media in tourism and hospitality: a literature review. J Travel Tour Mark 30(1–2):3–2
11. Hudson S, Thal K (2013) The impact of social media on the consumer decision process: implications for tourism marketing. J Travel Tour Mark 30(1–2):156–160
12. Surej J, Larke R, Kilgour M (2018) Applications of social media for medical tourism marketing: an empirical analysis. Anatolia 29(4):553–565. https://doi.org/10.1080/13032917.2018.1473261
13. http://www.oradea.ro
14. Simon A (2017) Turismul medical bihorean în proiect integrat, util pentru un turism de calitate (comunicat de presa) (Bihorian medical tourism in integrated project, useful for quality tourism

(press release)). http://www.uzpbihor.ro/turismul-medical-bihorean-in-proiect-integrat-intrument-util-pentru-turismul-bihorea-de-calitate/

15. The College of Bihor Dentists/Colegiul Medicilor Dentisti din Bihor (2018) Lista cabinetelor dentare si a medicilor dentisti din Bihor (actualizată 10.01.2018) (List of dental practices and dentists in Bihor (updated 10.01.2018)). http://www.cmdbh.ro/lista-medicilor-dentisti-si-a-cabinetelor-din-bihor

16. Ruggeri K et al (2015) Evidence on global medical travel. Bull World Health Organ 93: 741–816. https://doi.org/10.2471/BLT.14.146027

17. Nichols LC, Hassall D (2011) Quality and content of dental practice websites. https://doi.org/10.1038/sj.bdj.2011.242

18. Kavoura A, Sakas D (2017) The communication role of the 'imagined communities' in the promotion of international events. In: Proceedings in business and economics. Springer, pp 145–152. https://doi.org/10.1007/978-3-319-33865-1_18

19. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, PA, pp 185–214

20. Sakas D, Nasiopoulos D, Kavoura A (2015) The development of Facebook's competitive advantage for brand awareness. Procedia Econ Finance 24:589–597

21. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for Southeastern Rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, PA, pp 45–66

Institutional and Organizational Efforts to Establish Primary Health Care in Greece

Charalampos Platis and Nikoletta Kyritsi

Abstract According to international experience, Primary Health Care (PHC) should be the basis of any modern health system and its effectiveness is linked to a better health level, lower spending and high user satisfaction. In this article we try to summarize the efforts to establish a PHC system in Greece and the regulatory framework from the establishment of the National Health System. Although many multiple legislative efforts have been made, PHC in Greece is still the weak link of the health system and the current attempted reform under Law 4486/2017 aims at addressing the chronic weaknesses of PHC by creating an integrated and decentralized public PHC system that, in full development, will ensure public, free, universal coverage of the population. The latest reform fulfills the design of the fundamental principles of the PHC on equality, health promotion, cross-sectoral action and co-operation, social participation and rational use of resources as outlined in the Alma-Ata declaration. However, in its implementation, difficulties are already emerging that raise concerns about the resilience and success of completing the new system.

Keywords Primary health care · Legislative framework · Reform · Equality · Health promotion

1 Introduction

Primary Health Care (PHC) is the first point of contact for the health system and is characterized by the provision of a package of integrated health services at individuals and families. According to international experience, PHC should be the basis of

C. Platis (✉)
National School of Public Administration and Local Government (EKDDA), Athens, Greece

N. Kyritsi
Nursing Education Office, General Hospital of Karditsa, Karditsa, Greece

any modern health system and its effectiveness is linked to a better health level, lower cost and high user satisfaction.

The Alma-Ata Declaration adopted at the 1978 International Convention on Human Rights has highlighted the need for immediate action by the global community to promote global health through PHC. The principles of the Declaration were equality, social participation, cross-sectoral action and cooperation, health promotion and rational use of resources [1]. Its principles remain topical and PHC systems embodying them are linked to cost reduction and improvement health indicators improvement [2]. The advent of the economic crisis in Greece speeded up the effort to establish an integrated and efficient PHC system in line with the fundamental values of the Alma-Ata Declaration. Although PHC in Greece has been legally regulated since 1983, it has not been institutionally, administratively and economically supported to the extent required [3]. Despite multiple legislative efforts, PHC continues to be the weak link of the health system, without prevention orientation and with obvious chronic weaknesses such as fragmentation, lack of planning, access inequalities, discontinuity in care, low efficiency, underfunding and understaffing [3–5].

This paper is a literature review, recording the efforts to establish a PHC system in Greece. The bibliography (published papers, scientific texts) of the last 10 years has been studied. The regulatory framework refers to the beginning of these efforts with the establishment of the Greek National Health System, while for the chapter of the critical approach to the 2017 reform, the whole of the current bibliography was analyzed.

2   Review of the Legislative Framework

In Greece, the first comprehensive effort for the establishment of the PHC was done with the founding law of the National Health System (Law 1397/1983), with obvious influences from the fundamental principles of the Alma-Ata Declaration. It was based on the principle that health is a social good and its provision comes under the exclusive responsibility of the state, with the basic pillars of free, equal, universal and decentralized provision of health services [6]. The law stipulated the establishment of Urban and Rural Health Centers and Primary Care Offices, as well as the integration of the existing urban medical offices of the Social Insurance Organizations in the National Health System, introducing for the first time the term of the family doctor. However, this law was partially implemented and Urban Health Centers as well as the family doctor were never actualized.

For almost the next three decades many other legislative efforts, concerning the administrative subordination of Health Centers, the labor relations of doctors, the administrative reform of the National Health System and the electronic health file, failed to establish an efficient public PHC system. The advent of the economic crisis in Greece emerged the necessity to reform the health system, especially the PHC sector, in order to rationalize expenditures and improve its efficiency and

effectiveness. The establishment of the National Health Service Organization (EOPYY) with the merger of the largest insurance funds (Law 3918/2011) and the implementation of e-prescription were the first reforms. Law 4238/2014 was crucial, stipulating the establishment of a comprehensive, single, decentralized PHC National Network (PEDY), changed the EOPYY purpose exclusively to a healthcare buyer and introduced the Personal Electronic Health File. The recent attempted reform under the law 4486/2017 aims to amend the chronic weaknesses of PHC by creating an integrated and decentralized public PHC system that, in full development, will ensure public, free, universal coverage of the population through two levels of care.

The first level includes the existing Rural PHC offices and Urban Local Health Units (TOMY) are institutionalized in urban areas. TOMY, with an assigned population of 10,000–12,000 people, is staffed by General Practitioners, Internists, Pediatricians as well as nurses, health visitors and social workers. At the second level, PHC Centers include more medical specialties and provide specialized ambulatory care. In the case that public units are not sufficient, EOPYY may contract with private doctors. Administratively the above PHC units are directly assigned to the Health Regions. In Table 1, we try to summarize the regulations for the PHC since the establishment of the Greek National Health System.

In contrast to Greece, in most European countries, for decades, health systems based on organized models of PHC provision. However, there are several differences and particularities between countries in terms of structure, operation, interconnection with the next levels of care, payments and working relationships of physicians without any ideal model [7]. There are systems with strict gatekeeping (e.g. Great Britain) [8] and others with more flexible interface with specialized care (e.g. France) [8]. Some countries support PHC provision in public structures and others contribute to the private sector by buying services, while physicians' fees may be per visit/ medical operation, per capita or with a mixed payment system [9].

3 Critical Evaluation of the Reform with Law 4486/2017

Public PHC structures in Greece are unevenly distributed with urban centers disadvantaged. Additionally, resource allocation displays imbalances between urban centers and rural areas and between the public and private sector [10]. This contributes to the emergence of high rates of unmet need for medical care, with the phenomenon being more pronounced in low-income population. The data show that the rate of unmet needs is 12.3 for year 2015, while the corresponding European average was 3.2 (see Fig. 1). The cost factor is the most common cause [10, 11].

At the same time, the need for care providing by the public system, particularly in the area of emergency care, is increasing, thus exacerbating the problem [12].

Furthermore, the data resulting from the impact of the economic crisis in the Greek population health level are alarming due to the increase in mental health disorders, suicides and infectious diseases. Additionally, the fiscal adjustment

Table 1 Greek institutional framework for Primary Health Care

Laws	Official Government Gazette	Title
1397/1983	143A′	National Health System
1579/1985	217A′	Arrangements for the implementation and development of the National Health System and other provisions
2071/1992	123A′	Modernization and organization of the Health System
2194/1994	34A′	Restoration of the National Health System and other provisions
2519/1997	165A′	Development and modernization of the National Health System, organization of health services, drug regulations and other provisions
2889/2001	37A′	Improvement and modernization of the National Health System and other provisions
3106/2003	30A′	Reorganization of the National Social Care System and other provisions
3235/2004	53A′	Primary Health Care
3329/2005	81A′	National System of Health and Social Solidarity and other provisions
3852/2010	87A′	New Architecture of Local Government and Decentralized Management—Kallikratis Program
3868/2010	129A′	Upgrading the National Health System and other provisions of the Ministry of Health and Social Solidarity
3892/2010	189A′	Electronic registration and execution of medical prescriptions and referral medical examinations
3918/2011	31A′	Structural changes in the health system and other provisions
4052/2012	41A′	Chapter A: Regulation of National Health System issues and supervised entities
4208/2013	252A′	Ministry of Health regulations and other provisions
4238/2014	38A′	National Primary Health Network (PEDY), change of purpose EOPYY and other provisions
4368/2016	21/A′	Measures to accelerate government work and other provisions (Article 33, health coverage of uninsured and vulnerable social groups)
4486/2017	115/A′	Reform of Primary Health Care, urgent regulations of the Ministry of Health and other provisions
Ministerial decisions		
No. ΔΥΓ3 (α)/οικ. ΓΥ/148 No. ΔΥΓ3 (α)/ΓΥ/ 149 1-3-2013	545B′	Compulsory online registration of prescriptions to the National Health Service Organization (EOPYY) and other Social Security Entities Application of Prescription with Active Substance
No. A3 (γ)/ΓΠ/ 23754 1-4-2015	490/B′	Abolition of the obligation to pay a fee of five (5) euro to the public structures of the National Health System
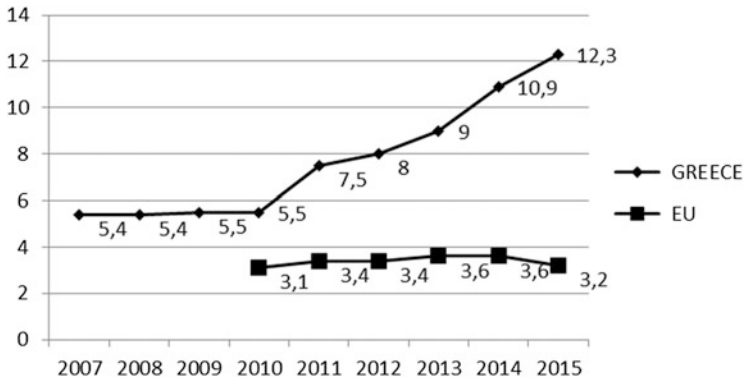
Fig. 1 Self-reported unmet need for medical care [11]

measures seem to negatively affect already problematic areas such as financing, access, efficiency and transparency [13].

Recent research findings, as documented by patient preferences, desires and values, highlight accessibility, continuity of care and patient-centered care as areas of improvement. These parameters are crucial for the quality in PHC [14]. Moreover, there is a significant deficit in integrated care (a concept that includes the human-centered orientation of care, the combination of preventive and therapeutic services and the interconnection of the different levels of care in the continuous), thus illustrating the inefficiency and fragmentation of the health system [15].

The expected benefits of the attempted reform under the law 4486/2017 are manifold: redirection of patient flows to primary care, rational use of services and resources, reduction of supplier-induced demand of healthcare services, change of patient attitudes, increase of citizens' confidence in the public health system and improvement of Greek population health status.

The reform fulfills the fundamental principles of PHC such as equality, health promotion, cross-sectoral action and co-operation, social participation and rational use of resources as outlined in the Alma-Ata Declaration. Its aim is to provide safe, effective, holistic and quality health care focused on the patient. It seeks to remove inequalities in access to health services with a clear focus on health prevention and promotion as well as on integrated care. It includes the management of chronic diseases as well as public health services, according to the needs of the respective population.

For the first time, a specific referral system, managed by the family doctor, aims to regulate flows to the next levels of care, avoiding unnecessary uses of health services. At the same time the full implementation of the Personal Electronic Health File ensures the uninterrupted and safe flow of medical information within the health system and strengthens the direct interconnection. Finally, a system of social control of public health care units is established to enable citizens to evaluate the operation and quality of PHC services.

However, despite the positive points mentioned, there are also difficulties that may affect the implementation and completion of the reform effort. First of all, the resilience of the new system is controversial because the planning of long-term funding is incomplete. Additionally, difficulties occur in recruiting family doctors to the new system, probably due to low remuneration and a full-time employment relationship with a 2-year only contract, as well as a low level of compensation for the contracted private doctors with EOPYY. Concerns also raise the fact that the family doctors of the system, while having to perform the same work, have different labor relationships and are paid differently [16]. Poor progress to the implementation timetable of the reform is recorded due to stuffing difficulties.

In addition, the creation of new public sector structures (TOMY) is likely to increase expenditure, while in urban centers, where there is the greatest lack of access to public PHC, there is already a developed network of private doctors with whom contracts could be concluded. Also, there are no specific criteria to assess the progress of health indicators and the overall performance of the system [16].

In order to improve and reinforce the above reform, the following are proposed:

- Incentives for staffing and choosing a compensation method to motivate doctors to be more effective and efficient [16, 17].
- Recording, monitoring and audit of health indicators to assess the effectiveness and efficiency of PHC [18].
- Given the low percentage of General Practitioners [10], on-the-job training of internists who will have a family doctor role in the new system, in order to supplement knowledge and skills [16].
- Recording and evaluating long-term structures, processes and results so that they can reasonably determine what direction the system should take [16].
- Use of information and communication technologies to bridge access disparities in remote areas [18].

4   Conclusions

Efforts to organize an integrated public healthcare system have begun in Greece with the establishment of the National Health System. Almost four decades later, with multiple inapplicable legislative efforts, PHC in Greece shows major weaknesses and pathogens. PHC means better health level, lower spending, high user satisfaction and must be the basis of every modern health system. That's why the recent economic crisis in Greece has brought PHC into the center of reforms. Unfortunately, difficulties have already emerged since the beginning of the reform, which, if not addressed, will once again undermine the attempt to create an integrated PHC system in Greece.

References

1. Declaration of Alma-Ata (1978) International conference on primary health care. WHO Chron 32:428–430
2. Starfield B, Shi L (2002) Policy relevant determinants of health: an international perspective. Health Policy 60:201–218
3. Petrelis M, Domeyer PR (2016) Primary health care in Greece and in Western Europe during the years of economic crisis. "To Vima tou Asklipiou" J 15:365–379
4. Vrachatis D, Papadopoulos A (2012) Primary health care in Greece: current data and perspectives. Nosileftiki 51:10–17
5. Economou C (2015) Barriers and facilitating factors in access to health services in Greece. WHO Regional Office for Europe, pp 1–14
6. Theodorou M, Mitrosili M (1999) Health services/hospital specificities and challenges, structure and functioning of the Greek health system, third section. Hellenic Open University, Patra
7. European Commission (2018) A new drive for primary care in Europe: rethining the assessment tools and methodologies: report of the expert group on health systems performance assessment. Publications Office of the European Union, Luxembourg. https://doi.org/10.2875/58148
8. World Health Organisation, Regional office for Europe. http://www.euro.who.int/en/countries
9. Kringos D, Boerma W, Bourgueil Y et al (2013) The strength of primary care in Europe: an international comparative study. Br J Gen Pract 63:742–750. https://doi.org/10.3399/bjgp13X674422
10. OECD/European Observatory on Health Systems and Policies (2017) Greece: country health profile 2017, state of health in the EU. OECD Publishing/European Observatory on Health Systems and Policies, Paris/Brussels. https://doi.org/10.1787/9789264283404-en
11. Eurostat Database (2018) http://epp.eurostat.ec.europa.eu/health/health_care/data/database
12. Economou C, Kaitelidou D, Katsikas D, Siskou O, Zafiropoulou M (2014) Impacts of the economic crisis on access to healthcare services in Greece with a focus on the vulnerable groups of the population. Soc Cohesion Dev 9:99–115
13. Simou E, Koutsogeorgou E (2014) Effects of the economic crisis on health and healthcare in Greece in the literature from 2009 to 2013: a systematic review. Health Policy 115:111–119. https://doi.org/10.1016/j.healthpol.2014.02.002
14. Lionis C, Papadakis S, Tatsi C, Bertsias A, Duijker G, Mekouris PB et al (2017) Informing primary care reform in Greece: patient expectations and experiences (the QUALICOPC study). BMC Health Serv Res 17:255. https://doi.org/10.1186/s12913-017-2189-0
15. Sifaki-Pistolla D, Chatzea VE, Markaki A, Kritikos K, Petelos E, Lionis C (2017) Operational integration in primary health care: patient encounters and workflows. BMC Health Serv Res 17:788. https://doi.org/10.1186/s12913-017-2702-5
16. Statements and Proposals of the Greek Union of General Practitioners about the Law "Primary Health Care Reform" (2017) Athens. https://virus.com.gr
17. Souliotis K (2016) Payment methods in primary health care- pursuing efficiency. In: Lionis C, Thireos E, Papanikolaou N (eds) Quality and efficiency in the PHC – evaluation and design of provided services in PHC, vol 28. Athens Medical Society, Athina, pp 78–83
18. Lionis C (2018) Step two: 11 prerequisites for an effective PHC. http://www.healthview.gr

Actors in a Museum: Towards an Innovative Theatre Stage

Stratis Panourios

Abstract Museums are living organizations and theatres bring live while staging performances. Can the to meet? How and this can take place? This paper discusses a theatrical project done within museums, in order to examine the use of museum space as a theatrical one. It aims in creating a new reality within museums and provides, at the same time, opportunities for tourism. The project's goal was to push the existing boundaries, to reconsider the way we perceive museum spaces and redefine the visitor's experience. Actors and audience members, as if in display, become part of the museum's reality, exchanging roles and redefining the boundaries and their experiences. Visitors are not just watching the objects on display but rather they 'experience' history, participating in an endless interplay between the performers, themselves and the museum's space. They acquire a well-rounded experience of history, as well as the contemporary art trends of the visiting destination. By using museums as theater spaces a new way of exploring history and art is created.

Keywords Museums · Theatrical performances · Touristic opportunities

1 Introduction

Museums have always been the places that tourists visit in order to understand and appreciate better the visiting destinations. Objects and information on display help the visitors travel through time, imagine the past, and if possible, acquire a clearer perception of the present.

In this paper we will be discussing the use of museums as a theatrical stage. This discussion will be based on the research done on the topic and the aim of the project was to push the boundaries, to re-examine the way we perceive Museums and theatre and redefine the spectators experience. By opening up the museums, a new way of exploring, history and art is created.

S. Panourios (✉)
National Theatre of Greece, Athens, Greece

2   Literature Review

There is a wide and open definition about the museums which was adopted by the ICOM, in the framework of UNESCO society. According to this definition, which exists world wide "A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment" [1].

The contemporary dialogue as regard to museums gives space to all the scientists to contribute. Recently, the dialogue opened for sociologists, for managers and marketeers and for the economists as well [2].

The modern museums are presented by the American Alliance of Museums as a strong economic engine which supports more than 726,000 jobs in America. According to statistics people love museums which nowadays are strongly connected with education [3–5].

Museums nowadays also are connected to the communities and their sustainability trying to find more paths to contribute to the local sustainable development process. They are very close to the modern transformations in society searching the methods to offer wide platforms for the integration of migrants and refugees.

According to a brief literature review, there are many points that connect theater and museums, the emphasis is mainly given in their educational role [6].

Another option brings together academic research and professional practice about performing heritage emphasizing that the collaboration between theater and museum offers an innovative way of making the museum more vivid and alive, giving an open space for education in depth [7].

The aim of this paper is to present a snapshot of the way the theatre and the museum can offer ground to each other so that the theatre comes in the museum with the final end to provide a total experience to the participant.

3   The Methodological Approach

The research was based on collaboration between the National Theatre of Greece and the Benaki Museum [8]. The idea was to create a series of six theatrical performances, within this rather remote space, and examine the reactions of the visitors/audiences. The name of the project was "From the silence of the display case to living theatrical voices". The methodology used was based on participant observation: The audience members, the actors, the curators and the director. 'The rationale for this approach is that by "being there" and actively taking part in the interactions at hand, the researcher can come closer to experiencing and understanding the "insider's" point of view' [9]. The director/researcher was visiting the museums for a 4 month period, between May 2016 to September 2016 to get accustomed with

the space and objects. Five elements were employed, the space, the objects, the text, the actors, and the audience. Three different Benaki museum spaces were chosen: The museum of Greek culture, the Ghika gallery, and the museum of Islamic Art.

4 The Insider's Approach Within the Museums

The first step was to explore the space which is normally silent, and still. It was important to discover within it, the place that could provide enough room for an audience to sit or stand in order to be able to watch the performance, and at the same time provide the actors with the needed space to move freely. As Peter Brook says in his book "I can take any empty space and call it a bare stage. A man walks across this empty space whilst someone else is watching him, and this is all is for an act of theatre to be engaged." Through this performance we wanted to re-examine the limitations of the space, and create within it fragments of life. Given the circumstances, the number of audience members never exceeded 80 people. This way, the place was used in a different way without disturbing or distorting its primary aim.

Regarding the objects on display, they are the starting point of each performance.

First, few of the many objects had to be chosen. This happened with the assistance of the museum's curators. Then, for each of these items a thorough research was done in order for the appropriate text to be found from the same historical period, and connect with it. The relationship between the texts and the objects reflects and 'vibrates' the past.

The actors were in a way the thread that connected everything together. The sound of their voices along with their movement was breaking the norm of silence within a museum. They were, at the same time, creating a new space, a new reality, that was projecting the same historical period as the objects used. No theatrical lighting was used, in order for the performers to blend in the museum's space rather than be in competition with it. Actors appeared as if they were coming out from the walls, or as if 'frozen' on display were becoming alive.

5 Discussion and Conclusion

The tickets sold for the six performances that took place in those three different museums were 2183 in total. Such actions discussed in this paper create a new platform, which brings together artists from different backgrounds together. They also give artists the ground to create something new, by incorporating the exhibits of a museum. The idea is through this type of collaborations to create a historical and artistic globalization. People worldwide will have the opportunity to learn more things about another cultural and their artistic heritage. Especially in Europe, there is a strong cultural historical memory, through paintings and writings one can easily see the influences from one country to the other. Through these collaborations we

can emphasize the European identity of the spectator. This type of globalization gives the possibility to reexamine our ideas to see art from another point of view, another culture and open ourselves to them.

Another important advantage of this type of performances is that we change the viewer's experience, and by doing that the observer can visit the museum again and again but also to bring in new people. The increase in the tickets of the museum and the sold out performances may justify that.

The museum can expand its purpose to reach the public. Each time one visits the museum, he/she will see something different and new.

Furthermore, when a tourist visits a country we can give them a well-rounded experience of the history, as well as the contemporary art trends. Therefore, this idea may create a new ground for worldwide collaborations, between museums and artists. Art and Historical museums in the world have a lot of similarities, a silent and sacred space in a way. The space of the museum without the exhibits as a remote and timeless space, reminds us a quote by Wassily Kandinsky "Empty canvas. In appearance—really empty, silent, indifferent. Stunned, almost. In effect—full of tensions, with thousand subdued voices, heavy with expectations. A little frightened because it may be violated" the exhibits are locked as if in a cemetery, by incorporating them we create a new dimension between past and present. That will create new dimension on the way we perceive exhibits until now.

The exhibits will be brought to present, we have the opportunity through these performances, to research, to question, to create, to use them as elements for contemporary works of art.

References

1. https://icom.museum/en/activities/standards-guidelines/museum-definition/
2. Fyfe G (2012) Sociology and the societal aspects of museums. In: McDonald S (ed) A companion to museum studies. Blackwell, Chichester. In Greek translated by the Piraeus Bank Group Cultural Foundation
3. https://www.aam-us.org/programs/about-museums/museum-facts-data/
4. https://mellon.org/resources/shared-experiences-blog/enriching-our-communities-findings-part-1-analysis-museums-economic-engines/
5. Kavoura A, Sylaiou S (2018) Effective cultural communication via information and communication technologies and social media use. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 7002–7013
6. Hughes C, Jackson A, Kidd J (2007) The role of Theater in museums and historic sites: visitors, audiences, and learners. In: Bresler L (ed) International handbook of research in arts education. Springer international handbook of research in arts education 16. Springer, New York, pp 679–699. https://doi.org/10.1007/978-1-4020-3052-9_46
7. Jackson A, Kidd J (2010) Performing heritage: research, practice and innovation in Museum Theater and live interpretation. Manchester University Press, Manchester. ISSN: 9780719081590
8. Nakata Y (2015) Insider–outsider perspective: revisiting the conceptual framework of research methodology in language teacher education. Int J Res Method Educ 38(2):1–18. https://doi.org/10.1080/1743727X.2014.923835
9. https://www.benaki.gr/index.asp?lang=en

Online Imagined Communities in the Airline Industry

Efstathios Kefallonitis and Androniki Kavoura

Abstract This paper employs Anderson's imagined communities applied in nations and their contributing elements that connect people—even if they have never met—to apply it to air transport member groups. The creation of the nation presupposed the association of people who have never met with symbols, association of ideas, the existence of experts, the presence of the significant other, the non-existence of time and space. In a similar vein, the air transport industry may implement the imagined communities to provide an online community perspective that may bond travelers together with significant implication for travelers and the industry.

1 Introduction

The concept of the sense of the community was employed to discuss the significance of specific elements to create nations [1, 2]. Anderson's [2] theory of imagined communities argues that a sense of coherence exists between its members who feel a sense of belonging to the same group, even if they have never met. Such social proximity or commitment is conceptually associated with identity formation, which shares many elements in common with the notion of the imagined communities. Gruzd et al. [3] argued that although people get together and exchange messages on the physical and environment, this does not mean that they feel they belong to a community. In this paper, we theoretically attempt to relate the concept of the imagined communities and the common elements that are shared with people that participate in the air transport industry.

E. Kefallonitis (✉)
State University of New York, Oswego, NY, USA
e-mail: e.kefallonitis@oswego.edu

A. Kavoura
University of West Attica, Aigaleo, Greece

To the authors' best knowledge, such concepts have not been conceptually associated with the way online communities and networks are created not to mention the limited research in air transport industry. In doing so, the air transport industry can create a loyal community that follows the air transport sector and its activities offering benefits for the industry per se.

The next section presents elements of identity for the creation of nationality and how they can be determining factors for preserving air transport communities, then the air transport industry is presented in relation to the imagined communities while implications for the air sector are presented.

2 Literature Review

2.1 The Imagined Communities

It is significant to acknowledge that although people get together and exchange ideas, they may not though have a sense of belonging to a specific community [4, 5]. Determining concepts in the creation of identity are the presence of the significant other, the use of language and the association of ideas, the role of experts, the homogeneous empty time and space. We argue that these elements need to pre-exist and further be maintained so that a network or community is created. These are concepts that create the sense of community and they are necessary for bringing people together.

More specifically, the presence of the 'other' in the form of another entity with which an entity or a nation differentiates itself has been argued in the theories of nationalism and identity formation. A nation does not exist in itself but is part of a system that forms a world of nations where each nation is perceived as unique [6, 7]. Another constitutive element employed in the creation of nations, was the use of symbols in the definition of identity. Its presence can contribute in the creation of the community. A common symbol system whether this is special language, a logo, a word or a flag for example, is important for people's connection within a group. In addition, the role of experts in the form of 'intelligentsia' was an issue that theories for the creation of identity took into consideration. Those involved with the organization of air industry may benefit from searching and distinguishing those people in the communities who have a high involvement in regard to the spread of information about the industry's services, acting as the air sectors' ambassadors. Furthermore, according to the theories of nationalism for the creation of identity, a sense of coherence exists between its members who feel a sense of belonging to the same group even if they have never met; the nation has finite if elastic boundaries [2]. People consider themselves to be part of groups within boundaries no matter how flexible these can be. A community can have a geographical and specific location but this does not mean that it can be bounded by location neither size [1]. In an interconnected world, one could argue that a community does not have a place [8].

Fig. 1 Passenger journey map

The aforementioned concepts that provide a solid ground for identity, may have associations with networks and communities in the airline industry that will be presented in the next section.

2.2 Passenger and the Airline Industry

The postmodern passenger [9] is actively participating in the process of searching for information before making travel plans and collect a variety on information throughout the entire passenger journey (Fig. 1). The time spend at the pre-trip, inspiration and planning phases may determine choices over flights, hotel accommodation options etc. During these phases, passengers heavily rely on information from personal experiences, affinity groups and online imagined communities [4, 5]. The effect of online imagined communities on social media networking platforms in the travel industry has been limited discussed in literature [10]. Looking carefully at the passenger journey (Fig. 1), one can identify areas that the role of online imagined communities, through social media networking platforms, can be more impactful.

Pre-trip Airline advertising and news-stories build a general, but low-level of consciousness, impression of the departure airport (retail options), airline and the travel experience. Passenger awareness of airline name and airline product characteristics early in the travel planning helps to: (a) manage expectations and (b) determine airline effectiveness in sustaining or improving the passenger experience [9].

Inspiration and Search of Information The motivation to travel comes from either professional need or personal desire. Identifying the strength of motivation to travel, based on information found on social media networking platforms of online imagined communities is crucial. This also presents an opportunity to determine which items of information shared within an online imagined communities of passengers. Popularity and reasoning of choice is important (such as type of aircraft used on certain routes, airline amenities, etc.).

Planning Planning tools are needed to aid passengers trying to navigate the complex world of travel planning. Airline/airport websites and mobile apps can help and determine how attractive and effective planning tools are. Online passenger imagined communities use such information in determining travel options and amenities, such as: the best seats on aircraft (through SeatGuru.com, SeatMaestro.com, etc.) and meal options (inflighfeed.com, airlinemeals.net, etc.).

Reservation and Purchase This is the passenger's introduction to the airline brand, services, menus, beverages/food [11]. (As an example: KLM is using sharing online menus available in economy. This will set certain expectations). If this is the passenger's first flight on this airline, this is the only impression the passenger has of the airline until flight. Everything after this interaction may change this initial impression and, therefore, takes more effort and expense. The pre-trip experience is technology-driven.

Pre-flight Updates and alerts help passengers prepare for error-free departure and enhance positive feelings toward the airline—the airline is looking out for me in this complex and problem-prone process. Using applications and solutions can determine the perception and effectiveness of these passenger-focused messages.

Departure, Check-in, Airport Experience Check-in can be complex and sometimes slow. Incorporating ways that support ease-of-use of the self-check-in kiosks, check-in apps or measure the comfort level of passengers who must wait in line and interact with airline personnel during check-in. Ease of locating entry-points, gates, and airport vendors and services are of high importance to passengers.

In-flight Initial interactions with flight crew members, comprehension of boarding instructions, initial reaction to the cabin environment, effects to on-board services, understandability of safety and in-flight instructions, and many other aspects of the

flight service are characteristics that imaged communities discuss in online forums and applications. Retail options, buy-onboard, food/beverage availability, menu and tableware design are also attracting significant importance.

Arrival Factors that slow disembarking or lead to forgotten personal items or luggage affect the passenger experience and are often among the topics of discussion among imagined communities. The ease of locating connecting flights reduces passenger transfer time and increases passenger satisfaction. This is also the last opportunity to communicate something or give something to the passenger [12–14] (the effect of pre-landing snacks or chocolates, last change to promote retail items or guide passenger to arrival shops at the destination airport).

Post-flight Post-flight messages and follow-up to flight problems can strengthen the connection between the passenger and the airline.

2.3   *Imagined Communities in the Airline Industry*

Based on the principles of imagined communities, in the airline industry an increasing number of social-media influencers are seen as leaders in the category of passenger experience, particularly in: (a) airline recommendation, (b) onboard amenities and hospitality, (c) seat selection, (d) arrival/destination information.

This is evident by the number of web-based channels available that assess a variety of aspects of a flight. As an example: seat comfort (seatguru), meals (inflightfeed), onboard comfort (tripit, etc.), overall trip (tripadvisor).

Airlines use social media applications (Facebook, twitter, Instagram, etc.) as means to highlight the fun element of flying by allowing passengers to select seatmates or where to seat in a specific ticketed cabin (KLM). Social-media platforms such as Instagram, Facebook and twitter act highly influential channels that may affect travelers' sources of information. Highly influential Instagram users such as "thepointsguy" and "dr.kefallonitis" and have thousands of followers to the point that have created a new trend of where-to-go for information search towards the passenger journey (see Fig. 1). Table 1 presents a parallelism between the imagined communities and how these are present in the airline industry.

Table 1 Combining the imagined communities in the airline industry

Imagined communities	Airline industry	Examples of the creation of an imagined air transport industry community
The significant other	Other travel or airline option besides the obvious choice	Considering flying with an airline that haven't flown before based (British Airways instead of United Air Lines)
Use of language symbols and association of ideas	Airline Language keywords and code words such as #paxex	#paxex = passenger experience #UnitedFirst = United Air Lines First Class #avgeek = aviation geek
The role of experts	Travel leaders through social media exposure and	Thepointsguy (Brian Kelly), theblondabroad (Kiersten Rich), dr. kefallonitis (Stathis Kefallonitis)
The homogeneous time and space	Relative to regions, time of year (high-season or low-season), long-haul/medium-haul/short-haul flights	Summer 2019 travel, new routes served by new aircraft

3 Discussion and Conclusion

The imagined communities may well apply in the creation of loyal communities with regard to international events such as conferences [15], tripadvisor community members [16], or even in the accounting industry [17]. With respect to the travel industry, the imagined communities play an important role in shaping passenger trends and affecting passenger options. Younger travel generations are more prone to imagined communities and use available information as a means of setting expectations and pre-evaluating offerings.

References

1. McMillan D, Chavis D (1986) Sense of community: a definition and theory. J Community Psychol 14:6–23. https://doi.org/10.1002/1520-6629(198601)
2. Anderson B (1991) Imagined communities, 2nd edn. Verso, London
3. Gruzd A, Wellman B, Takhteyev Y (2011) Imagining twitter as an imagined community. Am Behav Sci 55:1294–1318. https://doi.org/10.1177/0002764211409378
4. Kavoura A (2016) The creation of online communities and social networking sites based on constitutive elements of identity. In: Lee I (ed) Encyclopedia of E-Commerce development, implementation, and management. IGI Global, Hershey, pp 1970–1984
5. Kavoura A (2014) Social media, online imagined communities and communication research. Libr Rev 63:490–504. https://doi.org/10.1108/LR-06-2014-0076
6. Gellner E (2008) Nations and nationalism. Cornell University Press, Ithaca
7. Fleischacker S (2009) On Adam Smith's wealth of nations: a philosophical companion. Princeton University Press, Princeton

8. Mulligan M (2014) On ambivalence and hope in the restless search for community: how to work with the idea of community in the global age. Sociology 49:1–16. https://doi.org/10.1177/0038038514534008

9. Kefallonitis EG (2015) Airline brand dissatisfaction: an overview. Int J Strateg Innov Mark 2:1–16

10. Kavoura A, Kefallonitis E (2018) The effect of social media networking in the travel industry. In: Khosrow-Pour M (ed) The connected passenger. Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 4052–4063

11. Kefallonitis EG (2017) Country-of-origin and airline brand effects: a study of brand associations. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer, Cham, pp 747–752

12. Nechita, F, Demeter R, Briciu V-A, Kavoura A (2019) Projected destination images versus visitor-generated visual content in Brasov, Transylvania. In: Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism, 7th ICSIMAT. Proceedings in business and economics. Springer, Heidelberg

13. Aziz N, Kefallonitis E, Friedman BA (2014) Turkey as a destination: a study of sensory brand associations. Tour Cult Commun 14:77–89

14. Kavoura A, Sakas D (2017) The communication role of the 'imagined communities' in the promotion of international events. In: Proceedings in business and economics. Springer, Cham, pp 145–152

15. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66

16. Kavoura A (2016) How can mobile accounting reporting benefit from the imagined communities? Int J Mobile Comput Multimed Commun 7:36–52. https://doi.org/10.4018/IJMCMC.2016040103

17. Kavoura A, Tiago T (2016) Understanding online communities on social networks via the notion of imagined communities: the case of TripAdvisor. Int J Web Based Communities 12:238–261. https://doi.org/10.1504/IJWBC.2016.077759

Advances and Distinctions in the Use of Biometric Methods Versus Traditional Methods for Studying the Customer Experience

David McLain and Efstathios Kefallonitis

Abstract Advances and growth in the use of neurosensory methods of cognitive research are resulting in changes in the conduct of many marketing studies. This trend offers much promise for research but also requires caution so that methodological appropriateness and limitations are correctly recognized. In this paper, we discuss opportunities and cautions for neurosensory research into the customer experience. We specifically discuss two popular methods; eye-tracking and facial expression analysis. We suggest that researchers should recognize that these methods are best considered laboratory-based and that environmental conditions play a large role in influencing studies.

1 Introduction

The influences of environmental factors greatly increase when laboratory controls are relaxed, as when studies are conducted in field situations. The trade-off between laboratory control and field realism are no less serious when using neurosensory methods than when using traditional survey methods, despite the apparent versatility of these newer methods. There is also a natural alignment of exploratory research questions with field situations and confirmatory questions with the laboratory, as with other methods, that does not diminish when adopting neurosensory methods. An important difference between neurosensory methods and survey methods is the quantity and nature of data generated by each methodological category. Survey methods generate data sets that tend to be small and generated using pilot-tested multi-item measures of variables and supportive of null hypothesis significance

D. McLain (✉) · E. Kefallonitis
State University of New York at Oswego, Oswego, NY, USA
e-mail: d.mclain@oswego.edu

testing (an approach that has been criticized). Neurosensory methods generate large data sets including, if not dominated by, dynamic data streams of probabilistic measures such as the probability of an expressed emotion or a focus of attention. These different measures are continuous in magnitude, and over time, but do not necessarily co-occur temporally. These data are less subject to null-hypothesis significance testing by traditional statistical methods. The characteristics of these data sets require different approaches to acquisition and analysis. In addition, these characteristics suggest the resulting data answer different questions than are associated with survey measures. For example, surveys may be suitable for answering questions about a customer's attitude at a point in time, but neurosensors may better answer the question, "What is the distribution of the most likely attitude over the period of time data is collected?" A survey may ask whether the customer would buy or recommend the experience, but a neurosensory study might ask how the customer feels during the experience, in what dynamic pattern or sequence those feelings are expressed, how strongly the customer reacts, or what draws his or her attention in that experience.

Marketing research has undergone great changes in recent years [1–4]. Social media analysis, large-scale customer transaction analysis, artificial intelligence and machine learning, and neurosensory or biometric methods are among the new techniques rapidly changing the way researchers analyze consumers' wants and preferences—work previously done almost entirely with surveys and focus groups. This paper will discuss these changes as they influence the analysis and interpretation of marketing research data. This will be accomplished by focusing on two relatively new techniques, eye-tracking and facial expression analysis.

2 Biometric Methods

2.1 Eye Tracking

Eye-tracking (ET) describes the mapping of visual attention to specific areas and elements in the visual field [5]. This technique exists in two forms—remote and mobile eye-tracking—and uses cameras to follow pupil movement and associate that movement to locations on still images or videos. The subject of an eye-tracking test either focuses his or her eyes at a fixed distance from a viewing screen (remote eye-tracking) or wears glasses that both track pupil movements and record the visual scene as the subject travels through and experiences that scene (mobile eye-tracking).

Eye-tracking has the potential to specifically identify where attention is allocated, for how long attention is allocated to a specific place in the visual field, attention sequences, and repeated allocation of attention to a specific place in the visual field. These data greatly improve the accuracy of information about attention (through the tracking and analysis of gaze) over brief time increments, typically of 30 samples per second or greater, and eliminate the problems of imperfect recall or inability to

describe attention post-hoc. Eye-tracking offers distinct advantages over surveys when trying to measure attention to specific elements of an image or video.

Eye-tracking, like other advanced marketing research technologies, has a combined hardware–software structure. The eye-tracker hardware consists of a device that follows the subject's pupils and either provides data that can be mapped to very specific locations on an image or video presented to the subject, or streams scene data and pupil movement data to a recording device.

The data produced using eye-tracking is rich in content and volume. Data regarding the location of attention, sequence of viewing of multiple elements of a scene, time of attention, duration of attention, and revisitation of scene elements is usually obtained.

Although the abilities of these new techniques to improve marketing research are considerable, there are limitations. Remote eye-tracking requires careful positioning of the subject and a sensitive calibration procedure. Mobile eye-tracking also requires a sensitive calibration procedure that can be difficult and time-consuming to complete. The data sampling frequency varies greatly among different eye-tracker models and there is little published information regarding the appropriate sampling frequency for various research or practical tasks.

The sensitivity and accuracy of eye-tracking equipment is affected by such factors as situation lighting, distance between subject and the tracker, positioning of the tracking device, the wearing of eye-glasses; and health problems affecting eye movement or range of movement.

2.2   Facial Expression Analysis (FEA)

Facial expression analysis (FEA) refers to the measurement of movements in facial muscles that are associated with about seven basic emotions: joy, anger, surprise, fear, contempt, sadness, and disgust. To accomplish this task, several facial landmarks are located and tracked in a recording of the subject's face made during the testing session [6–8].

FEA, like eye-tracking, provides a rich stream of data. FEA hardware consists of any digital camera, including the built-in cameras in most laptop computers and mobile phones. This enables recording of an individual's face which will be analyzed to estimate the probability each one of the emotions is being experienced by the subject at specific times in the recording. Use of commonly available camera technology has made it possible to conduct FEA on many thousands of individuals, improving the standards and FEA information we have about many different people around the world.

FEA software is readily available that can analyze multiple faces in a single recording. The information produced by FEA consists of moment-to-moment estimates of the likelihood each measured emotion is being expressed. These likelihood data provide distinct advantages over survey techniques that are often self-report and provide only a general measurement of the subject's emotional reaction to a

stimulus. In addition, FEA eliminates the human cognitive filter between the stimulus and reported emotion.

The limitations of FEA include the need for proper lighting of a subject's face and the probability data that is produced. Some subjects have relatively less expressive facial muscles, such as individuals with facial nerve disorders, and FEA may produce poor quality analyses of their emotions. FEA provides only a probability estimate of each emotion, based on an indirect measurement of facial muscle movements. This is not the actual emotion and accuracy can vary. To obtain the most accurate estimates of emotion likelihoods, considerable additional data processing is required following the collection of a subject's data.

3 Contrasting Eye-Tracking and FEA with Traditional Methods of Marketing Research

3.1 Technology Does Not Directly Predict Behavior

Although eye-tracking and FEA can produce detailed and specific information regarding an individual's reaction to marketing stimuli, these two techniques cannot directly predict either purchasing or recommending behavior. Intermediate influences, similar to those associated with survey studies, reduce the strength of the link between the biometric data and actual consumer behaviors.

3.2 Real Time Reactions Versus Recalled Reactions

Arguably the most important difference between biometric measures and more traditional measures is the ability of biometric tools to accurately measure moment-to-moment emotional and physiological reactions to dynamic stimuli. This simply cannot be accomplished with focus groups or surveys, whether online or live. Accurate recall of moment-to-moment personal reactions is distinctly less reliable than when using a biometric instrument. This is a particularly valuable difference when analyzing reactions to video, website navigation, or the experiencing of an environment. An example is the evaluation of the reception environment experience at a resort hotel. A survey can gather overall positive or negative reactions and be tailored to specific elements of the experience but recall will be biased in at least two ways. First, recall may be poor or obscured by other elements of the experience and second, the weighting of elements of the experience by survey will not correspond to the weighting of each element as experienced by the participant. For example, the individual may be most affected by the greeting he or she receives at the reception desk whereas the survey may exclude or underweight the impact of this greeting on

the evaluation of the overall experience. This is a distinct advantage of biometric measurement.

3.3 The Laboratory Environment Versus the Field

An important difference between biometric and more traditional marketing research methods is that most biometric data collection must be conducted in a highly controlled laboratory environment. Traditional methods are often capable of being brought to the field where the complexity of influences tends to be greater than in controlled laboratory environments. The most extreme contrast between biometric and traditional methods is found in fMRA studies which require participants to be immobilized in highly controlled conditions; however, remote eye-tracking is also largely conducted in laboratories. Mobile eye-tracking and FEA are less constrained, being technically versatile enough to be conducted in the field, but the technologies associated with each require some artificiality due to the wearing or positioning of unnatural sensory devices or recording tools on the subject. This could influence the quality of data that is collected.

3.4 Some Research Questions Still Require Direct Inquiry

Surveys permit asking questions about future intentions that are not measurable using biometric technology. A survey or focus group question can address complex or abstract cognitions such as whether the participant intends to buy a product in the future whereas a biometric instrument is limited to a participant's current state and this may be largely or wholly non-cognitive.

3.5 Data Analysis and Statistics

The type of data collected using biometric devices is detailed and voluminous, making traditional reliability metrics less easy to apply than to most data collected using traditional tools. The type of data generated by biometric studies may require analysis using statistical software that can handle large datasets. Hand calculations or spreadsheet calculations may be cumbersome if not impossibly impractical.

   The large number of observations generated by some biometric techniques makes statistical significance more likely than with the smaller number of observations typically associated with variables gathered using survey methods. To properly analyze and interpret this data requires a good understanding of what is being measured. For example, you may identify a statistically significant difference in attention between groups of subjects; however, if those differences in attention are

associated with a variable that is well-represented in the data but has little practical meaning for your study, the significant difference is also not meaningful and should not be afforded value for decision making.

The types of data gathered using advanced technologies can be quite different from survey or focus group data. For example, FEA provides probabilities of the experience of emotion and the percentage of time, for a given duration of exposure to a stimulus, associated with that probable emotion. This differs from a survey question response that asks about the degree a stimulus is liked. In the latter, the data tells you the degree something is liked rather than the likelihood an emotion, such as liking, is being expressed. One type of data is immediate and non-cognitive whereas the other is reflective, based on recall. These two types of data may have different implications for the goals of your marketing study.

4   Conclusion

Advances in marketing research techniques have created a dichotomous body of data from which marketing researchers can draw when making marketing decisions. This expansion and divergence of data provides many benefits but achieving those benefits requires an understanding of the differences in the data and the way those data are analyzed and interpreted.

References

1. Burke RR (1996) Virtual shopping: breakthrough in marketing research. J Prod Innov Manag 6:558–559
2. Camerer C, Yoon C (2015) Introduction to the journal of marketing research special issue on neuroscience and marketing. J Mark Res 52:423–426
3. Malhotra NK (2007) Review of marketing research. In: Review of marketing research. Emerald Group Publishing Limited, Bingley
4. Novak TP, Hoffman DL, Yung YF (2000) Measuring the customer experience in online environments: a structural modeling approach. Mark Sci 19:22–42
5. Duchowski AT (2007) Eye tracking methodology. Theory and practice. Springer, London, p 328
6. Fasel B, Luettin J (2003) Automatic facial expression analysis: a survey. Pattern Recogn 36:259–275
7. Kanade T, Tian Y, Cohn J F (2000) Comprehensive database for facial expression analysis. In: Proceedings of the 4th IEEE international conference on automatic face and gesture recognition (FG'00). IEEE, p 46
8. Tian YL, Kanade T, Cohn JF (2005) Facial expression analysis. In: Handbook of face recognition. Springer, New York, NY, pp 247–275

The Effect of Airport Branding to Air Traffic and Passenger Movement: An Overview

Efstathios Kefallonitis and Konstantinos Kalligiannis

Abstract Certain airports around the world have established rather prominent brands in the air transport industry. This is a result of careful planning that mirrors the synergy of home-airlines, in their willingness to use an airport as a hub, airport management as well as the support of national and local governments. Airport branding helps in creating: (a) a sense of place, and (b) unification of like-minded passengers based on their choice of airport or members of a like-minded group (imagined-communities; such as a social media group of aviation geeks). Airport brands often become synonymous of quality of service, choice of retail stores, access to premium passenger lounges, among other benefits that each airport may offer. This translates in passenger willingness to spend more time at select airports that offer these perks as a means of incentives to stay there longer. The more time passengers spend at an airport the higher the likelihood of: (a) an emotional affinity with an airport, (b) building a stronger association with an airport-brand, (c) increased revenue from airport services and stores. Airport branding may also incorporate certain cultural, artistic, architectural and customary characteristics of the local city. In such a way, the arrival and departure point of a city (in this case an airport) becomes an ambassador and enhances the passenger experience. Research findings suggest an increase in awareness of airport branding, and as a result the willingness of seasoned-travelers to fly through specific airports due to certain expectations and benefits. Exploring further and enhancing the relationship between airport management, airport-brands the home-airlines is crucial for the sustainable development of air travel. Strengthening this three way relationship could be beneficial for all involved parties. This would not only not create a unique airport brand but also help maintain the brand's positioning in the air transport industry.

E. Kefallonitis (✉)
State University of New York at Oswego, Oswego, NY, USA
e-mail: e.kefallonitis@oswego.edu

K. Kalligiannis
Kazimieras Simonavičius University, Vilnius, Lithuania
e-mail: konstantinos.kalligiannis@ksu.lt

1 Introduction

1.1 Modern Air Passengers' Characteristics

The aviation industry is well-known to be a fast evolving and fast changing industry in terms of predominantly technological, legislative, and customer quality of service expectation developments. Although that all of them play crucial roles in airport branding (e.g. perceptions of a high-tech, high quality and safe airport), we could argue that the former two categories are sub categories of airport customers' quality of service expectations, since the more state-of-the-art technological facilities and infrastructure an airport has, the higher the quality of service that its passengers will experience (e.g. self-service check-in desks, e-gates, etc.). The same applies for the safety perception that passengers may have for a particular airport's brand image, which is defined as: "the way in which certain groups perceive a brand—the way in which they decode all the signals emanating from the products, services and communication of the brand" [1]. It is crucial to understand the way that an airport can develop a successful brand image, which is created by the selection of the appropriate brand values and their most efficient use for the airport's brand positioning. Brand values have been defined as "the desired set of experiences or associations a brand wants its customers to make with its products, services or identity" [2], and are characterized by their: (1) Favorability, (2) Strength, (3) Uniqueness. An airport will select its respective brand values and develop its unique brand image according to its unique passengers' profile analysis, which is the detailed analysis of an airport's passengers according to their demographic and other market segmentation categories. Another important element that will be reviewed in this paper, is the concept of "like-minded passengers" that each airport needs to examine in detail and place the required significance in order to fully utilize their characteristics towards its advantage and establish another strong airport brand differentiation category.

Modern Air Passenger Characteristics and Contemporary Trends Modern air-passengers have very different airport service quality expectations and have very different characteristic than they used to have few years ago [3], as they are predominantly:

- Technological Savvy
- High Social Media Interaction
- Bleisure (Business + Leisure) Travel
- Experiences-driven

Modern air passengers are tech-savvy since they are more high tech-literate and have fully incorporated the daily use of technology in their personal and professional life and air travel is not an exception to this trend. Therefore, passengers are expecting from all airports, particularly larger in terms of aircraft movements, to invest heavily in new technologies and these in their overall airport service. For smaller airports that do not have sufficient annual passenger traffic, passengers usually do not have the same expectations in terms of high technological airport infrastructure. However, in terms of branding it would be extremely useful for these airports to also invest in new technologies as a brand differentiator and also to be able to provide points-of-differences among the airports in the same category.

Modern air passengers, and particularly millennials, have a very high level of social media interaction and enjoy sharing moments of their travels on social media among friends and contacts. Airport services are part of a passenger's air travel journey and for this reason it is quite likely for passengers to share happy or enjoyable moments at their respective airport journey (particularly if their photo is associated with an innovative airport service/facility or a distinctive airport monument/exhibition item). All airports need to have a strong presence in all of the major social media networks in order to strengthen their individual airport brands and to be able to have a strong psychological connection with their passengers. There are many steps that airports can take in order to encourage passengers in uploading their photos from their airport facilities, such as the installment of iconic art monuments/exhibition items (e.g. the Yellow Bear at Hamad International Airport) or the provision of iconic airport facilities and infrastructure (e.g. rooftop park at JFK's Terminal 5).

Another current travel trend (and especially for the millennial passengers) is "B-leisure", which is the combination of a business trip with leisure activities. This trend is growing fast and for this reason, airports need to take it into consideration in their respective facilities and services provided for their business passengers. For example, the airports could include in their magazines (or develop dedicated brochures) of the type of activities and cultural experiences that the business passengers could experience at their destinations during their free leisure time.

Another important contemporary travel trend for modern passengers is that they are predominantly experience-driven. Modern-day travelers are not just satisfied with the provision of high quality services but they are also seeking of becoming part of the service provision themselves which will result in experience creation. The facility mentioned earlier regarding the roof park provided at JFK's Terminal 5 is a perfect example, since JetBlue passengers will not only taste typical New York snacks and beverages offered in the city's parks but actually take a walk or go for jogging at the park facility in the roof top of Terminal 5.

After analyzing, the contemporary travel trends that characterize modern air passengers, it is important to introduce the key branding concepts and their applicability in the airport industry.

2 Airport Branding

Over the years, there have been a number of academic studies investigating the applicability of branding concepts and theories in the airline industry [3–9] but there have not been, at least in the same extent, similar studies for the airport industry. For this reason, this paper aims to present the unique role and significance that airport branding has (or could potentially have) for airports. A question that could be raised at this point is what is an airport's brand specific role and its unique characteristics.

2.1 Airport Branding Role and Characteristics

It can be argued that airport branding has a much more significant and enhanced role than just marketing the airport and its facilities to airlines and passengers, since it is also the first and last impression that international passengers will have of a city and a country [10]. Therefore, it can be safely concluded that it has (or should have) a crucial role in destination branding and national branding for the location city and country (respectively) [11]. According to this view, several airports so far have successfully teamed-up with their main base airlines and their respective tourism organizations (the so called "Golden Triangle) for joining resources and promoting together their city and/or country destination.

In addition, to the destination marketing strategies and activities that the airport can lead or participate, the promotion of the destination (city and/or country) is incorporated into the respective airport's Master Plan. For example, the new airport terminal in Abu Dhabi has been inspired and designed according to the city's/emirate's natural landscape characteristics, including the terminal' s roof top (wave-like roof giving the impression of rolling desert dunes, whereas the four themed areas (piers) representing the ocean, city, oasis and desert [12]).

All of the above, coupled with the airport's intended passenger experience (as it was mentioned in the respective section previously with JFK's T5 roof-top park example) represent airport branding's key roles in terms of:

- Arrival and Departure point of the City and country (therefore becoming automatically a destination/national Ambassador)
- Incorporating Cultural, Artistic, Architectural Characteristics of the City/Country in its design and facilities
- Enhancing Passenger Experience according to local and regional culture

Airport brands are also synonymous with the following elements, which represent their key characteristics:

- Service quality
- Retail options
- Lounges

The quality of service aimed at each airport is formulated by a number of factors, including:

- National and regional governments' objectives
- Airport operator's strategy
- Main airlines based and operating from the airport
- Passengers that will use the airport's facilities

The extend that each of the above mentioned stakeholders will be influencing the intended quality of service at each airport is also dependent on the ownership model of the airport as well as the respective government's financial strength. Nevertheless, it should be emphasized that the relationship between the airport operator and its main base-airline is a symbiotic relationship, meaning that the success and prosperity of the one party will be influencing the success and prosperity of the other party. For example, Dubai Airport could not have been a high quality airport if instead of Emirates as its main base-airline would have a low-cost airline and vice-versa. Another good example is Luton Airport during the early years of easyJet's success and fast growth that wanted to invest in upgrading significantly its facilities that easyJet opposed rigorously [13].

The passengers that will be using the airport will also largely determine the retail strategy options available for each airport. The type of passengers as well as their specific needs and disposable incomes will determine after a detailed passenger profiling study the type of commercial retailers as well as the mixture of national and international brands that the airport should ideally be offering. The airport's commercial offering as well as how it will be branded (e.g. Munich My Duty Free) will consist (and shape) the respective airport's unique brand.

The airport lounges as well as other key airport infrastructural elements are part of each airport brand's characteristics (although a further study is recommended for determining the extent to which passengers predominantly relate airport lounges with the airport brands or the airline strategic alliance brands.

We have reviewed the Airport Branding's role and characteristics and we have seen that it creates:

- A sense of place, and
- A unification of like-minded passengers based on their airport choice/like-minded sub-group

2.2 Brand Loyalty

It has been demonstrated and accepted over the years that not all products and services, no matter how successful their respective brand strategy is, can exhibit the same degree of brand loyalty and that every industry has its own specific limits of brand loyalty extent that any brand offering its respective products and/or services in the specific industry could potentially research but not exceed. The highest degree of

brand loyalty is expected to be found among football club supporters, claimed to be irrationally loyal [14], since "the commitment of football supporters to their club is of a different order of magnitude to other kinds of brand loyalty, since they are likely to support a club almost from cradle to grave" [15]. In contrast, on the other extreme of the industry level of brand loyalty limitations spectrum, most people's loyalty to a tour operator ends immediately after the specific holiday has been finished [16].

Crandall (1995) (as cited in [17]) has argued that the airline industry's service can generate only a very 'soft' brand loyalty. He explained that this is because airline passengers place great importance on price and schedule, and because there are limited differences between the services that different airlines offer (although this tendency is changing over the recent years, especially for the premium/business class passengers, with the premium brand airlines going the extra mile in terms of how to make their airline service unique—e.g. Emirates A380 Private Suite). Since price and schedule influence so heavily the airline choice of customers (particularly in the short-haul routes), brand identification becomes a secondary issue. To support his view, Crandall (1995) (as cited in [17]) also argued that while passengers may have a 'favorite airline', more often than not, they are willing to fly on a different airline for even small differences in departure time and fare. This is also further supported by a study of business travel market adoption of low cost carriers that identified that business travelers and their corporate travel managers were similar in their attitudes towards low cost carriers, since they liked the price of the service but not the limited scheduled and their restricted ticket flexibility [18].

Since passengers may consider the airline service, as primarily a seat on an airplane (generic product) and therefore as a relative undifferentiated commodity (particularly in the short-haul routes), the only way an airline can differentiate itself from competitors is by creating a strong brand that will generate customers' preference and loyalty. The problem is how to establish and maintain a strong brand from a service that, as suggested, until now it only generates a very soft brand loyalty.

Airlines have realized that fare competition alone cannot ensure long term success for any airline, since competitors can respond quickly to price alterations [19]. For this reason, Pilling [20] has claimed that when airlines offer identical or similar fares, then passengers will make their purchasing decision based on the airlines' respective brands.

To summarize, airline branding is characterized by:

- A Soft brand industry
- Passengers predominantly having a preferred airline affinity BUT are more sensitive to Fares and Schedule

In the previous section, airline brand characteristics and industry brand loyalty were described, but what about the airport branding characteristics and its respective industry brand loyalty levels.

It can be argued that airport brand loyalty differs based on:

1. Type of passenger traffic (Originating from, Terminating to or Transfering through); as well as
2. Availability of airport alternatives for the same catchment area

According to these differential factors, we claim that:

- Point-to-point airports (Destination City): No brand loyalty, since passengers to not have any other airport alternative;
- Transfer (hub) airports: Strong brand loyalty, since passengers have a large number of options and they will exercise a level of route preference via their preferred airport hub brands.

It should be emphasized that the suggested brand loyalty per airport category classification does not indicate that airport branding is more significant for one airport category in compared to the other, but rather focuses on the available alternative airport options the passenger have and therefore being able to exercise his/her brand loyalty level of commitment.

2.3 Time Spend at Airports and Emotional Affinity with Their Airport Brands

It is suggested in this paper, that the more time a passenger spends at a specific Airports, the higher the emotional affinity and association that it develops with the respective airport-brands [10, 11].

3 Airport Social Media Influencers

A common trend is the fact that social media and in particular social media influencers, may have an impact in influencing decisions of travelers [21]. Certain Instagram influencers such as Brian Kelly (thepointsguy), Kiersten Rich (theblondaboard), Stathis Kefallonitis (dr.kefallonitis) have thousands of followers. The impact of social media influences has been characteristics as influencer marketing and its importance in brand growth has been increasing steadily. Social media influencers particularly in the area of airport marketing can: (a) influence select target audiences (frequent flyers, high status flyers), (b) may share useful authentic and trustworthy information (new lounges, family areas, etc.), (c) develop and use specific hashtags (#DubaiAirport), (d) provide reliable third-party individual interactions (advice about a terminal's facilities, airport hotels, etc.). Above all, social media influencers create a new channel of marketing that affects brand perception and extend the benefits of an airport brand. This equals millions of dollars in indirect marketing through the promotion of a third-party social media influencer.

4   Conclusion

In order to increase awareness of airport branding and encourage passengers flying through specific airports, airport management teams need to highlight and communicate airport differential advantages, benefits and manage expectations. Exploring and enhancing the relationship between airport management, airport-brands and home-airlines is crucial for achieving these goals. Strengthening the relationship among airport management, airport-brand image and the home-airline is essential for the success of such partnerships and the growth of the airport as a hub (if applicable). Creating a unique airport brand, that highlights its advantages, helps maintain and sustain the brand's positioning.

References

1. Kapferer JN (1997) Strategic brand management. Kogan Page, London, p 8
2. Knemeyer D (2006) Brand experience and the web. Digital Web, 14 July 2004
3. Kalligiannis K (1999) An investigation of potential brand conflict between Virgin Atlantic and Virgin Express. Thesis, Cranfield University
4. Kalligiannis K (2009) An investigation of potential brand inconsistencies within the airline strategic alliances. Ph.D. thesis, Cranfield University
5. Kefallonitis E (2004) Brand associations as a design driver. Ph.D. thesis, Cranfield University
6. Kefallonitis EG, Sackett PJ (2004) Brand and product integration for consumer recognition: a review. In: Design and emotion. CRC Press, London, pp 350–354
7. Kefallonitis EG (2015) Airline brand dissatisfaction: an overview. Int J Strateg Innov Mark 2:1–16
8. Alexander P (1999) What branding strategies and techniques should an airline alliance adopt in order to ensure airline alliance branding success? Unpublished M.Sc. thesis, Cranfield University
9. Kalligiannis K, Iatrou K, Mason K (2005) How do airlines perceive that strategic airline alliances affect their individual branding? J Air Transp 11:3–21
10. Kefallonitis EG (2017) Country-of-origin and airline brand effects: a study of brand associations. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer, Cham, pp 747–752
11. Aziz N, Kefallonitis E, Friedman BA (2014) Turkey as a destination: a study of sensory brand associations. Tour Cult Commun 14:77–89
12. Webster N (2017) Abu Dhabi's new midfield terminal to offer gateway to cultural heart of the UAE. 7 Nov 2017
13. Clarke H (1999) Easyjet poised for EU protest, Sunday 24 Jan 1999, Independent
14. Salomon Brothers (1997) In: Innovative loyalty and relationship marketing conference, Wednesday 22 May 2002, Royal Aeronautical Society, London
15. Smith J (1998) Football, it's values, finances and reputation. In: Innovative loyalty and relationship marketing conference, Wednesday 22 May 2002, Royal Aeronautical Society, London
16. Rogers D (1998) Travel: sun, sea and brands. Marketing, 26 March 1998
17. Jenkins D (1995) The unique U.S. airline industry. In: Jenkins D (ed) The handbook of airline economics. McGraw-Hill, New York, pp 37–44
18. Mason K J (1995) A stakeholder approach to the segmentation of the short-haul business air travel market. Doctor of Philosophy thesis, University of Plymouth

19. Jones TO, Sasser WE (1995) Why satisfied customers defect. Harv Bus Rev 73:88–99
20. Pilling M (2003) Price promise. Airline Business, April 2003
21. Kavoura A, Kefallonitis E (2018) The effect of social media networking in the travel industry. In: Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, PA, pp 4052–4063

Do Social Media Affect Museums' Brand Equity? An Exploratory Qualitative Study

Zoe-Charis Belenioti, George Tsourvakas, and Chris A. Vassiliadis

Abstract The beneficial role of traditional marketing communication tools on branding performance is a dominant feature of marketing bibliography Moreover, the advent of social media has definitely resurged this research interest following the revolution both within For Profit and Non Profit Organizations communications (NPOs and FPOs) context. Thus, there is a growing trend towards the impact of both e-marketing and social media tools on destination branding procedures. However, due to its infant nature, very little is known on the association between social media and brand equity. No single study so far has empirically explored the role of social media on museums' branding. Addressing previous calls within FPOs and NPOs' sector and having recently reviewed and established theoretically the positive link, (1) first, between the social media and museums (2) second, between social media and NPOs' brand equity, and (3) third, between social media on museum branding equity. The present study examines through a qualitative method the social media impact on museums brand equity. Data were collected using semi-structured interviews, that have been held for a month with communication officers of 30 museums. This work contributes to existing knowledge of multidisciplinary research interests such as museum branding, social media marketing and tourism marketing, both by confirming the beneficial contribution of social media on museums' brand equity, visitors' satisfaction and visitors' engagement, and by providing valuable managerial insights.

Keywords Social media · Museums · Brand equity · Qualitative study

Z.-C. Belenioti (✉) · G. Tsourvakas
Aristotle University of Thessaloniki, Thessaloniki, Greece

C. A. Vassiliadis
University of Macedonia, Thessaloniki, Greece

1 Introduction

Central to the entire discipline of branding is the concept of marketing communication tools [1–3]. In the light of the social media era various researchers have explored its effect within For Profit Organizations (henceforth, FPOs) [1, 4–7]. Various studies have also explored the impact of e-marketing and social media tools on destination branding [8–11]. Nevertheless, social media is becoming a vital tool for museums' sustainability given its multidimensional effect [12], few studies have investigated its impact on brand equity [1, 12, 13]. Especially, within NPOs only scant studies—at a desk research level—have investigated this impact [12–20]. To Belenioti and Vassiliadis [13], so far, there are no data on the link between social media use and museums' customer-based brand equity as defined by Liu et al. [18, p. 25, lines 34–36]. Therefore, this study aims to contribute within the link between social media and CCBE by exploring the following research questions

RQ1: Does different social media use affects museums Customer Based Brand Equity (CBBE)?
RQ2: Does the use of social media increase visitors' satisfaction?
RQ3: Does the use of social media boost the brand engagement with visitors?

2 Literature Review

In recent years, museums represent a shift towards branding. Despite, the ambiguity between brands skeptics and brand advocates, "branding is the heart of the future museum" [19, p. 2]. However, Belenioti and Vassiliadis [13] concluded that research on brand equity and NPOs—along with museums' customer based brand equity-remains in its infancy [13, 19]. For instance, only Camarero et al. [20] identified four factors as determinants of brand equity; brand value, brand recognition, brand quality and brand uniqueness. They also confirmed a positive link between brand equity both with visitors' satisfaction and willingness to pay. On the other hand, focused on customer based brand equity in museums and inspired by the link among brand awareness, perceived quality, brand image, brand value and brand loyalty within in tourism field [20–22]. Liu et al. [18] identified that brand values as mediator of museums' customer-based brand equity. In addition, the same authors showed a positive link between consumer recognition and perceived quality along with brand image. They also confirmed the impact of perceived quality on brand image. Moreover, their study revealed that brand image, brand quality and brand awareness do not directly affect brand loyalty although the last is a critical factor to the decision process.

Besides, marketing communication tools have a pivotal role in brand equity both in FPOs and NPOs context [2, 3, 12, 14, 15, 23–26]. Precisely, prior studies link social media with brand equity both in FPOs [1, 21, 27–32]. Furthermore, the available studies support previous research that social media use and brand equity

boost within NPOs context [15, 21, 33–37] as well. Social media also boost perceived quality, brand loyalty, and brand trust [38, 39].

Finally, bibliography shows a positive link of social media use and consumer brand engagement in FPOs context [5, 16, 29, 38, 40–43] or destination marketing organizations [9–11, 44]. Likewise, there is an association within OB/GYN [37] or healthcare NPOs, [17, 34, 35] and cultural NPOs such as festivals [14, 44] and museums [6, 12, 19, 23, 38, 45].

3 Methodology

The survey examines how museums exploit social media to boost their branding, visitors' engagement and boost visitors' satisfaction. A pre-test questionnaire was also distributed to ten respondents to verify its credibility and its ease of comprehension. Semi-structured interviews were conducted with 30 communication officers, with a mean age of 45 years. Interviews were conducted from May 2017 to July 2017. A random sample of museums was recruited based on the 158 museums referred to the official cultural guide launched by the Greek Ministry of Culture and the report of Museums and archaeological sites (visitors, receipts) published by ELSTAT (12/2016). Primary inclusion criterion for the participants was their affiliation with social media–corporate communication within those museums context and museums availability. Thirty Greek Museums contributed to our research study data collection method. Respondents were museum practitioners and representatives of 30 Greek Museums in central and north Greece, region of Attica (Central Greece) and North Greece (Regions of Macedonia & Thrace) serving as communication officers. The interview lasted 45 min. The questionnaire is based on the prior work of various renowned researchers such Chung et al. [46], Whelan [36] and international organizations within museum sector (UNESCO), while new constructs were also added given the insights of literature review analysis. The new set of questions investigates managers' perception on the association between social media and customer-based brand equity of museums visitors, brand awareness in museums, brand engagement and visitors' satisfaction.

4 Findings

Regarding the first question, respondents were asked about the link between social media and museum customer-based brand equity dimensions—as defined by Liu et al. [18], such brand values, brand loyalty, perceived quality, brand identity, brand awareness. Particularly, Table 1 shows an intensively positive correlation between social media and brand awareness (45/100). Similarly, within central Greece's context, a positive correlation was also found between social media and brand values (15.3/100), between social media and brand loyalty (13.5/100), between social

Table 1 Social media boost on museums' customer brand equity perception; The Central & North Greece respondents

	Brand awareness	Brand identity	Perceived museum quality	Brand loyalty	Brand values
Central Greece	45	13.8	11.8	13.5	15.3
North Greece	25.4	15.4	18.8	15.4	10.8
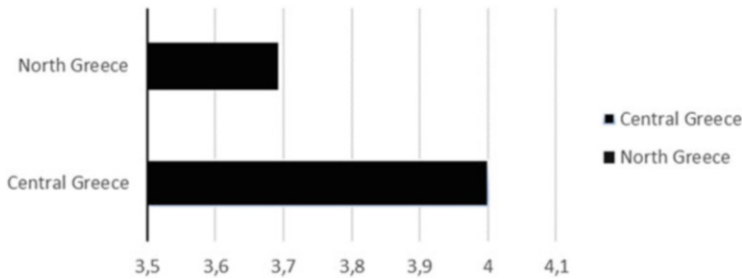
Fig. 1 Social media boost on visitors' satisfaction level; managers' perception

media and brand identity (13.8/100) and finally, between social media and perceived quality (11.8/100).

In the same vein, in North Greece's context (see Table 1), strong evidence was found between social media and museums' customer-based brand equity dimensions. Specifically, respondents concluded that social media boost massively brand awareness (25.4/100) and perceived quality (18.8/100). Then, brand identity and brand loyalty followed (15.4/100) while brand values reveal the lowest percentage (10.8/100). In a nutshell, both in central and north Greece findings revealed that there is as positive correlation between social media use and customer-based brand equity. Precisely, both in Central Greece and North Greece findings (see Table 1) reveal an intensively positive correlation first between social media and brand awareness (45/100 and 25.4/100, respectively). However, there is an ambiguity regarding social media impact on variables such as perceived quality and brand values, given that managers in Central Greece conclude that social media effects on a larger scale brand values (15.3/100 and 10.8/100, conversely) than perceived quality (11.8/100 in Central Greece and 18.8/100, in North Greece).

The next section of the survey was concerned with managers' perception on social media impact towards visitors' satisfaction. Comparing the two results, we conclude that both in central and north Greece, a positive link between social media and visitors' satisfaction (see Fig. 1).

Finally, in the same vain managers reported that social media do use boost visitors' engagement. There is a positive relation between social media and engagement both in museums of north (mean = 4.46) and central Greece (mean = 4.65) (see Table 2).

Table 2 Social media boost on visitors' engagement; managers' perceptions

	Average
North Greece	4.46
Central Greece	4.65

5 Discussion, Conclusions and Limitations

Overall, this paper supports prior studies linking social media with brand equity both in FPOs [1, 27, 28, 38, 47–49]. Second, regarding the link between social media and brand equity, these results support previous research that social media use and brand equity boost within NPOs context as well [15, 17, 24, 26, 33, 35, 38, 47, 50]. The study is in accord with similar studies in cultural tourism small-scale event and NPOs, such as Thessaloniki Food Festival [14] or museums [15, 25, 34, 36, 51]. Regarding the link between social media and satisfaction (RQ2), the study also accords with earlier observations, which showed that social media boost perceived quality, brand loyalty, and brand trust [30, 38].

Finally, the study corroborates with prior findings on the positive link between social media use and consumer brand engagement in FPOs context [16, 29, 38, 40, 41]. Likewise, this study confirms previous insights within OB/GYN [37], healthcare industry [17, 35], and cultural NPOs [26, 34] such as festivals [14, 52] and museums [6, 12, 23, 45, 46, 53–55]. Despite its exploratory nature and limited sample, the study valuable insights to communication officers and museums practitioners. Future studies are welcome to validate these insights. The impact of social media on connected passengers [56] could also provide interesting insights within museum brands.

References

1. Bruhn M, Schoenmueller V, Schäfer DB (2012) Are social media replacing traditional media in terms of brand equity creation? Manag Res Rev 35(9):770–790. https://doi.org/10.1108/01409171211255948
2. Keller KL (2009) Building strong brands in a modern marketing communications environment. J Mark Commun 15(2–3):139–155. https://doi.org/10.1080/13527260902757530
3. Kapoor PS, Jayasimha KR, Sadh A (2013) Brand-related, consumer to consumer, communication via social media. IIM Kozhikode Soc Manag Rev 2(1):43–59. https://doi.org/10.1177/2277975213496514
4. Berthon P, Pitt L, Plangger K, Shapiro D (2012) Marketing meets Web 2.0, social media, and creative consumers: implications for international marketing strategy. Bus Horiz 55(3):261–271. https://doi.org/10.1016/j.bushor.2012.01.007
5. Hennig-Thurau T, Edward C, Evanston IL, Christian F, Sonja G, Lobschat L, Rangaswamy A, Bernd S (2010) The impact of new media on customer relationships. J Serv Res 13(2009):311–330. https://doi.org/10.1177/1094670510375460
6. Vassiliadis C, Belenioti ZC (2017) Museums & cultural heritage via social media: an integrated literature review. Tourismos (Special Issue 2017) 12(3):97–132. http://etem.aegean.gr/images/VOL12NO3.pdf

7. Belenioti Z-C, Andronikidis, AI, Vassiliadis C (2015) Classifying and profiling social media users: an integrated approach. In: Proceedings of the second European conference on media & mass communication, pp 183–204

8. Fotiadis A, Vassiliadis C, Piper L (2013) Measuring dimensions of business effectiveness in Greek rural tourism areas. J Hosp Market Manag 23:21–48. https://doi.org/10.1080/19368623.2012.746931

9. Buhalis D, Inversini A (2014) Tourism branding, identity, reputation co-creation, and word-of-mouth in the age of social media. In: Mariani MM, Baggio R, Buhalis D, Longhi C (eds) Tourism management, marketing and development, vol. 1: the importance of networks and ICTs. Palgrave Macmillan, New York, pp 15–40. https://doi.org/10.1057/9781137354358

10. Wozniak T, Stangl B, Schegg R, Liebrich A (2016) Do social media investments pay off? Preliminary evidence from Swiss destination marketing organizations. In: ENTER2016 eTourism conference, 2016-02-02–2016-02-05, Bilbao, Spain

11. Xu F, Buhalis D, Weber J (2017) Serious games and the gamification of tourism. Tour Manag 60:244–256. https://doi.org/10.1016/j.tourman.2016.11.020

12. Villaespesa E, Kingdom U (2013) Diving into the museum's social media stream analysis of the visitor experience in 140, museum and the web 2013. http://mw2013.museumsandtheweb.com/paper/diving-into-the-museums-social-media-stream/

13. Belenioti Z-C, Vassiliadis CA (2016) Branding in the new museum era. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer, Cham, pp 115–121. https://doi.org/10.1007/978-3-319-33865-1

14. Belenioti Z-C, Gkarane S, Vassiliadis C (2017) The contribution of social media to small scale events: boosting the city branding & tourism demand through Thessaloniki food festival. In: 5th international conference on contemporary marketing issues ICCMI, 21–23 June 2017, Thessaloniki, Greece, pp 224–229

15. Belenioti Z-C, Vassiliadis CA (2017) Social media impact on NPO brand equity: conceptualizing the trends and prospects. In: Vrontis D, Weber Y, Tsoukatos E (eds) 10th Annual Euromed Academy of Business (EMAB) conference. EuroMed Press, Rome, pp 150–160

16. Langaro D, Rita P, De Fátima Salgueiro M (2015) Do social networking sites contribute for building brands? Evaluating the impact of users' participation on brand awareness and brand attitude. J Mark Commun 24:1–23. https://doi.org/10.1080/13527266.2015.1036100

17. Leek S, Houghton D, Canning L (2017) Twitter and behavioral engagement in the healthcare sector: an examination of product and service companies. Ind Mark Manag:1. https://doi.org/10.1016/j.indmarman.2017.10.009

18. Liu CR, Liu HK, Lin W-R (2015) Constructing customer-based museums brand equity model: the mediating role of brand value. Int J Tour Res 17(3):229–238. https://doi.org/10.1002/jtr.1979

19. Belenioti Z-C, Tsourvakas G, Vassiliadis CA (2017) A report on museum branding literature. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer, Cham, pp 229–234. https://doi.org/10.1007/978-3-319-56288-9_31

20. Camarero C, Garrido-Samaniego MJ, Vicente E (2012) Determinants of brand equity in cultural organizations: the case of an art exhibition. Serv Ind J 32(9):1527–1549. https://doi.org/10.1080/02642069.2011.567414

21. Chen CF, Tseng WS (2010) Exploring customer-based airline brand equity: evidence from Taiwan. Transp J 49:24–34. https://doi.org/10.2307/40904819

22. Hyun SS (2009) Creating a model of customer equity for chain restaurant brand formation. Int J Hosp Manag 28:529–539. https://doi.org/10.1016/j.ijhm.2009.02.006

23. Hausmann A (2012) The importance of word of mouth for museums: an analytical framework. Int J Arts Manag 14:32–43

24. Nah S, Saxton GD (2012) Modeling the adoption and use of social media by nonprofit organizations. New Media Soc 15:294–313. https://doi.org/10.1177/1461444812452411

25. Padilla-Meléndez A, Del Águila-Obra AR (2013) Web and social media usage by museums: online value creation. Int J Inf Manag 33:892–898. https://doi.org/10.1016/j.ijinfomgt.2013.07.004
26. Lovejoy K, Waters RD, Saxton GD (2012) Engaging stakeholders through Twitter: how nonprofit organizations are getting more out of 140 characters or less. Public Relat Rev 38:313–318. https://doi.org/10.1016/j.pubrev.2012.01.005
27. Kim AJ, Ko E (2012) Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. J Bus Res 65:1480–1486. https://doi.org/10.1016/j.jbusres.2011.10.014
28. Kananukul C, Jung S, Watchravesringkan K (2015) Building customer equity through trust in social networking sites: a perspective from Thai consumers. J Res Interact Mark 9(2):148–166
29. Davis R, Piven I, Breazeale M (2014) Conceptualizing the brand in social media community: the five sources model. J Retail Consum Serv 21:468–481. https://doi.org/10.1016/j.jretconser.2014.03.006
30. Lobschat L, Zinnbauer MA, Pallas F, Joachimsthaler E (2013) Why social currency becomes a key driver of a firm's brand equity – insights from the automotive industry. Long Range Plan 46 (1–2):125–148. https://doi.org/10.1016/j.lrp.2012.11.004
31. Stojanovic I, Andreu L, Curras-Perez R (2018) Effects of the intensity of use of social media on brand equity. Eur J Manag Bus Econ 27(1):83–100. https://doi.org/10.1108/EJMBE-11-2017-0049
32. Godey B et al (2016) Social media marketing efforts of luxury brands: influence on brand equity and consumer behavior. J Bus Res 69(12):5833–5841. https://doi.org/10.1016/j.jbusres.2016.04
33. Asorwoe E (2017) The diffusion of social media in nonprofit organizations. FIU Electronic theses and dissertations. 3471. https://digitalcommons.fiu.edu/etd/3471. https://doi.org/10.25148/etd.FIDC001925
34. Young J (2012) VCU scholars compass the current status of social media use among nonprofit human service organizations: an exploratory study. Dissertation, Virginia Commonwealth University, Richmond, VA
35. Stefanone M, Anker AE, Evans M, Feely TH (2012) Click to "like" organ donation: the use of online media to promote organ donor registration. Prog Transplant 22:168–174. https://doi.org/10.7182/pit2012931
36. Whelan R (2011) The use of social media in museums. Available at: http://trentcentre.ca/documents/public/4157FinalReport.pdf (Report)
37. Constantinides E, Karantinou K, Alexiou M, Vlachaki A, Bernritter SF, Verlegh PWJ, Smit EG (2016) Why nonprofits are easier to endorse on social media: the roles of warmth and brand symbolism. J Interact Mark 33:27–42. https://doi.org/10.1016/j.intmar.2015.10.002
38. Kuvykaite R, Piligrimiene Z (2014) Consumer engagement into brand equity creation. Procedia Soc Behav Sci 156:479–483. https://doi.org/10.1016/j.sbspro.2014.11.225
39. Gautam V, Sharma V (2017) The mediating role of customer relationship on the social media marketing and purchase intention relationship with special reference to luxury fashion brands. J Promot Manag 23:872–888. https://doi.org/10.1080/10496491.2017.1323262
40. Pongpaew W, Speece M, Tiangsoongnern L (2017) Social presence and customer brand engagement on Facebook brand pages. J Prod Brand Manag 26:262–281. https://doi.org/10.1108/JPBM-08-2015-0956
41. Triantafillidou A, Siomkos G (2018) The impact of Facebook experience on consumers' behavioral Brand engagement. J Res Interact Mark 12:164–192. https://doi.org/10.1108/JRIM-03-2017-0016
42. Kırcova İ, Yaman Y, Kose SG (2018) Instagram, Facebook or Twitter: which engages best? A comparative study of consumer brand engagement and social commerce purchase intention. 1 (Mar):602–611
43. Turri AM, Smith KH (2013) Developing affective brand commitment through social media. J Electron Commerce Res 14(3):201–215

44. Hudson S, Roth MS, Madden T, Hudson R (2015) The effects of social media on emotions, brand relationship quality, and word of mouth: an empirical study of music festival attendees. Tour Manag 47:68–76. https://doi.org/10.1016/j.tourman.2014.09.001

45. Dudareva N (2014) What makes social media relevant for arts and culture marketing a study applied to Facebook pages of three museums in Copenhagen. Master thesis, Supervisor: Gurli Jakobsen, CBS Centre for Corporate Social Responsibility, Copenhagen Business School, May 2014

46. Chung TL, Marcketti S, Fiore AM (2014) Use of social networking services for marketing art museums. Mus Manag Curatorship 29:188–205. https://doi.org/10.1080/09647775.2014.888822

47. Pham PHM, Gammoh BS (2015) Characteristics of social-media marketing strategy and customer-based brand equity outcomes: a conceptual model. Int J Internet Mark Adv 9:321. https://doi.org/10.1504/IJIMA.2015.072885

48. Adetunji PP, Rashid SM, Ishak MS (2018) Social Media marketing communication and consumer-based brand equity: an account of auto motive brands in Malaysia. Malays J Commun 34:1–19. https://doi.org/10.17576/JKMJC-2018-3401-01

49. Bernritter SF, Verlegh PWJ, Smit EG (2016) Why nonprofits are easier to endorse on social media: the roles of warmth and brand symbolism. J Interact Mark 33:27–42. https://doi.org/10.1016/j.intmar.2015.10.002

50. Guo C, Saxton GD (2018) Speaking and being heard: how nonprofit advocacy organizations gain attention on social media. Nonprofit Volunt Sect Q 47:5–26. https://doi.org/10.1177/0899764017713724

51. Badell J-I (2015) Museums and social media: Catalonia as a case study. Mus Manag Curatorship 30:1–20. https://doi.org/10.1080/09647775.2015.1042512

52. Williams NL, Inversini A, Buhalis D, Ferdinand N (2015) Community crosstalk: an exploratory analysis of destination and festival eWOM on Twitter. J Mark Manag 31(9–10):1113–1140. https://doi.org/10.1080/0267257X.2015.1035308

53. Vogel C (2011) Museums pursue engagement with social media – NYTimes.com. New York Times

54. Carvalho J, Raposo R (2012) The adoption of social media by museums as a communication tool helping museums get into the game. In: 9th European museum advisors conference, p 10

55. Fletcher A, Lee MJ (2012) Current social media uses and evaluations in American museums. Mus Manag Curatorship 27:505–521. https://doi.org/10.1080/09647775.2012.738136

56. Kavoura A, Kefallonitis E (2018) The effect of social media networking in the travel industry: the connected passenger. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, PA, pp 4052–4063

The Sociological Approach to Tourism in the Period of Economic Crisis

Labros Sdrolias, Dimitrios Tsiotas, Olga Kalantzi, Nikolaos Kakkos, Vasileios D. Spanos, and Stefanos Koffas

Abstract International tourism, after the end of World War II, has become a mass phenomenon of major importance affecting almost all social classes of the economically developed countries. Both its diachronic potential and wide spread have made it a main subject of scientific study regarding local and national economy, natural and structural environment and also society and culture of tourist destinations. Greece, with its rich history, great culture and many natural beauties has always attracted many tourists from all over the world. Consequently, it is considered as a country with prominent tourist identity and tradition. Today, although Greece is characterized by deep economic recession, it still adopts and/or even likely is forced to continue this specific tourist philosophy and politics. Bearing in mind its tragic economic situation, this article addresses the socio-cultural impacts of tourism development, with an emphasis on the context and results of the communication between tourists and local residents. Factors that shape the features of tourists in Greece and influence their communication with local residents are analyzed. Furthermore, the possible reactions of locals concerning the attitudes of tourists as well as the way of managing emerging problems from public and private tourism sectors and other indirectly involved local and regional services are being studied.

Keywords Sociological tourist approach · Local peculiarities · Behavioral reactions · Communication deficit · Greece

L. Sdrolias (✉) · N. Kakkos · V. D. Spanos · S. Koffas
Technological Educational Institute (T.E.I) of Thessaly, Larissa, Greece
e-mail: llsdrolias@teilar.gr

D. Tsiotas · O. Kalantzi
University of Thessaly, Volos, Greece
e-mail: tsiotas@uth.gr

1   Introduction

International tourism after the World War II has become a major mass phenomenon since it began practically to address and extend—as an activity—to all social classes of industrially developed societies. The expansion of tourist travel has to do with the increase of the living standard, the reduction of working time, the provision of short or/and long-term paid working permissions and the technological improvement of transport means [1]. The diachronic and wide spread of tourism has created a main subject of study in various scientific fields concerning its multiple effects on both local and national economy, on natural and structural environment as well as on the society and culture of host tourist places [2].

This paper deals with basic socio-cultural impacts of tourism development, bearing in mind Greek reality. More specifically, the first section analyzes the factors which shape the characteristics of tourists (in Greece and in general) and those which affect their communication with the local inhabitants. In the second section, the possible reactions of the locals regarding the attitude of the tourists are studied as well as the management of any emerging problem from public and private tourism organizations. Finally, the third section criticizes the most important problems which are encountered in this communication context.

2   The Communication of Tourists and Local Residents During the Trip

The framework of communication between tourists and host residents, during a touristic journey, is considered to be the set of formal and informal exchange interactions of all types of messages and information that are generated from both sides. This kind of communication is a complex process, which depends on a variety of parameters by demand (tourists) and offer (locals) [3]. On the one hand, every tourist is a social unit who invests in making a journey sharing money, time and energy, maintaining simultaneously individualized expectations of emotional reward. However, bearing in mind the behavior of tourists, it is possible to recognize several similarities which conventionalize their study. According to Cohen [1], there are four types of tourists: the "organized" and "individual" mass tourists, who are considered as institutionalized tourists and the "explorers" and "travelers" who are non-institutionalized. On the other hand, the inhabitants of the host region are the social part that lives in the destination and exploits the productive factors of the region, hoping for prosperity and general economic development [4]. In this context, the features of tourists (Fig. 1) and the communication between tourists and locals are presented in the following paragraphs.
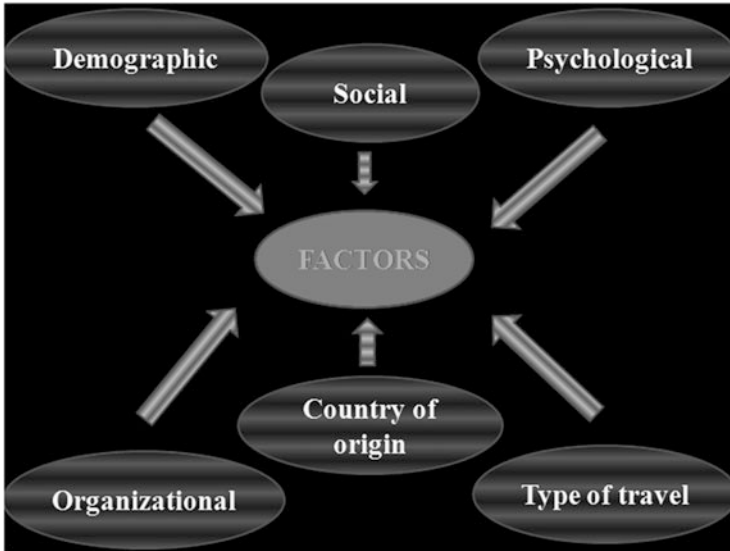
Fig. 1 Factors which shape the characteristics of tourists

2.1 Factors Which Shape the Characteristics of Tourists

Social and Psychological Factors The social status of tourist mass determines significantly the type of tourism. The tourist trip is a ticket for a way out consisted of leisure and rest, sometimes in a world with familiar and recognizable symbols and sometimes in an unknown world which promises a different way of life than everyday life. In both cases, the motivation function makes the tourist a dynamic modulator of the particular social features during the journey [3, 5]. For instance, urban residents make more holiday trips per year compared to rural residents. Despite the "democratization" of the journeys, there are still significant social differences among industrialized and developing countries, not only in terms of travelling but also in terms of the distance and type of destination, organization, motivation, style of travel and deeper cultural motives [1].

Demographic Factors Tourism is a phenomenon which is determined also by demographic factors such as gender, age and income. In total, it seems that men travel more often than women [1], probably because of the social stereotypes that exist about the position of the women in several developing countries. Furthermore, the elderly travel more than younger people [1, 6], apparently due to the fact that the first have more free time and the second have lack of economic independence. In addition, higher income categories make annual holiday travels more frequently and in larger numbers than the economically weaker people [1]. Last but not least, the training level of the tourists contributes to make travel reality either by facilitating

communication through language skills or by developing the search for knowledge using the contact with other cultures [4, 6].

Country of Origin The level of prosperity and in general, the economic development of the country of origin, plays a decisive role in forming the profile of the tourists. Tourists from countries with a high standard of living and per capita income make more trips and usually spend more money during their holidays [4]. Moreover, the mother tongue of the tourists in some cases facilitates travelling to more destinations [6], such as English-speaking and Latin-speaking countries.

Institutional and Organizational Factors The institutional framework of various states, especially the developed ones, has specialized regulations on tourism, influencing indirectly the characteristics of tourists. In particular, welfare states, by granting paid working permissions, adequate pensions and opportunities for social tourism highlight the institutional nature of tourism by adjusting its relationship with the consumer and its impact on the national economy through the organization and promotion of the tourism sector [7].

Type of Travel The main type of tourist travel that has prevailed in the postwar period is "holiday packages" which are based on the organization and standardization of procedures, phases and services throughout the trip as an example of socialism towards consumption, shaped by the complex function of supply and demand in modern tourism. In this case, the tourist enjoys a safe, organized and qualitative touristic trip, thus limiting his sociability to the status of a simple buyer of a product or a hurried observer of the social life of the host region [3]. Through standard package holidays, substantial conditions of direct contact or communication with the place of visit and its residents are formed while sociability is limited between the participating tourists and those who work in the tourist businesses of the host country/region. In each of the previous cases, the sociability of the tourist is predetermined and rarely differentiated from place to place since its features are influenced by the organization of the trip and not by the search for travel experience and communication [3].

2.2   Factors That Affect the Communication Between the Tourists and the Residents of the Host Area

Touristic Travel According to Tsartas [3], the advertising of the tourist products and services gives impressions to the tourists in advance, about the destination area or its inhabitants and consequently affects in a similar way the outcome of the communication. This situation is also supported by the fragmented or short-term form of communication between these parties, which functions into a standard "commercial" context. Also, the quality and organization of the infrastructure of the reception area, as well as the general organizational and commercial parameters of the tourist transaction, act decisively into this sort of communication. In addition,

the bulk of tourism disturbs the exercise and continuity of communication. Initially, as long as tourism takes place in the early stages of tourism development in a region, tourists are treated as part of the code of the traditional native-tourist relationship. However, as tourist intensity increases, tourists are becoming less and less welcome and this is a fact that alters the traditional communication relationship [1].

Social Differences and Stereotypes Between Locals and Tourists The consequences of social contact between tourists and locals depend to a great extent on the cultural background and the conditions of interaction [8]. For example, the xenophobic stereotypes of both tourists and locals, obviously affect their communication [3]. An important role of in shaping them plays the economic background [4], the value system and religious belief [1] of the societies which contribute to the conclusion of communication.

Specific Features of Communication Poles The communication between tourists and locals is complex since these two poles are composed of social units with personalized characteristics. Some features, for its determination, should be taken into account such as:

- The intention of tourists to join the lifestyle of the host region during the journey which is related to the social and psychological factors which form their profile and generally their receptivity to a non-biased communication [3].
- The nature of communication, according to which tourism is a field of work for the locals and entertainment for visitors, thus describing a contradictory relationship and potentially competitive [1].
- As mass tourism services escape the boundaries of inherent hospitality, there is a tendency of tourists' exploitation. Local people try to make the most of their profits, degrading the quality of the provided services and this is a fact that is characterized often by aggressiveness, leading to increased discrimination. Such incidents are detrimental to the long-term development of tourism, leading the authorities and companies to actions which depersonalize the tourist system [1].
- Communication between tourists and locals also takes a spatial dimension. The negative reactions to tourism development is a result of the proximity the inhabitants' residences and the gathering of tourist activities [6].

The examination of the above communication relationship throughout empirical research highlights the following observations:

- In their studies, McCool and Martin [8] and Williams et al. [9], held in Montana and Virginia respectively, found that older residents had less favorable perception about tourism than the other residents.
- Cavus and Tanrisevdi [10] found that age and home distance is related to negative perceptions of tourism development.
- As for the genus, Mason and Cheyne [11], in a study of New Zealand's rural areas, found that women opposed more than men in tourism development due to some negative effects such as traffic growth, noise and crime (despite they acknowledged the benefits of tourism).

- Mansfeld [12] found that residents who live away from tourist areas were more negative while Sheldon and Var [13] reported that residents of densely populated tourist areas were more positive regarding the development of tourism industry.

3 The Reactions of the Locals to the Attitudes of Tourists and Their Management by the State

3.1 Possible Reactions of the Locals to the Attitudes of Tourists

Interaction between locals and tourists can lead to new social and cultural opportunities but also can threaten the social structure and cultural identity of the region, causing loss of local traditions and abandonment of local traditional activities [14, 15, 16]. In this context, the multifactorial process of social contact between people with a different cultural, social, economic, national and religious identity or background affects in various ways the final attitude and reaction of the locals. At first, there is a positive reaction mainly concerning the employees in the tourism sector who invest in the economic dimension of the tourist development in their area, ignoring any problematic behavior and focusing on improving infrastructure and raising their living standards [16]. At the same time, job creation helps the community to preserve the social structure by preventing young people from emigrating [1].

In developing countries or in regions at an early stage of tourism development, there is a positive attitude of the locals towards tourists, who are treated as operators of development and modernization, even displaying trends of imitation of the behavior of the strangers. Similarly, the younger locals show a more acceptable attitude toward tourists' behavior acting as supporters of changes related to tourism [7]. Furthermore, if a place is a destination of alternative form of tourism (e.g. ecological, congress, historical, tour guide etc.), where the main communication takes place with non-institutionalized tourists, the influence on the locals is positive and constructive to regarding the preservation of historical and archaeological monuments, the protection of natural resources and the environment and the preservation of cultural values of the area [16].

On the other hand, tourism which derives from developed to developing countries is usually treated by the locals as a factor of altering the socio-cultural identity of the host country, increasing thus the social intensions. Negative behaviors also occur in the case of contacting people with completely different backgrounds, experiences and prejudices. As a result, cancellation of effective communication between tourists and locals can be observed [8]. Similarly, when residents, who live in the core of the tourist development, see inappropriate behavior from tourists which has to do with guilty acts (e.g. prostitution, vandalism, crime, drug use, excessive alcohol consumption), their reaction is intense, their behavior is aggressive and deny to

communicate. This attitude stems from the justifiable annoyance to illegal behaviors and the belief that they—the tourists—may lead to disruption the social fabric of a region [16]. In cases where tourist development reaches levels of maturity or even more saturation, there is an indifferent and a communication gap between tourists and local residents, as tourist is treated like a commercial product [17]. The lack of substantial communication causes several problems during the trip, contributing thus to the generally poor evaluation of the trip by the tourist, affecting the attractiveness of a place [7].

3.2 Problem Management by Public and Private Tourism Operators

Tourism has the potential to affect in a negative way the social and cultural structure of the host country and this is a fact that can be faced by implementing appropriate planning and tourist policy, utilizing the assistance of private operators, in order to mitigate, as possible, the often violent interaction among people with not the same social and cultural basis [7]. The management and supervision of the tourism development of each area by public bodies is particularly important, under the supervision of a central national tourism organization (such as the Greek Tourism Organization) so that the entire touristic product can be coordinated. With the help of decentralized tour operators and local tourist organizations (e.g. Municipal organizations), as well as cooperation with private tourism organizations (e.g. hotel chambers, Greek Tourism Confederation (SETE), local tourist clubs and associations), research, localization and problem recording can be carried out [7]. All these, give the possibility of immediate intervention when a problem occurs.

Considering the above, efforts are being made for targeted interventions in areas of uncontrolled tourist behavior due to the type of attracted tourism (usually mass youth tourism). At a recent meeting in the South Aegean Prefecture, under the aegis of the Ministry of Tourism with the participation of local stakeholders, the implementation of a pilot program for the regeneration of the Faliraki area on the island of Rhodes was discussed, taking into account a simultaneous shift towards upgraded tourism services which are going to attract more qualitative tourists [18]. In the past, for similar problems, the British consul had proposed the cooperation between Greek and British authorities while in a meeting at the Municipality of Kallithea, Athens, there was a reference to similar problems in Corfu, Kos, and Crete. Measures were proposed to solve these problems without any progress though [19]. Unfortunately, the confrontation of the competent bodies so far, regarding the problems, has been inadequate.

The above mentioned entities should cooperate with each other to promote management measures for the social impacts of tourism development which consist of carrying out several inspections by relevant public authorities (e.g. the tourist police), aiming at the limiting of the delinquent behaviors, compliance with tourist

legislation by tourist businesses such as observance of night shop hours, noise control, alcohol consumption control, alcoholic beverages quality control. Tourism development and planning must be a collective process, where proper education and training of the human resources and the society as a whole, is essential. Residents must be actively involved in the decision making processes in order to maintain social cohesion, reduce social conflicts and improve the quality of the tourist product [6, 20]. Into this framework, it has been proposed [2]:

- Conducting surveys on locals and tourists (e.g. questionnaires, interviews etc.) to identify the nature and the size of the problems and specify the most appropriate way to deal with them.
- Creation of infrastructure (e.g. tourist information offices).
- The promotion of events so that the tourists can easier connect to the history, the morals and the cultural identity of the region and its inhabitants.
- The implementation of programs and local actions by public or private bodies (environmental, cultural etc.), involving tourists and locals, thus bringing them closer, relaxing their peculiarities, developing good cooperation and fruitful communication among them.

It is also important to promote tourism educational training programs for tourism workers, targeting at the upgrade of the provided services, and training programs for tourists and residents in to improve the communication among each other. Furthermore, a code of mutual rights and obligations (behavior in religious and other places) can be promoted as well as the establishment of cooperation among the authorities of the host and origin countries by providing valid information about host country conditions. Finally, possibilities for potential cooperation among host and origin countries should be sought in order to fight any form of human exploitation within the tourism industry. Concerning sexual exploitation, which is "at odds" with the fundamental objectives of tourism, it should be penalized without concessions by the national law of every country [17].

4 Comments on Communication Problems Between Locals and Tourists

The outcome of communication between heterogeneous populations is not always positive, as it is a multifactorial process with many problems. On the one hand, residents of host regions often believe that tourism development has an adverse impact on local customs moral values of the inhabitants, especially the younger ones who tend to be more influenced by the behavior of modernized western tourists. Young people in tourist areas abandon traditional patterns of behavior, traditional values and local customs, reproducing foreign behavioral codes which are not interwoven with family environment. Organized mass tourism creates discomfort and pressure for residents of tourist areas who often feel that they do not have the

opportunity to enjoy their facilities [6]. The unequal and contradictory relationship between a tourist-consumer and a local worker often creates feelings of inferiority and dissatisfaction among the locals, who feel the pressure and fatigue of everyday work while tourists appear to be impersonal, arrogant, rich consumers.

On the other hand, tourists often complain about the level of the services and the relationship between quality and price which, according to them, do not meet their expectations as they often have a preformed and beautiful picture about services and infrastructure. Moreover, in the case of tourist development saturation, relations between locals and visitors are not characterized by courtesy and hospitality. As a result, tourists are treated as profit source and tourists perceive that as an economic exploitation. Lastly, the main objective of any of the applied tourism policies, both at national and local level, is to ensure the smooth movement and living of the tourist crowd by regulating the distribution of the tourist product and mitigating the communication difficulties between locals and tourists [7].

This whole context should be taken into account when tourism records high standards such as the case of Greece [20, 21]. Although it seems positive that the country has a great range of tourists still, there is one big problem; the spatial distribution of Greek territory. Greek islands are magic but they are too small and the infrastructure is incomplete. Resources, facilities, transport and even the way of supplying essential items such as water are a bit of a problem [21]. Thus, the conflict between tourists and locals is unfortunately a great possibility. All the above aspects can lead, through a further research, to a holistic view about tourism, especially in a period of economic recession.

References

1. Coccossis C, Tsartas P (1999) Tourist sector, vol. 2. Development and environment in tourism. EAP Publications, Patra
2. Tsartas P (1998) Sociability and tourism: characteristics analysis in different types of tourism. Greek Rev Res 96/97:111–132. https://doi.org/10.12681/grsr.731
3. Polyzos S (2011) Regional development. Kritiki Publications, Athens
4. Tsartas P, Thanopoulou M (1988) A proposal to consider the role of tourism in the socialization of Greek youth: the cases of Ios and Serifos islands. In: Tsartas P (ed) Tourism and socialization of Greek youth. EKKE Publications, Athens, pp 114–128
5. Harrill R (2004) Residents' attitudes toward tourism development: a literature review with implications for tourism planning. J Plan Lit 18(3). https://doi.org/10.1177/0885412203260306
6. Zacharatos G, Tsartas P (1999) Tourist sector, vol. 3. Policy and sociology of tourism development. EAP Publications, Patra
7. Tosun C (2002) Host perceptions of impacts: a comparative tourism study. Ann Tour Res 29 (1):231–253
8. McCool SF, Martin SR (1994) Community attachment and attitudes toward tourism development. J Travel Res 32(2):29–34. https://doi.org/10.1177/004728759403200305
9. Williams DR, McDonald CD, Riden CM, Uysal M (1995) Community attachment, regional identity and resident attitudes toward tourism development. In: 26th Annual conference proceedings of the travel and tourism research association. Travel and Tourism Research Association, Acapulco, Mexico, pp 424–431

10. Cavus S, Tanrisevdi A (2002) Residents' attitudes towards tourism: a case study of Kusadasi, Turkey. Tour Anal 7(3–4):259–268. https://doi.org/10.3727/108354203108750102

11. Mason P, Cheyne J (2000) Residents' attitudes to proposed tourism development. Ann Tour Res 27(2):391–411. https://doi.org/10.1177/0885412203260306

12. Mansfeld Y (1992) Group-differentiated perceptions of social impacts related to tourism development. Prof Geogr 44:377–392. https://doi.org/10.1111/j.0033-0124.1992.00377.x

13. Sheldon PJ, Var T (1984) Residents' attitudes to tourism in North Wales. Tour Manag 5:40–47. https://doi.org/10.1016/0261-5177(84)90006-2

14. Polyzos S, Tsiotas D, Kantlis A (2013) Determining the tourism developmental dynamics of the Greek regions by using TALC theory. Tourismos 8(2):159–178

15. Garcia FA, Vazquez AB, Macias RC (2015) Residents' attitudes towards the impacts of tourism. Tour Manag Perspect 13:33–40. https://doi.org/10.1016/j.tmp.2014.11.002

16. Cypriot Tourism Organization. http://media.visitcyprus.com/media/b2b_gr/Research_Projects/Meleti_Koinonikes_Epiptosis_Tourismou_2005.pdf

17. Democracy newspaper. http://www.dimokratiki.gr/01-03-2014/siskepsi-stin-periferia-gia-tin-anaplasi-tou-falirakiou/

18. In.gr Homepage. http://news.in.gr/greece/article/?aid=477625. Accessed 6 July 2018

19. Adults Training Center (2008) Environment, culture, tourism and regional development: tourism. Ministry of National Education, Athens

20. Kalantzi O, Tsiotas D, Polyzos S (2017) The contribution of tourism in national economies: evidence of Greece. Eur J Bus Soc Sci 5(11):39–62

21. Tsiotas D (2017) The imprint of tourism on the topology of maritime networks: evidence from Greece. Anatolia 28(1):52–68

Exploring the Factors Affecting Consumer Acceptance of Proximity M-Payment Services

Apostolos Giovanis, Androniki Kavoura, Ioannis Rizomyliotis, Sotiris Varelas, and Aspasia Vlachvei

Abstract The purpose of this study is to analyze the factors determining consumers' intentions to adopt NFC proximity mobile payment services (p-mps). An extended version of the Unified Theory of Acceptance and Use of Technology (UTAUT), a model that incorporates the most relevant theoretical approaches in the adoption literature was selected to investigate the consumers' adoption process. To empirically test the proposed model, data were collected from 513 consumers of mobile internet service providers in Greece and were analyzed using PLS. The results indicated that p-mps features, expressed by consumers' expectations about service performance and required efforts, along with the social context effects have the biggest impact on consumers' intentions to use the service, followed by channel characteristics, reflecting consumers' beliefs about p-mps usage risk and trust. Potential customers' characteristics moderating analysis suggested that the effects of performance expectancy and perceived trust on behavioral intentions are affected by gender, age and previous experience, while that of social influence only by potential customers' previous experience. Theoretical and managerial implications, limitations and suggestions for further research are provided at the end of the study.

Keywords M-payment · NFC p-mps adoption · UTAUT · Risk · Trust · Individual differences · Marketing financial self-service technologies

A. Giovanis (✉) · A. Kavoura
University of West Attica, Athens, Greece
e-mail: agiovanis@uniwa.gr

I. Rizomyliotis
University of Brighton, Brighton, UK

S. Varelas
Neapolis University of Pafos, Paphos, Cyprus

A. Vlachvei
Western Macedonia University of Applied Sciences, Kastoria, Greece

1   Introduction

Mobile payment system (mps) is an emergent self-service technology (SST) offering payment services through mobile devices without locational and temporal restrictions [1, 2]. According to Gerpott and Meinert [3], there are two categories of mps: (a) Remote mps (hereafter r-mps), enabling payments through mobile telecommunication or Wi-Fi networks, and allow the payments for digital content or online purchases through SMS or mobile internet connection, (b) Proximity mps (hereafter p-mps), enabling payments through short-range communication technologies and allow for payments for purchases such as ticketing, vending, and point-of-sale items, employing a QRcode displayed on the smartphone, or a NFC (Near Field Communication) device or Bluetooth low energy (BLE) proximity sensing technology [3, 4]. This study focuses on NFC-enabled p-mps that has become important part of consumers' shopping experience due to the continuous advancements of the technology [3].

The study of the p-mps adoption and usage process has attracted significant attention from academics and practitioners over the last years. Yet consumers' adoption and usage of this m-service is characterized as a complex process due to interplay of many factors that are under-researched so far [2]. According to Adapa and Roy [5] and Frimpong et al. [6] there are technology-, social-, channel- and personal-related factors affecting consumer behavior towards SSTs usage intentions. Although, there are many studies that have used different well-known theoretical frameworks to investigate the adoption of p-mps, there aren't studies that have examined the interplay of all the aforementioned groups of factors in order to better understand the potential customers' decision making process, towards p-mps usage.

Thus, the purpose of this study is to identify the factors affecting the p-mps adoption process and the degree of influence of each factor leading p-mps usage intentions. Drawing on the studies of Adapa and Roy [5] and Frimpong et al. [6], four groups of innovation adoption drivers (i.e. innovation features; social context; channel credibility; and personal characteristics) mainly affect SST's usage intentions. Thus, the proposed modelling framework extends the UTAUT, proposed by Venkatesh et al. [7] and its constructs express the effects of technology-related and social-related factors, with potential users' perceived risk and trust, expressing the role of channel-related factors, and potential users' demographics in order to better predict the p-mps adoption intentions.

2   Literature Review and Proposed Model

There are several theoretical models which have been used to explain the adoption of SSTs. These models include the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the Innovation Diffusion Theory (IDT), and the Unified Theory of Acceptance and Use of Technology Model (UTAUT) [4, 8, 9]. Focusing

on the p-mps context, the majority of the adoption studies use and support the TAM [10] and its extensions as a theoretical framework [11–16]. Despite the fact that the TAM and its extensions provide a reliable and valid modelling framework to investigate the technology adoption process, it has received a lot of criticism about its predictive ability for two reasons: Firstly, it considering two consumers' salient beliefs related to innovation's attributes (i.e. perceived usefulness and perceived ease of use), and no other external factors that might affect consumers' behavior; Secondly, it assuming that usage is volitional without constraints [7, 17].

To address these limitations Venkatesh et al. [7] proposed the UTAUT which integrates eight well established innovation adoption theoretical frameworks. The UTAUT includes three key constructs: performance expectancy (PE), effort expectancy (EE), social influence (SI) to model behavioral intentions (BI). The latter along with facilitating conditions (FC) predicts also usage behavior. These determinants are defined as follows [7, p. 447–453]: PE refers to "the degree to which a potential adopter has the opinion that the innovation adoption will help him to improve the performance of a task or work". EE refers to "the degree of ease associated with use of the innovation". SI is defined "as the degree to which an individual perceives that important others believe he or she should use the innovation" and reflects the normative drivers of the innovation adoption process. Finally, FC is defined as "the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system" (TPB, DTPB). The original UTAUT considers that PE, EE, and SI are antecedents of BI, while BI and FC are drivers of potential customers' actual behavior. Hence, this model assumes that the concept of "BI captures the motivational factors that affect the potential adopters' behavior and reflects the effort that they are willing to undertake in order to develop an action" [18]. This study does not consider the FC, as it investigates only potential consumers' intentions to adopt p-mps and not their actual behavior. These three variables represent the technology- and social-related variables motivating consumers to use an SST. Focusing in the context of p-mps there are three studies using UTAUT to investigate the adoption process in Malaysia, UK and USA [17, 19, 20]. All three studies support the significance of PE and BI, two of them found a significant effect of SI on BI [17, 20], and only one confirms the significance of EE on BI [19]. Lately, Slade et al. [8, 17] suggest the extension of UTAUT with perceived risk (PR) and perceived trust (PT) in order to consider the effects of SSTs' channel-related factors in the adoption process. PR in the context of SSTs expresses "the potential for loss in the pursuit of a desired outcome of using the service" [21]. PT, on the other hand, refers to potential customers' subjective belief that a service provider will fulfil its obligations [8]. Consumers often face spatial and temporal separation from their online providers and this makes them more vulnerable to greater risks as they do not have the full control of their action [8, 17]. Thus, trust in p-mps is essential to mitigate the uncertainty of m-payments to motivate the consumer to use it. Many previous studies in the field of m-services in general and mps in particular empirically validate the positive effect of PT and the negative effect of PR on BI. The studies of Slade et al. [8, 17] for example, suggest PR and PT to be included among the significant drivers of mps adoption in the UK.

Moreover, the UTAUT posits that the effects of these five constructs on BI are moderated by individual differences such as gender, age, and technology experience [7, 8, 22]. Among the three previous UTAUT studies in the context of p-mps, none of them considers the moderating role of personal factors in the adoption process. Thus, the use of the complete UTAUT is expected to provide a more comprehensive theoretical framework for predicting p-mps usage intentions and, further, better support the development of a differentiated marketing strategy towards the extension of p-mps adoption and usage. Based on the above discussion, PE, EE, SI, PR, and PT are theorized to influence behavioral intention to use a p-mps. Moreover, individual characteristics, such as gender, age, and previous experience are theorized to moderate the five previous direct relationships. Thus following the studies of Venkatesh et al. [7] and Slade et al. [8] it is hypothesized that:

H1   PE directly and positively affects BI
H2   EE directly and positively affects BI to adopt p-mps
H3   SI directly and positively affects BI to adopt p-mps
H4   PR directly and negatively affects BI to adopt p-mps
H5   PR directly and positively affects BI to adopt p-mps
H6   (a) Gender, (b) age and (c) experience moderate the positive effect of PE on BI to adopt p-mps, such that the effect will be stronger for younger males with high levels of technology experience
H7   (a) Gender, (b) age and (c) experience moderate the positive effect of EE on BI to adopt p-mps, such that the effect will be stronger for older females with low levels of technology experience
H8   (a) Gender, (b) age and (c) experience moderate the positive effect of SI on BI to adopt p-mps, such that the effect will be stronger for older males with low levels of technology experience
H9   (a) Gender, (b) age and (c) experience moderate the positive effect of PT on BI to adopt p-mps, such that the effect will be stronger for older females with limited experience of the technology
H10   (a) Gender, (b) age and (c) experience moderate the negative effect of PR on BI to adopt p-mps, such that the effect will be stronger for older females with limited experience of the technology

3   Research Methodology

To ensure the content validity of the scales used to measure the constructs of the proposed models, validated scale items from prior studies were used. As such, the scales proposed by Venkatesh et al. [22] were used to measure PE, EE, SI and BI, while those include in the study of Slade et al. [17] were used to measure PR and PT. All scale items were measured using a 7-point Likert scale with 1 corresponding to "strongly disagree" and 7 to "strongly agree". A conclusive research design was selected in order to examine the relationships described in the conceptual framework. A convenience sampling was employed and a questionnaire was developed

and distributed to 600 individuals. This procedure resulted in 530 questionnaires. After eliminating those with unanswered items 513 questionnaires were coded for data analysis. The method of partial least squares (PLS) path methodology [23], an implementation of structural equation modeling (SEM) with Smart PLS 2.0 M3 [24], was used to examine the model and test the proposed hypotheses.

4 Results

Among the 513 survey participants 59.1% were male. In terms of age 29.6% were less than 24 years old; 30.6% were in the 25–34 age group; 19.1% were in the 35–44 age group and 20.7% were more than 45 years old. In terms of educational background 52% of the respondents have college degree or higher. The test of the measurement model involves the estimation of reliability; convergent validity, and discriminant validity of the extended UTAUT's constructs, indicating the strength of measures used to test the proposed model [23]. As shown in Table 1, all measures present high item reliability as all corresponding loadings values exceeds the cut-off value of 0.70. Composite Reliability (CR) values of all measures included in the study exceed 0.93 suggesting that all measures were good indicators of their respective components. Average Variance Extracted (AVE) values for all constructs exceed 0.77, higher than the recommended cut-off value of 0.50 [23] suggesting satisfactory convergent validity. Finally, the square roots of AVE for all first-order constructs, provided in the diagonal of the table, are higher than their shared variances providing strong evidence of discriminant validity among all first order constructs [23].

The PLS-PM method was also used to confirm the hypothesized relationships between the constructs in the proposed model. The significance of the paths included into the proposed model was tested using a bootstrap resample procedure. In assessing the PLS model, the squared multiple correlations (R^2) of the endogenous latent variable was initially examined and the significance of the structural paths was evaluated [23, 24]. The data analysis for the main effects model, depicted in Table 2a, indicates that all six hypotheses concerning the direct effects were confirmed. Significant positive relationships were yielded between PE and BI (confirming H1: $\beta = 0.31$), EE and BI (confirming H2: $\beta = 0.20$), SI and BI

Table 1 Measurement model assessment

LV	Loadings	AVE	CR	PE	EE	SI	PR	PT	ITU
PE	[0.85–0.90]	0.77	0.91	**0.88**					
EE	[0.86–0.97]	0.80	0.95	0.57	**0.89**				
SI	[0.93–0.97]	0.91	0.97	0.45	0.30	**0.95**			
PR	[0.88–0.93]	0.81	0.95	−0.35	−0.32	−0.25	**0.90**		
PT	[0.83–0.96]	0.82	0.93	0.51	0.41	0.47	−0.49	**0.91**	
ITU	[0.97–0.98]	0.95	0.98	0.66	0.56	0.52	−0.48	0.59	**0.97**

Table 2 Structural model and moderation analysis results

LV	Value	t-value	Sig.	LV	Male	Female	p-value
(a) Direct effects (pool sample)				(b) Moderating effects: gender			
PE	0.31^{***}	6.01	0.000	PE	0.35^{***}	0.24^{***}	**0.006**
EE	0.20^{***}	8.03	0.000	EE	0.19^{***}	0.18^{***}	0.673
SI	0.20^{***}	5.73	0.000	SI	0.20^{***}	0.20^{***}	0.885
PR	-0.17^{***}	-5.29	0.000	PR	-0.20^{***}	-0.16^{***}	0.282
PT	0.17^{***}	4.58	0.000	PT	0.09^{ns}	0.28^{***}	**0.000**
R^2	0.60			R^2	0.58	0.64	
LV	Young	Old	p-value	LV	High	Low	p-value
(c) Moderating effects: age				(d) Moderating effects: experience			
PE	0.36^{***}	0.24^{***}	**0.049**	PE	0.37^{***}	0.19^{***}	**0.013**
EE	0.15^{***}	0.22^{***}	0.207	EE	0.23^{***}	0.14^{***}	0.141
SI	0.23^{***}	0.15^{***}	0.153	SI	0.11^{**}	0.30^{***}	**0.001**
PR	-0.16^{***}	-0.19^{***}	0.677	PR	-0.15^{***}	-0.16^{***}	0.825
PT	0.09^{***}	0.31^{***}	**0.000**	PT	0.12^{**}	0.26^{***}	**0.049**
R^2	0.55	0.69		R^2	0.47	0.54	

(confirming H3: $\beta = 0.20$), and PT and BI (confirming H5: $\beta = 0.17$). Significant negative relationships were observed between PR and BI (confirming H4: $\beta = -0.17$). The five significant constructs explained 60% of variance in BI. Multigroup analysis [25] was used to investigate the moderating effects of individual differences on the relationships between adoption drivers and potential customer BI. As such, the pool sample separated in two groups of respondents according to their gender (male vs. females), age (young: ≤ 30 years vs. old: >30 years) and declared familiarity with m-commerce (high vs. low). As shown in Tables 2b, c, d the results suggest that gender, age and experience moderate the relationships between PE and BI (confirming H6a, H6b, H6c) and between PT and BI (confirming H9a, H9b, H9c), while experience also moderates the relationship between SI and BI (confirming H8c).

5 Discussion

The purpose of this study was to identify the factors influencing the adoption p-mps, and the degree of influence of each factors leading their usage. An extended version of the UTAUT, investigating the role of technology, social, channel and personal factors of the p-mps adoption intention, was proposed as a ground base for this study. Concurrent with the existing literature of p-mps acceptance [17, 20], the role of PE and EE, reflecting the two technology-related factors, and SI, reflecting the social-related factors, in predicting p-mps adoption was confirmed. These results suggest that p-mps service providers aiming to gain competitive advantage and increase the p-mps adoption rates have to offer platforms of great utilitarian value

(e.g. speed in task completion, convenience, etc.) which, at the same time, are free of effort and easy to use [17, 19, 22]. Moreover, they have to communicate positive testimonials of satisfied p-mps users which will increase potential consumers' awareness/trial, and educate them. In this research, in accordance with the findings of previous studies [14, 15, 17], PR and PT were also recognized as significant driver and detractor of p-mps usage intentions respectively. As such, service providers have to identify the most critical risks that tend to increase customers' fears in using p-mps and, then, select the most appropriate actions to reduce the impact of these threats. This is also expected to raise trust in p-mps transaction security. Finally, the results also confirmed the significant moderating effects of personal factors on consumers' behavior towards p-mps adoption intentions. In accordance with the relevant studies [4, 7, 8], the findings of this study confirmed the significant influence of potential users' differences in the p-mps adoption intention. More specifically, the effect of PE on BI seems to be bigger for younger males with high levels of technology experience as this group is more task-oriented. The effects of EE on BI and SI on BI are stronger for older females with low level of technology experience and the effect of SI on BI is stronger for those with low level of technology experience. These results indicate that service providers have to implement a differentiated marketing strategy in order to provide an added value to potential customers with different characteristics which lead to relevant actions efficiency optimization. Future research could be directed towards the consideration of other variables that theoretically affect the adoption mechanism, such as perceived service value, brand reputation and personal traits (i.e. innovativeness, need for control etc.) that could further improve the predicting power of the model within the m-payment services context.

References

1. Dahlberg T, Guo J, Ondrus J (2015) A critical review of mobile payment research. Electron Commer Res Appl 14:265–284. https://doi.org/10.1016/j.elerap.2015.07.006
2. Oliveira T, Thomas M, Baptista G, Campos F (2016) Mobile payment: understanding the determinants of customer adoption and intention to recommend the technology. Comput Hum Behav 61:404–414. https://doi.org/10.1016/k.chb.2016.03.030
3. Gerpott TJ, Meinert P (2017) Who signs up for NFC mobile payment services? Mobile network operator subscribers in Germany. Electron Commer Res Appl 23:1–13. https://doi.org/10.1016/j.elerap.2017.03.002
4. Slade EL, Williams MD, Dwivedi YK (2013) Mobile payment adoption: classification and review of the extant literature. Mark Rev 13:167–190. https://doi.org/10.1362/146934713X13699019904687
5. Adapa S, Roy SK (2017) Consumers' post-adoption behaviour towards Internet banking: empirical evidence from Australia. Behav Inform Technol 36:970–983. https://doi.org/10.1080/0144929X.2017.1319498
6. Frimpong K, Al-Shuridah O, Wilson A, Sarpong FAA (2017) Effect of inherent innovativeness and consumer readiness on attitudes to mobile banking. J Financ Serv Mark 22:187–201. https://doi.org/10.1057/s41264-017-0037-2

7. Venkatesh V, Morris MG, Davis GB, Davis FD (2003) User acceptance of information technology: toward a unified view. MIS Q 27:425–478. https://doi.org/10.2307/30036540

8. Slade EL, Williams MD, Dwivedi Y (2013) Extending UTAUT2 to explore consumer adoption of mobile payments. In: Proceedings of UK academy for information systems conference, pp 36–59

9. Blut M, Wang C, Schoefer K (2016) Factors influencing the acceptance of self-service technologies: a meta-analysis. J Serv Res 19:396–416. https://doi.org/10.1177/1094670516662352

10. Davis FD, Bagozzi RP, Warshaw PR (1989) User acceptance of computer technology: a comparison of two theoretical models. Manag Sci 35:982–1003. https://doi.org/10.1287/mnsc.35.8.982

11. Leong LY, Hew TS, Tan GWH, Ooi KB (2013) Predicting the determinants of the NFC-enabled mobile credit card acceptance: a neural networks approach. Expert Syst Appl 40:5604–5620. https://doi.org/10.1016/j.eswa.2013.04.018

12. Shin S, Lee WJ (2014) The effects of technology readiness and technology acceptance on NFC mobile payment services in Korea. J Appl Bus Res 30:1615–1626

13. Tan GWH, Ooi KB, Chong SC, Hew TS (2014) NFC mobile credit card: the next frontier of mobile payment? Telematics Inform 31:292–307. https://doi.org/10.1016/j.tele.2013.06.002

14. Ooi KB, Tan GWH (2016) Mobile technology acceptance model: an investigation using mobile users to explore smartphone credit card. Expert Syst Appl 59:33–46. https://doi.org/10.1016/j.eswa.2016.04.015

15. Ozturk AB (2016) Customer acceptance of cashless payment systems in the hospitality industry. Int J Contemp Hosp Manag 28:801–817. https://doi.org/10.1108/IJCHM-02-2015-0073

16. Liébana-Cabanillas F, Luna IRD, Montoro-Ríos F (2017) Intention to use new mobile payment systems: a comparative analysis of SMS and NFC payments. Econ Res Ekonomska Istraživanja 30:892–910. https://doi.org/10.1080/1331677X

17. Slade E, Williams M, Dwivedi Y, Niall P (2015) Exploring consumer adoption of proximity mobile payments. J Strateg Mark 23:209–223. https://doi.org/10.1080/0965254X.2014.914075

18. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50:179–211. https://doi.org/10.1016/0749-5978(91)90020

19. Tang CY, Lai CC, Law CW, Liew MC, Phua VV (2014) Examining key determinants of mobile wallet adoption intention in Malaysia: an empirical study using the unified theory of acceptance and use of technology model. Int J Model Oper Manag 4:248–265

20. Morosan C, DeFranco A (2016) It's about time: revisiting UTAUT2 to examine consumers' intentions to use NFC mobile payments in hotels. Int J Hosp Manag 3:17–29. https://doi.org/10.1016/j.ijhm.2015.11.003

21. Featherman MS, Pavlou PA (2003) Predicting e-services adoption: a perceived risk facets perspective. Int J Human Comput Stud 59:451–474. https://doi.org/10.1016/S1071-5819(03)00111-3

22. Venkatesh V, Thong JY, Xu X (2012) Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. MIS Q 36:157–178

23. Hair JF, Ringle CM, Sarstedt M (2011) PLS-SEM: indeed a silver bullet. J Mark Theory Pract 19:139–152. https://doi.org/10.2753/MTP1069-6679190202

24. Ringle CM, Wende, S, Will A (2005) SmartPLS 2.0 (M3) Beta, Hamburg

25. Matthews L (2017) Applying multigroup analysis in PLS-SEM: a step-by-step process. In: Latan H, Noonan R (eds) Partial least squares path modeling. Springer, Heidelberg, pp 219–243

OneAppy: An Interactive Platform Providing Novel Marketing Channels and Promoting Product and Services to the Tourism Industry

Ioannis Paliokas, Stella Sylaiou, Nikolaos Katertsidis, Odysseas Tsakai, Alexandros Tzallas, Nikolaos Giannakeas, Markos Tsipouras, Konstantinos Votis, and Vaggelis Nomikos

Abstract Nowadays, marketers are required to rethink their marketing strategies, and provide innovative approaches, based on new communication technologies, alongside the classic channels of business promotion. OneAppy is a platform based on a new eMarketing model, aiming to provide valuable marketing channels and tools for promoting products/services. After an analysis on related technologies, the architecture and services of the OneAppy platform are presented in respect to the targeted market domains. With OneAppy, a business may develop a powerful web and mobile presence with minimum cost/time and communicate with its clients interactively, offering them information, suggestions, and updates regarding everything that is related to offered services.

Keywords eMarketing · eTourism · CMS · Mobile marketing model

I. Paliokas (✉) · K. Votis
Information Technologies Institute, Centre for Research and Technology Hellas, Thessaloniki, Greece
e-mail: ipaliokas@iti.gr

S. Sylaiou
Hellenic Open University, Patras, Greece

N. Katertsidis · O. Tsakai · A. Tzallas · N. Giannakeas · M. Tsipouras
Technological Educational Institute of Epirus, Arta, Greece

V. Nomikos
Everit, Athens, Greece
e-mail: info@everit.gr

1   Introduction

The evolution to a knowledge-based economy and the vast development of Information and Communication Technologies (ICTs) are leading the tourism industry to find novel methods for marketing and for business in general [1, 2]. More specifically, with the grown of Web 2.0 technologies (i.e., video/photo sharing, blogging, social bookmarking and networking), the interaction between consumers has experienced massive acceleration, simplifying their accumulation and participation. Participation-based technologies (i.e. push notifications, on demand content, chat rooms, wikis, forums, social networks, etc.) allow users to interact and collaborate with each other as creators of user-generated content in a virtual community [3].

Therefore, marketers need nowadays to rethink marketing strategies, using innovative approaches based on ICTs, alongside the classic channels of business promotion (traditional media such as TV, radio, newspaper). The most promising innovative marketing practices that leverage on Web 2.0 technologies are: viral marketing, buzz marketing, mobile marketing and social media marketing. The common characteristic of these marketing techniques is the exploitation of the personalization information and the word-of-mouth phenomenon in online environments. In particular, users benefit from targeted news, information and entertainment in an online community, and consider suggestions and recommendations as an important source of information [4].

In this context, this paper proposes the need to adapt modern eMarketing strategies not only to Web 2.0 technologies, but also to complex user's online behaviours with an emphasis on adaptations to sub-cultures derived from lifestyles (e.g. healthy lifestyle) or specific market domains like innovative and cultural tourism. A tool developed according to this adaptation model is OneAppy, a mobile application framework offering a new approach to the communication/interaction between tourism and lifestyle businesses and customer communities (clubs, societies, etc.). Following a user-centred design approach, the overall architecture of the application is presented in the following sections, along with a short definition of the offered services.

2   User's Online Behaviour, Cultural Adaptation and Influencers

Previous studies have investigated how theories like the Theory of Planned Behavior (TPB) [5] and the Theory of Fow (ToF) [6] are being used to provide interpretation for observed consumer online behaviours [7, 8]. The TPB has been applied to analyses of the relationships between people's identity, attitudes and behaviours [9] in market domains like public relations and advertising. On the other hand, the ToF describes the mental state under which users perform stimulating activities like

videogames, or social networking under a feeling of fully immersion and involvement.

Apart from the need to adapt the cultural content of the online services [7], there is the need to adapt to specific users or groups and this adaptation process can make the difference between failure and success of a business model [10]. People who follow a specific lifestyle share similar needs, attitudes and beliefs and thus their behaviour as customers may have strong similarities. Those 'subcultures' created by user groups differentiate them from the mother culture to which they belong. Occasionally, brands foster the subculture making process and help create values/norms that are distinct from those held by other groups. Moreover, the market has witnessed social media influencers becoming a driver of consumer purchases, especially in the lifestyle and tourism market [11]. Having more than half of individuals (54%) using the Internet for social networking [12]. it is derived that social media today allow more efficient ways to build relationships with existing and possible new customers [13].

Overall, it has become very difficult for most brands, especially small companies, to reach a critical mass of customers using the techniques explained before, namely the development of subcultures related to their products and the recruitment of social media influencers, due to budget and policy restrictions. Thus a new model is needed to help small brands to run marketing campaigns on the Internet, to be able to adapt their contents to the needs of specific existing or possibly new customer communities and make direct links between online activities and their products and services.

3 Existing Solutions for Content Adaptation and Social Media

There is a plethora of Social media marketing tools present today that can offer cost-effective online marketing strategies. For example, Buffer (buffer.com) can help businesses and marketing teams to schedule posts and check analytics for all social accounts in one place. However, those tools are platform dependent (like platform plugins), or they provide simple functionalities like MeetEdgar (meetedgar.com) used to recycle old posts, or SocialOomph (www.socialoomph.com) to upload a long list of blog posts in a single text file and let them be randomly distributed at certain time-based intervals on selected platforms. More advanced tools are equipped with Machine Learning (ML) techniques to discover hidden patterns in user's behaviours, find the best audience and the way to update ads for better investments. Such a tool is the Adext AI (www.adext.com) which can run thousands of simulations to discover the best choices and support in decision making processes.

Some of the existing solutions are optimized for mobile devices. Creating mobile marketing campaigns is made possible with a wide range of tools, starting with simple SMS message posting apps like TextMagic (www.textmagic.com/), to more advanced tools like Snapchat (www.snapchat.com) which is used to promote

products, engage with clients and run polls and contests. Similarly, Mobile Roadie (mobileroadie.com) offers app creation, media file sharing, RSS news feed, and polls creation. Marketers recognize the strength of mobile eMarketing tools which allow media integration, because it allows them to reach their target demographics throughout the day [14].

4 OneAppy Platform and Features

OneAppy was created on the top of a new eMarketing framework model to help small companies and brands related to lifestyle and tourism to develop a powerful web and mobile presence with minimum cost, time and effort. As a tool, it can be used by social media marketers and people who market their own business to communicate with their clients interactively, offering them information, suggestions, and updates.

The underlying model makes it easy to create and maintain relatively small, but very targeted social media channels (private marketplaces), to adapt the online contents to the needs of specific customer communities and to develop long-term relationships with them. This eMarketing approach can provide equal chances to brands in order to maintain their position in the competition, or to scale their marketing campaign. The proposed architecture provides a new communication and marketing channel, based on state-of-the-art technologies as explained in the following sections.

4.1 Overall System Architecture

OneAppy is an intelligent and customizable platform based on web technologies (HTML5, JavaScript, PHP7, WebSockets, cloud computing). The main architectural components are (Fig. 1):

- A *mobile application* providing the main interaction point (User Interfaces) with end-customers, and a placeholder for multiple micro-apps, called Appies. Micro-apps are small, task-specific, consumer-oriented, and offer highly targeted functionality, letting users perform a handful of easy tasks instantly (Fig. 2). In comparison to the usual enterprise mobile applications, micro apps offer an experience that is more consumer-focused and are easy-to-use.
- A backend *Content Management System (CMS)* used by business users to create/ update Appies, and provide personalized bidirectional communication to customers (Figs. 3 and 4).
- A *gamification component* designed to maintain and run customer loyalty campaigns based on a point-based award system.
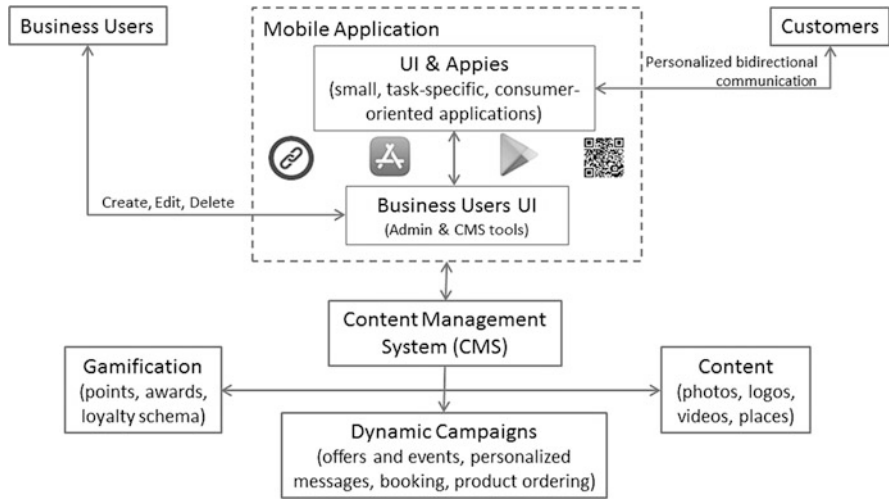
Fig. 1 Overall system architecture of the OneAppy platform

Fig. 2 User interfaces of the OneAppy mobile application

- The *content database* in which photos, logos, videos, categories, places and content in general are being stored.
- *Dynamic Campaigns* container for models targeting in a more accurate way their customer base, creating offers and events, sending personalized messages, making services available for booking and products for ordering.
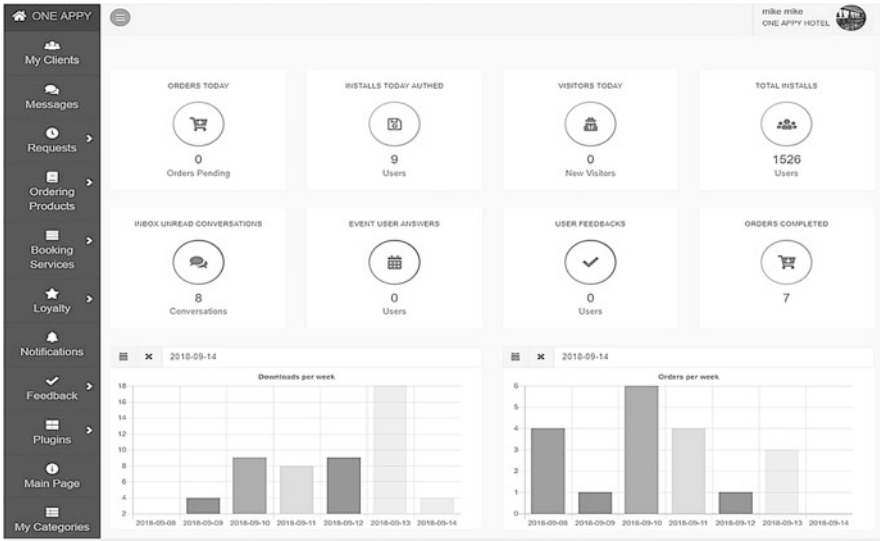
Fig. 3 A view of the CMS UI (statistics reports and service management screens)

Fig. 4 Another view of the CMS UI (targeted campaigns to specific clients)

4.2 Features and Services

With OneAppy, no technical skills are required for the development of a mobile micro app. Business users can login with their credentials in the user friendly CMS, and proceed with Appies development in a very easy way. Appies are ready to run by the very first minute and they can be distributed to end-customers through multiple ways: (1) click on the web link shared with them, (2) download OneAppy from the

App store or Play store (Android and iOS) and (3) scan the QR code derived from the CMS.

By navigating in a micro app, customers can receive useful insights and services in a personalized way, while strengthening their loyalty to a company. The flexible functionality of OneAppy allows marketers to create dynamic campaigns targeting in a more accurate way their engaged customer base (Fig. 4).

Any change regarding a micro app can be completed at minimum effort and time. Updates are automatically delivered to the customers through own communication channels. The platform adapts to each user's conditions and preferences, and integrates the functionalities presented in Table 1.

5 Market Positioning and Benefits

OneAppy is an innovative marketing tool that can be applied to a diverse set of industries and markets, and especially the tourism, cultural heritage destinations and the hotels industry. It can provide unique experiences to guests and distant or onsite visitors, and promote products and services. Independent of a business capacity, OneAppy can be dynamically adjusted to specific needs, offering an easy way to customers to view products and services, and send their requests. Customers can be continuously informed about offers or events taking place (e.g. an offer of discount for cultural site entrance tickets, cultural events, accommodation), can browse a local travel guide with drive-me features, rate their experiences via a feedback form and more. Moreover, they may receive and redeem loyalty points for their purchases, and provide feedback in a simple and useful way with respect to modern Gamification principles.

On the other hand, business users can create a mobile application for their business within a few hours and with no technical skills; adapt the info-to-present to communities of online users; describe products and services, create offers and events on demand, initiate and maintain two ways communication with their existing and new potential customers; and receive online satisfaction feedback from them.

6 Conclusion

In this paper, the OneAppy architecture and services was presented, with regard to the tourism and lifestyle industry. The proposed framework is not a simple marketing automation or a site monitoring app, but an advanced tool for promoting products and services across multiple channels, and enhancing customer experience. Focus was given to the adoption of a new eMarketing model to assist businesses and customers to develop a mutual community [15, 16], and benefit from a wide range of mobile marketing functionalities. Based on state-of-the-art technologies, OneAppy

Table 1 Adaptation to user/customer's needs (individuals and/or communities)

Service title	Description	Features
Book services	Businesses can promote their services online, and provide audience the option to reserve their preferences, thus increase sales as well as implementation flow	• Unlimited number of service categories with unlimited services per category • Support of multiple file formats (photos, text) • Organize and brand services properly • Services calendar within a timing framework and provide audience the option to book prefer session • Notify customers instantly about the launching of new services or offers • Receive online reservations from customers 24/7 • Offer a large choice of delivery and payment options
Gamification	Customers can be rewarded through flexible loyalty programs (engagement and sales). The award mechanism is based on an internal point-based economy	• Collect points by interacting with the platform and payments • Adjust the gamification rules according to the needs • Support of different loyalty categories (gold, silver, bronze) • Connect product ordering/booking with points earning • Provide the option to pay through points redemption • Design Quests (special campaigns) with discounts, extra points for a period of time • Monitor customer's status and balance • Provide extra ad-hoc motivation.
Order products	Products can be sold online to highly targeted and engaged audiences, thus increasing conversions, revenues and profits for a business	• Unlimited product categories and products per category • Support of multiple file formats (photos, text) • Organize and brand products properly • Create a product catalogue (accessible to the mobile app audience and to everyone through the Internet) • Notify customers instantly whenever they launch new products or offers • Receive online orders from clients on a 24/7 basis • Manage orders through the OneAppy's intuitive interface
Instant messaging	Instant messaging empowers organized bidirectional communication efficiently, immediately and safely	• Full messaging functionality though a user friendly UI • Allow customers to receive immediate notification (even before they read messages)

Table 1 (continued)

Service title	Description	Features
		• Send messages across groups or individuals • Plan messages for delivery now or at any time • Maintain control and history across all data
Provide feedback/ reviews	Users provide their view about businesses simply and quickly (insight into important aspects and improvements)	• Create simple categories including the business areas business users want customers to evaluate • Structure questions within each category • Provide an easy-to-rate way (click per question) • Monitor and manage customer's feedback safely and quickly • Export feedback for further processing

aims to provide a hallmark in marketing technologies adopt to a diverse set of industries.

Our findings are in line with the word of Pentina and Koh [17] who explored the social media marketing strategies and calculated 3 clusters of eMarketing ap-proaches, including one named 'cautious watchers' used to describe B2B service providers (like OneAppy) who are characterized by the dominant tactic to create brand communities on their own websites and to monitor chats on social networks. OneAppy goes one step further by taking advantage of the mobile marketing to obtain customer feedback and spreading marketing messages. Moreover, according to other studies which focus on the aptitude and potential of eMarketing applications as influencers of users/customer behavior [18, 19], the proposed framework support an active model of engaging with social media and Web 2.0 technologies.

As Kaplan noted, mobile communication channel will become a truly global reach across countries and demographic groups [20], and thus eMarketing could be the dominant digital marketing model in the near future. The OneAppy plans for the future include the development of more advanced Machine Learning models in order to discover the optimal demographic sub-groups in communities of users/customers and automatically optimize advertisements and message posts multiple times per day.

References

1. Capece G (2008) An e-distinctivity parameter to evaluate an e-business idea. Manag Res News 31:311–323
2. Capece G, Calabrese A, Di Pillo F, Costa R, Crisciotti V (2013) The impact of national culture on e-commerce acceptance: the Italian case. Knowl Process Manag 20:102–112
3. Adebanjo D, Michaelides R (2010) Analysis of Web 2.0 enabled e-clusters: a case study. Technovation 30:238–248
4. Ho JYC, Dempsey M (2010) Viral marketing: motivations to forward on line content. J Bus Res 63:1000–1006
5. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50:179–211. https://doi.org/10.1016/0749-5978(91)90020-T
6. Nakamura J, Csikszentmihályi M (2001) Flow theory and research. Handbook of positive psychology. Oxford University Press, pp 195–206. ISBN 978-0-19-803094-2
7. Singh N, Kumar V, Baack D (2005) Adaptation of cultural content: evidence from B2C e-commerce firms. Eur J Mark 39:71–86
8. Pavlou AP, Chai L (2002) What drives electronic commerce across cultures? A cross-cultural empirical investigation of the theory of planned behavior. J Electron Commer Res 3:240–253
9. Rise J, Sheeran P, Hukkelberg S (2010) The role of self-identity in the theory of planned behavior: a meta-analysis. J Appl Soc Psychol 40:1085–1105
10. De Reuver M, Bouwman H, Haaker T (2013) Business model roadmapping: a practical approach to come from an existing to a desired business model. Int J Innov Manag 17:1340006. https://doi.org/10.1142/S1363919613400069
11. Chatzigeorgiou C (2017) Modelling the impact of social media influencers on behavioural intentions of millennials: the case of tourism in rural areas in Greece. J Tour Herit Serv Market 3:25–29
12. Eurostat (2018) Individuals who used the internet for participation in social networking in 2017 (% of individuals aged 16 to 74), https://goo.gl/GatFu2
13. Safko L, Brake D (2009) The social media Bible: tactics, tools & strategies for business success. Wiley, New York
14. Mobile Marketing Association (2007) Understanding mobile marketing technology & reach. www.mmaglobal.com/files/uploads/MMAMobileMarketing102.pdf
15. Ntalianis K, Kavoura A, Tomaras P, Drigas A (2015) Non-gatekeeping on social networks: a reputation monitoring approach. J Tour Serv 10:19–44
16. Kavoura A, Tiago T (2016) Understanding online communities on social networks via the notion of imagined communities: the case of TripAdvisor. Int J Web Based Communities 12:238–261
17. Pentina I, Koh AC (2012) Exploring social media marketing strategies in SMEs. Int J Internet Market Advert 7:292–310
18. Ananda AS, Hernández-García A, Lamberti L (2014) N-REL: a comprehensive framework of social media marketing strategic actions for marketing organizations. J Innov Knowl 1:125–180. https://doi.org/10.1016/j.jik.2016.01.003
19. Constantinides E (2009) Social Media/Web2.0 as marketing parameter: an introduction. Proceedings of 8th international congress marketing trends, pp. 15–17
20. Kaplan AM (2012) If you love something, let it go mobile: mobile marketing and mobile social media 4x4. Bus Horiz 55:129–139

European Works Councils in the Hotel Industry

Stephen J. Havlovic

Abstract European Works Councils (EWCs) were reported in use at 7 hotel groups operating in two or more European Economic Area (EEA), European Free Trade Association (EFTA) or European Union (EU) candidate countries. Sharing information and consultation with management is an important role in all of the hotel EWCs. Most of the hotel EWCs were allowed to share their opinions and comments with upper management. The focus of most hotel EWCs was on economic, financial, strategy, and performance issues of their hotel group. Hotel employees would benefit from EWCs expanding their focus to include human resource management topics, new technologies, and environmental issues.

Keywords European · Works councils · Hotel

1 Introduction

A review of the European Works Council (EWC) literature revealed that there had not been studies of the impact of the EWCs on the hotel industry. The intent of this study is to utilize the European Trade Union Institute's (ETUI) database on EWCs to determine the hotel groups utilizing EWCs and their characteristics [1]. In theory hotel EWCs have the potential to improve the hotel employees' work life, the hotel customers' experience, and the performance of the hotel group.

S. J. Havlovic (✉)
Laurentian University, Sudbury, ON, Canada
e-mail: SHavlovic@laurentian.ca

2   European Works Councils (EWCs)

In 1994, the European Works Council Directive 94/45 was passed which called for European Works Councils (EWCs) to be established in multinational corporations (MNCs) with at least 1000 employees and operations in at least two European Union (EU) countries involving 150 or more employees. Prior to the EWC Directive there were some MNCs that had established EWCs voluntarily. In 1998, the Directive was expanded to include the United Kingdom, Iceland, Liechtenstein and Norway [2]. "It is widely agreed in the literature that European works councils (EWCs) offer the most advanced experiences of workers' representation in the ongoing process of Europeanization of industrial relations. These bodies provide an institutional basis for information and consultation of workers at transnational level, enabling a channel for effective employee participation in corporate decision making" [3].

As the EU has expanded and the EWC Directive revised, there has been growth in the number of EWCs. "EU enlargement in 2004 brought an additional 300 companies within the scope of the EWC Directive, 31 of them with headquarters in the incoming Member States. All these countries had already transposed the directive into national law. By May 2004, a number of subsidiaries in all ten states, as well as the three candidate countries, had reached voluntary agreements on setting up EWCs: the largest number being in Poland, the Czech Republic and Hungary" [4].

In 2009, the EWC Directive was revised in part to increase worker participation and to improve labour-management relations in MNCs. "The Recast Directive provided some, albeit limited, impetus for setting up EWCs and renegotiating existing EWC agreements, with the creation of around 20 EWCs per year since its implementation in 2011, mainly in companies headquartered in France, Sweden and the US. Recast EWCs tend also to be established in smaller companies. It is estimated that half of the eligible companies have not yet established a EWC" [5]. Unfortunately, there is evidence that the revised EWC Directive has not attained the desired outcomes. "The 2016 external study concluded that EWCs regulated by the Recast Directive have a limited impact. . ." [5].

2.1   Hotels with EWCs

Previous studies on EWCs have not examined the hotel sector. Based on reports contained in the EWC database [1] it was possible to identify 7 hotel groups utilizing EWCs. Below is a listing of these hotel groups with a brief EWC synopsis.

Accor Hotels operates in 24 EEA-EFTA and EU candidate countries [1]. The original Accor EWC was established pre-directive in August 1994. Selection of EWC representatives nominated by the trade union (IUF—International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations). 5 seats are also reserved for IUF representatives. The IUF nominates the EWC Co-Chairman and prepares the meeting agenda [6].

Club Méditerranée (Club Med.) established their EWC in 1996 and it covers Club Med. operations in several EU countries [1]. While there is an exchange of views between management and the EWC, Club Med. management does not have to consult the EWC before making a decision [1]. "The existence of this (EWC) agreement cannot result in any restrictions whatsoever of the rights arising from legislation, regulations, collective bargaining agreement or local customs" [7]. This agreement was reached with the EWC after concerns were raised about using subcontracted workers at Club Med. villages. "Club Méditerranée's management undertakes to ensure that any recourse to subcontractors is in line with the moral code governing respect for individuals and laws as well the customs of the host country [8].

Hilton International established an EWC in 1999 and has employee representatives from 25 countries [1]. Since 2007 Hilton International has been owned by Blackstone. Shortly before the takeover the "...secretary of the European works council tried in vain within the last months to call for an EWC meeting or at least a meeting of the steering committee with the central management" [9].

InterContinental Hotels Group (IHG) created their EWC in February 2007 and has operations in 14 EEA-EFTA countries [1]. InterContinental hotels participate in the EWC when IHG owns 50% or more of the hotel. "Every three years one third of the EWC members retires automatically in order to preserve continuity" [10].

NH Hoteles just installed their EWC in 2015 and has operations in 13 EEA-EFTA countries [1]. The Select Committee (SC) is responsible for organizing the EWC meetings. The SC maintains the minutes, manages the budget, makes training arrangements for EWC members, and is involved in dispute resolution [11].

Rezidor Hotel Group created an EWC in 2004 and has operations in 13 EEA-EFTA countries [1]. The Select Committee (SC) sets the EWC agenda and is responsible for communication, coordination, consultation, and selection of experts/advisers [12].

Starwood Lodging Group established their initial EWC in 2000 and has operations in 15 EEA-EFTA and EU candidate countries [1]. "On November 28th, 2007 the European works council of the U.S. hotel group of Starwood (Sheraton, Westin, Le Méridien, St. Regis) signed an agreement with the central management on financial help in case of posting of employees to another EU country... They receive up to a monthly salary as help when they move and the right to return to their old job within three months" [13]. Marriott has recently purchased the Starwood Lodging Group [14].

3 Characteristics of EWCs in the Hotel Industry

A content analysis of the hotel EWCs from the ETUI database [1] can be seen in Table 1. All 7 of the hotel EWCs had roles involving organizational information and consultation with their hotel's management group. However, only 57% (4 of 7) of the EWCs had the role of providing opinions and comments. All of the hotel groups

Table 1 European works council (EWC) characteristics in the hotel industry [1]

	Accor	Club Med.	Hilton	InterContinental	NH Hoteles	Rezidor	Starwood
Role of the EWC:							
Information and consultation	X	X	X	X	X	X	X
Giving opinion/comments		X			X	X	X
Composition	Joint	Joint	n/a	Joint	Employee	Joint	Employee
Select Committee	No	Yes	Yes	Yes	Yes	Yes	Yes
Competence(s) of the EWC:							
Economic and financial situation of the company	X	X	X	X	X	X	X
Corporate strategy and investment	X	X	X	X	X		X
Changes to working methods/organisation	X	X		X	X	X	X
Probable development of the business, production & sales	X		X	X	X	X	X
Employment situation and forecasts		X	X	X	X	X	X
Mergers, take-overs or acquisitions	X		X		X	X	X
Collective redundancies		X	X		X	X	X
Vocational training	X	X			X	X	X
Company structure		X			X	X	X
Closures or cutbacks		X	X		X		X
Equal opportunities		X			X	X	X
Health and safety	X			X	X		X
Environmental Protection	X			X	X	X	
Reorganisation of production	X				X		X
Other specified issues not mentioned above				X	X		X
Transfers/relocation		X			X	X	X
Traded Union Rights	X						
New technology policy					X		
Corporate social responsibility					X		
Human resource management practices						X	

X indicates that the activity is engaged by the EWC

except Accor have a Select Committee (SC) ranging in size from 3 to 6 members which functions as an executive board for the EWC and meets separately with hotel management.

100% of the hotel EWCs indicated competence with the economic and financial situation of their company. 86% (6 of 7) of the hotel EWCs stated competence with corporate strategy & investment, working methods, business development, and employment situations. 71% (5 of 7) of the EWCs indicated competence with organizational mergers or acquisitions, redundancies, and vocational training. Most EWCs (4 of 6 or 57%) stated competence with company structure, closures & cutbacks, equal opportunities, health & safety, and environmental protection.

Several EWCs (3 of 7 or 43%) indicated competence with reorganization of production and other issues. Few (1–2 of 7 < 29%) of the hotel EWCs stated competence with transfers & relocations, trade union rights, new technology, corporate social responsibility, or human resource management practices. These results suggest that the competence of the hotel EWCs is more at the macro level of the firm involving organizational strategy, finances and structure than at the micro level involving workers, trade unions, and technology.

4 Conclusion

EWCs contribute to industrial democracy in the workplace, but often do not have influence in major financial decisions such as mergers and acquisitions. It is surprising that the hotel EWCs are not more involved in policies and practices directly effecting workers such as Health & Safety, Transfers & Relocations, New Technology, and Human Resource Management practices. It would also be beneficial for the hotel EWCs to be more active in Environmental Protection and Corporate Social Responsibility. Increasing the competence and involvement of hotel EWCs in matters involving Human Resource Management, Technology, Environmental Protection, and Social Responsibility has the potential of providing improvements for hotel workers, customers, communities, and the hotel groups.

References

1. ETUI (2018) European works council database. http://ewcdb.eu
2. Havlovic SJ, Besson D, Haddadj S (2000) European works councils: alternative forms of Industrial democracy. Proceedings of the 52nd annual meeting of the Industrial Relations Research Association, Boston, MA
3. Kohler HD, Gonzalez-Begega S (2010) The European works council as a multidimensional contested terrain. Employee Relat 32(6):590–605
4. ETUC (2008, May) European works councils. https://www.etuc.org/en/european-works-councils-ewcs

5. European Commission (2018, 14 May) Report on the implementation by member states of Directive 2009/38/EC (Recast). Brussels
6. Accor Hotels (2002) Agreement details. http://ewcdb.eu
7. Club Méditerranée (2001) Agreement regarding the respect for basic rights at work and mobility of Club Méditerranée employees in Europe and Africa. http://ewcdb.eu
8. Club Méditerranée (2001, 17 June) Joint declaration by the central management and the European Social Dialogue Committee of the Club Méditerranée group. http://ewcdb.eu
9. Hilton International (2007) Mega-mergers aggravate the EWC work. http://ewcdb.eu
10. InterContinental Hotels Group (2007) Agreement details. http://ewcdb.eu
11. NH Hoteles (2015) Agreement details. http://ewcdb.eu
12. Rezidor Hotel Group (2008) Agreement details. http://ewcdb.eu
13. Starwood Lodging Group (2007) Agreement regarding the transnational transfer of Starwood Employees. http://ewcdb.eu
14. Marriott International completes acquisition of Starwood Hotels & Resorts worldwide (2016.) http://news.marriott.com/2016/09/marriotts-acquisition-of-starwood-complete

Investigating the Social Media Potential to Attract Customers in the Banking Services Industry Using Fuzzy Delphi and Analytic Hierarchy Process

Eleni-Maria Mousouraki, Dimitrios Kardaras, George Stalidis, Stavroula Barbounaki, and Eleutherios Papathanasiou

Abstract Customer attraction is a fundamental goal for most companies that cannot be seen as a simple process but as a complex mix of factors and decisions. The world of Social Media offers new ways and opportunities for customer attraction, allowing companies to showcase their products and reach clients. They also amplify word of mouth marketing, affect purchasing decisions and help raise brand awareness. In this paper, the way in which aspects of social media usage affect customer attraction were analyzed. The study was focused on retail banking services and was based on the opinions of bank marketing experts. The most important factors were initially identified through a Fuzzy Delphi process. A hierarchical model of the importance of each factor was then built using the Analytic Hierarchy Process Multi-Criteria Decision Method. The results showed that the provision of reliable information from the company's side and efficient management of complaints were more important than the promotion of products and services and the acquisition of information on the customers' views. It is crucial that through consistency and honesty, companies improve their reputation and gain potential customers' trust, encouraging their active involvement.

Keywords Social media · Customer attraction · Services marketing · Banking · Analytic Hierarchy Process

E.-M. Mousouraki · D. Kardaras · E. Papathanasiou
Athens University of Economics and Business, Athens, Greece

G. Stalidis (✉)
Alexander Technological Educational Institute of Thessaloniki, Thessaloniki, Greece
e-mail: stalidgi@mkt.teithe.gr

S. Barbounaki
Merchant Marine Academy of Aspropyrgos, Athens, Greece

1   Introduction

Social Media (SM) sites such as the big three Facebook, Twitter and LinkedIn have become extremely popular and are an indispensable part of everyday life for many people and businesses. According to Ahn et al. [1], companies join these Web 2.0 applications in order to seize the user base for commercial purposes. SM create opportunities for businesses to gain value in many ways, supporting branding, sales, customer service and product development [2, 3]. In the branding sector, SM can drive traffic, enhance viral marketing and help optimize customer loyalty and retention, while an important business value component where SM are expected to strongly contribute is customer attraction. The world of SM allows companies to showcase their products and reach clients, amplifies word of mouth marketing, affects purchasing decisions and helps in raising brand awareness [4–6]. Especially in the context of services, there is a strong tendency by new potential customers to seek information from others as a risk reduction strategy [7, 8]. The tendency to resort to and trust information from SM is stronger when customers are dealing with high-risk purchase processes such as banking services [9, 10]. The exploitation of SM in bank marketing is a hot topic worldwide [11] and it is expected to be further developed, since SM constitute an important communication channel in banking. Particularly in e-banking, 46% of customers accessed e-banking services in the EU in 2015 [12].

   The aim of this paper is to investigate the potential of SM usage by retail banking service providers as a tool to attract customers, as well as to analyze the importance of individual factors affecting customer attraction. The study took place from January to May 2017 and was based on the opinions of a sample of bank marketing experts active in the Greek market. By directly capturing experts' opinions, our goal was to build a model that provides insights on how SM are perceived, what is their potential value and which of their elements are the most important. Considering the fast pace with which SM are adopted for marketing purposes and the relatively small experience in the banking area, our goal was to investigate contemporary views in Greece in relation to international trends. In order to consolidate different opinions, to quantify subjective views and to produce an objective model where individual goals are ranked according to multiple criteria, the Analytic Hierarchy Process (AHP) has been used, as one of the most popular modeling methods for multi-criteria problems, originally proposed by Saaty [13].

2   Literature on the Value of SM to Customer Attraction

The membership in SM is spreading rapidly all over the world, offering people a sense of belonging as they chat, seek information and generally affiliate with each other. People join online SN because they want to share their interests with others, they are places where they want to be and, consequently, they do not feel challenged

by advertising [14]. Businesses have the opportunity to inform themselves of the views of consumers, advertise themselves directly and indirectly, build relationships with potential customers and build their brand [15]. The nature of SM is such that their value grows exponentially and becomes self–supportive when the participants reach a critical mass [16]. Already a decade ago, bank marketing research showed that the extensive availability on the internet of information on a multitude of offers by competitive banks encouraged a "cherry picking" customer behavior, which had negative effect on customer loyalty [17]. At the same time, the "digitization" of financial services gradually distanced customers away from their service providers [18]. In order to mitigate this problem, studies on the role of SM in banking considered the SM as valuable tool for strengthening relationship building with customers [19]. Nowadays, the value of SM in banking has been established and recent studies focus on the optimization of their use and the challenges associated with their multifaceted role. A survey by the American Bankers Association on "The State of Social Media in Banking" [20] performed in 2017 on nearly 800 banks in US highlights that banks are using their social media accounts in creative ways to educate, inform, entertain and celebrate, helping them "to transform bank personas from anonymous institutions into friendly and approachable members of the community". In the same survey, it is stated that there's a lot of work to be done in strategy and implementation, since only a small number of banks have established clear plans, goals, governance and training programs for their use of SM.

Customer attraction can be defined as the effort of businesses to approach new customers [15, 21]. Customers can be attracted to a company which demonstrates potential value, dependence, integrity, commitment, trust, loyalty, support, fairness, satisfaction and reliability [3, 21–23]. The vast amount of information that exists on SM allows businesses to target their message to specific demographic or common interest groups in a much more precise way than it is possible through traditional channels. By using social networking tools, businesses can improve their visibility and brand awareness, interacting with potential customers and attracting new customers [24]. No doubt the best way to attract potential customers is the recommendation of a friend, since users tend to trust their friend's opinion and buy products they have recommended, imitating their behavior. Almost 70% of all new clients come from users' recommendations [25]. When intending to buy a product, customers usually seek information through SM because they consider the information provided in them reliable. Most of this information can be found through search engines available in social networking sites. Consequently, companies who are present in such search engines are considered more attractive, consistent and honest and may attract more potential customers [26]. Potential customers can also be found in forums, where users tend to discuss their opinion. By participating in these, companies have the opportunity to gain users' trust and loyalty as they can provide help and manage complaints [3]. Frequent posting in Social Media can help firms enhance their appearance and remind customers about their products, gaining publicity [6], while by engaging in popular activities they can come more easily in contact with potential clients [27].

Recent studies confirm the ability of content marketing to attract customers, as by providing useful content and personally targeting users, banks create a positive image and imprint themselves in the consumer's mind, in order to gain their loyalty, which in the end can lead to sales and new customers [23]. In a recent study investigating the effect of content marketing on increasing customer attraction in retail banking, it is reported that valuable content and sharing content have been ranked as the factors with the largest effect on banking customer attraction [28].

3 Research Design and Methods

Customer attraction has been identified as an important element of business value, which is particularly relevant to the service sector and specifically to retail banking services. The main goal of this work was to study the contribution of SM to customer attraction, ranking the corresponding factors on the basis of their importance, by constructing a quantitative multi-criteria model. The discrimination among different SM sites was not within the aims of this study. The steps followed were: (a) literature survey on possible factors of SM usage that affect business value and customer attraction, (b) selection of the most important factors by applying a Fuzzy Delphi process, (c) performance of a primary survey addressed to experts in the banking sector on Greece and (d) application of AHP in order to produce a quantitative hierarchical model of SM factors' contribution to customer attraction in banking. The AHP has been adopted because of its abilities (a) to model a complex problem in a hierarchical structure, expressing the relationships of the overall goal (i.e. business value) with sub-goals (i.e. customer attraction) and factors or criteria to which goals can be decomposed, (b) to rank the identified factors in terms of a quantitative importance weight and (c) to reliably consolidate subjective opinions of multiple experts into an objective model which can be used to support management decisions. The AHP requires pair-wise comparisons between all combinations of factors, so when the number of alternatives and/or criteria increases, the size of the questionnaires largely increases, making them impractical. For this reason a pre-selection stage of the most important criteria was necessary [29].

An initial set of 31 potential factors of SM usage that may affect customer attraction were extracted from the literature (Table 1). These have been evaluated by a set of experts regarding their relevance and importance, in order to come up with a reduced set of the most important factors, which is not only manageable in size but also verified as regards its appropriateness. The survey was based on a questionnaire including all the initial 31 factors plus an open field with the indication "Other". The participants were asked to evaluate each factor in a 5-level scale. The survey was conducted in a physical meeting with 8 participant experts, applying the Fuzzy Delphi method [30]. The selected factors are shown in Table 2, together with their supporting references.

The AHP method has been used to estimate the relative importance of each factor of customer attraction to which SM contribute. For modeling completeness

Table 1 Factors of SM usage with potential contribution to customer attraction

	Factor		Factor
1	Building relationships with potential customers	17	Easier cooperation with suppliers
2	Brand building	18	Sponsoring competitions
3	Friend recommendations/likes	19	Post and photo commenting
4	Familiarity with the company's image promoted through social networks	20	Participation to a group of social networks in order to maintain identity
5	Positive posts about the company	21	Identification with a company's image
6	Presence of the company in forums	22	Accepting users as friends
7	Business operation improvement	23	Impression to belong to a group
8	Advising users about the company's products and services	24	Users' desire to accomplish their goals easily
9	Complaint handling through social networks	25	Maintaining contacts with users
10	Likes for the products of the company	26	Stability and consistency of presence
11	Product promotion, provision of discounts and offers through social networks	27	Word of mouth through social networks
12	Safety that the users feel when connected in a social network	28	Getting information on the opinion of users for the company
13	Providing reliable information	29	Advertisement through SM
14	Presence of the company in SM search engines	30	Frequent message posts
15	Purchase recommendations by friends through social networks	31	Users' tendency to imitate behavior
16	Positive comments regarding support through SM		

Table 2 Selected important factors of SM contribution to customer attraction

	Factor	References
1	Purchase recommendations by friends	[25]
2	Presence of the company in forums of specific interest	[21]
3	Complaint handling through social networks	[21]
4	Positive posts by users about the company's products and services	[2, 3, 21, 23]
5	Providing reliable information	[2, 3]
6	Presence of the company in search engines of social networks	[26]
7	Frequent message posts by the company	[6]
8	Users' tendency to imitate behavior	[3]

purposes, the participating factors were structured in a two-level hierarchical model, where the "Business value" has been set as global goal, the 1st level contained 6 factors contributing to business value (including customer attraction) and on the 2nd level, "Customer Attraction" was analyzed to the 8 factors selected in the previous step. Since the focus of the current work was to study customer attraction, the survey and data analysis were limited to the 2nd level of the model. The
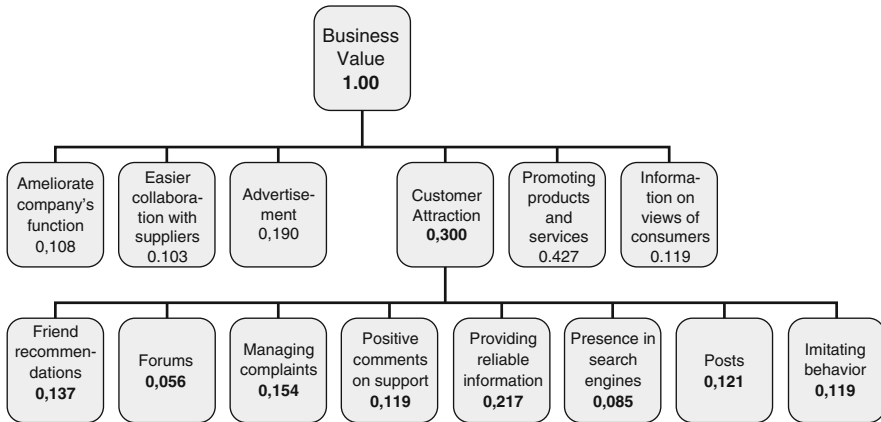
Fig. 1 The hierarchy of factors contributing to customer attraction and their importance weight

questionnaire was compiled according to the specifications of AHP and included pair wise comparisons between all combinations of factors contributing to customer attraction $(8(8-1)/2 = 28$ questions). The relative importance was expressed in the typical scale proposed by Saaty, where the values from 1 to 9 were used to express the degrees from $1 =$ "C_i is equally important to C_j" to $9 =$ "C_i is absolutely more important than C_j". The questionnaire has been distributed to the expert group, which included 14 experts, who all were holding managerial positions in banking institutions in Greece. The calculation of relative importance of each factor has been performed using the Expert choice software. The Consistency Ratio was 0.02, which was acceptable ($<$0.1). The resulting importance weights are shown in Fig. 1, together with the factor hierarchy.

4 Results and Business Implications

In our research, customer attraction came out as one of the main business value contributions of SM to a bank, ranked above advertisement and collection of information on the customers' views. This study identifies several SM related factors that contribute to customer attraction. Each one of these factors may possibly represent a strategy that a bank can follow when examining the potential of its SM. The results show that the most important factor is the provision of reliable informational content (weight 0.217), followed by complaints management (weight 0.154). This finding is to a large extent in accordance with the opinions of US social media leaders across the banking industry [20], who were asked to rank the reasons their banks use SM. Customer attraction was found in one of the first positions (5th), being pursued mainly by showcasing the bank's more human, personal and lighter

side, providing useful and credible content but also amusing content, keeping away from direct advertising.

5 Conclusions

In this paper, it is argued that by providing useful content and personally targeting users, banks can create a positive image and imprint themselves in the consumer's mind, in order to gain their loyalty, which in turn can convince SM users to become new customers. In conclusion, it is suggested that great benefits from the usage of SM in bank marketing are mainly expected by building a friendly and dependable face, which may be achieved by assigning the SM presence role to well trained personnel and by implementing a strong policy regarding the content to be delivered. Future research could focus on investigating additional service industries internationally, as well as on examining the potential of each individual SM site to attract customers.

References

1. Ahn Y, Han S, Kwak H, Moon S, Jeong H (2007) Analysis of topological characteristics of huge online social networking services. WWW 2007/Track: Semantic Web Session: Semantic Web and Web 2.0, 835–844. https://doi.org/10.1145/1242572.1242685
2. Culnan M, McHugh P, Zubillaga J (2010) How large U.S. companies can use twitter and other social media to gain business value. MIS Q Exec 9(4):243–259
3. Aminoff A, Tanskanen K (2013) Exploration of congruence in perceptions of buyer-supplier attraction: a dyadic multiple case study. J Purch Supply Manag 19(13):165–184. https://doi.org/10.1016/j.pursup.2013.02.006
4. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214. https://doi.org/10.4018/978-1-5225-0843-4.ch007
5. Ankeny J (2009) How Twitter is revolutionizing business (140 characters at a time). Entrepreneur +, Entrepreneur.com, Inc, pp 26–32
6. Zavišić S, Zavišić Ž (2011) Social network marketing. In: Križman-Pavlović D, Benazić D (eds) Marketing challenges in new economy, pp 1008–1019
7. Flanagin AJ, Metzger MJ, Pure R, Markov A, Hartsell E (2014) Mitigating risk in ecommerce transactions: perceptions of information credibility and the role of user generated ratings in product quality and purchase intention. Electron Commer Res 14(1):1–23. https://doi.org/10.1007/s10660-014-9139-2
8. Jalilvand MR, Samiei N (2012) Perceived risks in travelling to the Islamic republic of Iran. J Islamic Market 3:175–189. https://doi.org/10.1108/17590831211232573
9. Mehrad D, Mohammadi S (2017) Word of Mouth impact on the adoption of mobile banking in Iran. Telematics Inform 34(7):1351–1363. https://doi.org/10.1016/j.tele.2016.08.009

10. Velázquez BM, Blasco MF, Gil Saura I (2015) ICT adoption in hotels and electronic word-of-mouth. Academia Revista Latinoamericana de Administración 28(2):227–250. https://doi.org/10.1108/ARLA-10-2013-0164

11. Durkin M, Mulholland G, McCartan A (2015) A socio-technical perspective on social media adoption: a case from retail banking. Int J Bank Market 33:944–962. https://doi.org/10.1108/IJBM-01-2015-0014

12. eBanking EU (2015) http://www.statista.com/statistics/222286/online-banking-penetration-in-leading-european-countries/

13. Saaty TL (1990) How to make a decision: the analytic hierarchy process. Eur J Oper Res 48:9–26. https://doi.org/10.1016/0377-2217(90)90057-I

14. Gangadharbatla H (2008) Facebook Me: collective self-esteem, need to belong, and internet self-efficacy as predictors of the iGeneration's attitudes toward social networking site. J Interact Advert 8:5–15. https://doi.org/10.1080/15252019.2008.10722138

15. Paschopoulos A (2010) New media: are you in? Social media marketing. Kleidarithmos Editions, Athens

16. Papathanassiou E, Kardaras D (2012) Information system: from theory to practice. Benou G. Editions, Athens

17. Durkin M, O'Donnel A, Crowe J (2007) Relationship disconnect in retail banking. J Financ Serv Mark 12:260–271

18. Johns R Perrot B (2008) The impact of internet banking on business-customer relationships: are you being self-served? Int J Bank Market 26(7):465–482. https://doi.org/10.1108/02652320810913846

19. Mitic M, Kapoulas A (2012) Understanding the role of social media in bank marketing. Mark Intell Plan 30:668–686. https://doi.org/10.1109/CBI.2017.52

20. ABA Bank marketing. Accessed 31/7/2018. https://ababankmarketing.com/insights/how-banks-are-using-social-media/

21. Hald KS, Cordon C, Vollman TE (2009) Towards an understanding in buyer-supplier relationships. Ind Mark Manag 38:960–970. https://doi.org/10.1016/j.indmarman.2008.04.015

22. La Rocca A, Caruana A, Snehota I (2012) Measuring customer attractiveness. Ind Mark Manag 41:1241–1218. https://doi.org/10.1016/j.indmarman.2012.10.008

23. Mortensen MH (2012) Understanding attractiveness in business relationships – a literature review. Ind Mark Manag 41:1206–1218. https://doi.org/10.1016/j.indmarman.2012.10.005

24. Blakeman K, Brown S (2010) Social media: essential for research, marketing and branding. Bull Am Soc Inf Sci Technol 37:47–50. https://doi.org/10.1002/bult.2010.1720370121

25. Reifsnider C, Hogenson L (2010) Social media & social capital: the value of social networks. Kenan Institute of Private Enterprise

26. Ridings C, Gefen D (2004) Virtual community attraction: why people hang out online. J Comput Mediat Commun 10(1). https://doi.org/10.1111/j.1083-6101.2004.tb00229.x/full

27. Grindeland M, Harrison C (2009) The power of social networking for women research study. Social Marketing to Women vol 1, ShesConnected Multimedia Corp

28. Zomorodian S, Sun R, Lu Y, Li X (2019) Identification and ranking of factors influencing customer attraction in the banking industry in Tehran. In: Xu J, Cooke F, Gen M, Ahmed S (eds) Proceedings of the twelfth international conference on management science and engineering management. ICMSEM 2018. Lecture notes on multidisciplinary industrial engineering. Springer, Cham. https://doi.org/10.1007/978-3-319-93351-1_100

29. Koutra G, Barbounaki S, Kardaras D, Stalidis G (2017) A multicriteria model for personnel selection in maritime industry in Greece. In: 19th IEEE conference on business informatics, Thessaloniki. https://doi.org/10.1109/CBI.2017.52

30. Noorderhaben N (1995) Strategic decision making. Addison-Wesley, Wokingham

Greek Consumers' Awareness and Perceptions for Green Hotels and Green Furniture

Ioannis Papadopoulos, Marios Trigkas, Aikaterini Papadopoulou, Argiro Mallisiova, and Fotini Mpakogiorgou

Abstract During the last years, several researches have shown that a significant group of hotel visitors with increased environmental awareness, prefer the so called "green hotels" for their accommodation. The aim of this prototype research was the collection of information and opinions of Greek consumers regarding green hotels and eco-furniture, studying the awareness of the consumers on the specific institution and meaning as well as their intension and acceptance in selecting such a hotel for their accommodation. The green hotels movement has been a growing industry in Europe and the U.S., but it is the first effort to study the potential those hotels to be equipped with green furniture. For the purposes of this study, which was conducted during 2016, we used a specially constructed questionnaire which was filled by 304 Greek consumers. We used personal interviews as well as electronic docs. google with the help of social media and mainly Facebook. Results have shown that only 6% of the Greek consumers know the meaning of green hotels very well, while the majority (58%) heard it for the first time through this specific study. While the majority of the Greek consumers consider the institution of the green hotels as quite significant, however more than 88% of them have never stayed in a green hotel and the rest stated that they have stayed 2–3 times. In general, there is an intention to pay a 5–10% more for a green hotel instead of a conventional one, among the people surveyed. Furthermore, they believe, at a percentage of 98%, that it is necessary for a green hotel to be equipped with ecological furniture and wooden constructions. The Greek consumers' target-group, for green hotels equipped also with green furniture,

---

I. Papadopoulos (✉)
University of Thessaly, Karditsa, Greece
e-mail: papad@teithessaly.gr

M. Trigkas
Aristotle University of Thessaloniki, Thessaloniki, Greece

A. Papadopoulou
National and Kapodistrian University of Athens, Athens, Greece

A. Mallisiova · F. Mpakogiorgou
Technological Educational Institute of Thessaly, Karditsa, Greece

583

consists of those with relatively higher income, while the support of this institution is independent from the income, educational level, age and sex of the respondents.

Keywords Green hotels · Green furniture · Greek tourism · Eco-friendly behavior

1 Introduction

During the last years, there has been very rich international bibliography [1–3], which reinforces the role that traditional economic sectors can play in the contemporary financial reality and which can guide innovation and technological changes beyond the classic fields of R&D intensive activities. There is an increasing belief that low tech companies (to which according to OECD the hotel sector and wood & furniture also belong [4]). They also occupy a significant share of employment and production in both developed and emerging economies and could be knowledge-intensive and develop innovation based on new knowledge creation and acquisition and its development mechanisms through other sectors [2]. According to Smith [5] "Development in less eminent, traditional sectors, is based on innovation and much more on intellectually complex and deep cognitive bases, which from times to times are subject to discontinuous changes".

Tourism, is without doubt a very important economic force and one of the fastest growing sectors of global economy [6–9]. Tourism can be the key-sector for the development strategy of Europe 2020. It represents the third biggest social-economic activity in E.U. and in 2014 it held the 21.5% of the total employment in the services sector in E.U, as 2.3 million companies occupied around 12.3 million people [10].

Throughout Europe, the tourism sector is currently facing challenges, such as the continuously growing competition deriving from developing countries and tourist destinations, but is also facing opportunities arising from the rapid development of e-commerce, marketing etc. Moreover, tourism, for a long period of time, has been based on a non-sustainably viable model regarding its consequences and development strategy [8, 11]. At the same time, there are examples of customers regarding wood products, seeking for hotel units that follow and apply eco-friendly practices [6, 12]. Furthermore, there is a specific segment of consumers pushing for a greater corporate and social responsibility of companies [7] or in other words, there is a "niche" market of consumers with moral criteria [13]. It is argued that consumers of this market segment are willing to pay higher prices for corresponding products, as a fee to the company for this kind of behavior [6, 14]. Thus, those consumers could be characterized as "moral consumers" in regard to their behavior for various products and services, among which is tourism and wood products for example. Consumption of this kind, with respect to the local hotel sector, is being perceived as a positive phenomenon, as many are those customers who prefer to choose to stay in a "green" hotel.

In the hotel sector, the idea of "green hotels" is being promoted at a global level [12, 15] as a future strategic marketing advantage, but also as a behavioral model of a specific target-group of consumers [16]. This idea contributes to the application of

Fig. 1 Hotel with Green Key in Greece [19]

Europe 2020 strategy to the relative sectors. Green hotels could attract environmentally sensitive customers who are willing to look for hotels that bring as little environmental impact as possible through their operation, such as low forest burden in terms of wood products use.

In Greece, although the number of hotels that have managed to obtain a "Green Key" certificate has tripled during the period 2009 (52) to 2014 (158)—most of them are in Crete (71), Chalkidiki (16), Attica (10) and Evia (7) etc.—this specific sector represents only 1.2% of the total numbers of hotels in Greece [17]. Moreover, the relevant research attempts on this subject are very limited for the time being [18] (Fig. 1).

2   Literature Review

According to a study for international green hotels, it was found that 90% of hotel guests would prefer to stay in an environmentally-friendly hotel [20], while in another study the figure reached 93% [21]. In current survey, 75% of visitors are willing to participate in green hotel practices, while 65% believe that proper green management can contribute to the hotel's competitiveness.

In a survey conducted by Booking.com (2016), 52% of respondents stated they would be affected by the environmental and social performance of a hotel for their final choice [17]. However, the percentage of those who have not heard about green hotels was high enough, reaching 53%, while for 62% of the respondents, the hotel's environmental policy is an important factor [21]. However, turning to green hotels is necessary, as they save natural resources and reinforce sustainability while saving money at the same time [22].

In general, the negative point for green hotels is the relatively higher accommodation cost. Thus, according to Karavasilis et al. and Yunhi and Heesup [23, 24], customers are willing to pay for a green hotel, as much as they would pay to stay in a conventional hotel. However, in US in 2014, a relevant research showed that over 30% of tourists worldwide state that they intend to pay $1–5 extra per night for staying in an eco-friendly hotel [25].

The active contribution of consumers to environmental protection, which has been observed during the last years, also includes the purchase of products, such as of furniture industry, which uses raw materials as well as production process, with reduced negative environmental impacts [26, 27]. Thus, strategies have been developed by furniture companies in E.U. which are directed to the increase of use of certified timber coming from sustainably managed forests (FSC και PEFC), chains of custody, investments in research programs for the reduction of VOC's such as formaldehyde, use of recycled wood, biodegradable materials etc. [28]. Thus, green products gradually emerging in the markets, force product designers to incorporate environmental criteria in the production process as well as in the final products [29].

In the framework of a successful research program on ecological and smart furniture in Greece [30], it was found that consumers play an active enough role in the formulation of policy and strategy in Greek furniture enterprises, incorporating those environmental principles and values in their operation (production and disposal).

Green furniture consumers in Greece have shown a satisfactory interest in buying them. The same research showed that the price of an eco-furniture is a decisive factor for the consumer's buying decision. The amount that eco-furniture consumers are willing to spend is estimated at approximately 6% in the Greek market, above conventional furniture.

Therefore, wood and furniture sectors could make an important contribution to the development of green hotel ideas, through the production of environmentally-friendly products and the development of innovation, mainly in the construction and buildings' furnishing sector [31–33], and thus also hotel units' sector, maximizing the added value of the overall tourism product.

Based on the above, the purpose of this survey, was the collection of information and opinions of Greek consumers regarding green hotels as an alternative accommodation choice, which would also include ecological furniture. More specifically, the research questions were the following:

- Q1: Is there a statistically significant difference regarding the awareness of green hotel institution, in relation to sex, income, education and age of Greek consumers?
- Q2: Does the opinion of Greek consumers, that a "green" hotel should be equipped with ecological furniture and wooden constructions, differ in relation to sex, income, education and age?
- Q3: Does the support of green hotels institution in Greece, differ in relation to the sex, income, education and age of Greek consumers?

- Q4: Is the intention of Greek consumers for paying an extra amount in order to stay in a "green" hotel instead of in a conventional one, of equivalent category, related to their sex, income, education and age?

3 Methodology

The research followed the quantitative research approach under the positivistic research philosophy. Research took place in 2016. In order to collect the necessary data, to measure the awareness and perception of Greek consumer for green hotels and green furniture, a structured questionnaire was prepared and a simple random sampling was engaged. It was addressed to a random sample of Greek consumers that were at least 18 years old of age. The questionnaires were distributed both in hard copy as well as online through "Google Docs" application. The data used in the current research came from 304 properly answered questionnaires.

At the beginning of the research, researchers performed a content validity test on the questionnaire; this demanded an extensive literature review and several conversations with experts on the Green Hotels and Green Furniture subject. A pilot research included a sample of 10 respondents. It actually led to gaps and needs for further specification of the questions. Thus, the questionnaire was improved and finalized [34].

The questionnaire consisted of three groups and a total of 24 questions. Questions were short, precise, easy to be understood by the majority of respondents and covered the full range of information needed to answer research questions and beyond them, so as to avoid as much as possible any tiredness and discontent of the respondents during the interview. Likert scale was used for the majority of the questions. The first group consisted of six questions regarding views on environmental protection and eco-friendly furniture. The second group of eight questions included variables regarding the institution of green hotels in Greece. The third group of questions offered information about the respondents' profile such as age, sex, educational level, profession, income. This profile is presented in Table 1. In this paper are presented some results of total answers of the simple random sampling of Greek consumers.

The data were recorded, processed and analyzed via the statistical package SPSSWIN version 20.0 and the appropriate tests for frequency (Frequencies), descriptive statistics (Descriptives), variable comparison analysis (Crosstabs), and Correlation analysis (Person correlation) were conducted, in order to derive critical conclusions in regard to the issue under investigation.

Table 1 The profile of Greek consumers for green hotels

Sex	%	Education	%	Profession	%	Age	%	Income (€/year)	%
Male	37.2	Phd	1.6	Public employee	5.9	<20	11.2	<10,000	44.7
Female	62.8	Postgraduate	6.3	Private employee	22.7	20–29	71.7	10–20,000	34.5
		Bachelor/ Univer.	29.3	Freelancer	12.8	30–39	10.9	20–30,000	11.8
		Bachelor—TEI	40.5	Merchant	1.0	40–49	2.6	30–40,000	6.6
		IEK	12.2	Retired	0.7	50–59	3.3	>40,000	2.3
		Secondary school	10.2	Student	45.1	60+	0.3		
				Unemployed	10.9				
				Other	1.0				

4   Results

Although the initial level of Greek consumers' awareness about the institution of green hotels was relatively low (only 5.6% of them knew it very well and 35.9% had some awareness), the final opinion formed by themselves, after having filled the survey questionnaire, significantly improved by 80.3% (much more positive at a percentage of 47.7% and more positive at a percentage of 33.6%).

Regarding the 1st research question Q1: "Is there a statistically significant difference regarding the awareness of green hotel institution, in regard to sex, income, education and age of Greek consumers?" Chi-Square test showed that there is a strong correlation between Greek consumers' income and awareness of green hotel institution (Pearson X^2 = 24.658 and df = 8) and this correlation is also statistically significant at an importance level of a = 0.005. More specifically, the more consumers' income increases the greater the awareness about green hotel.

Based on the definition of green hotels, "green hotels are environmentally friendly properties that develop eco-friendly programs, such as energy and water saving, as well as reduction of solid waste production" [35], which was given to the Greek consumers as a footnote in the questionnaire conducted for the survey, respondents were invited to give their opinion about the possibilities offered by green hotels. Thus, environmental protection (75.3%), accommodation in an environmentally healthy room (71.1%), application of eco-friendly practices (70.4%) and the application of environmental friendly actions for their awareness about eco-friendly products (65.8%), are the most important parameters for which Greek consumers state an agreed initial opinion.

Greek consumers consider that the coexistence of "green" hotels and "green" furniture is necessary, as 97.7% of them (66.4% definitely yes and 31.3% probably yes) states that a "green" hotel should be equipped with ecological furniture and
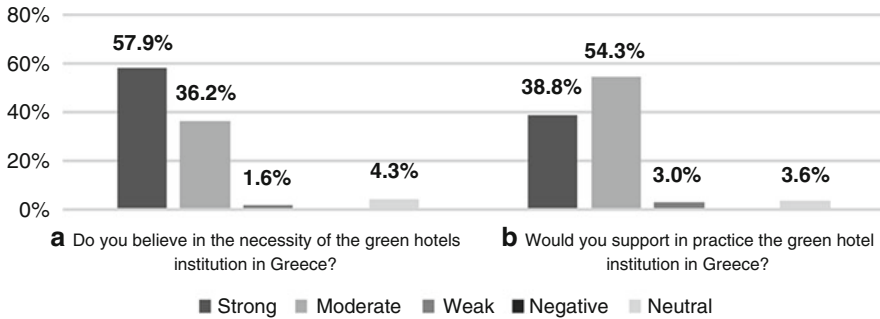
Fig. 2 Opinions of Greek consumers regarding (**a**) if it is necessary to have "green" hotels in Greece and (**b**) if they would practically support the institution of "green" hotels in Greece

wooden constructions. Thus, in the 2nd research question (Q2), statistical analysis with Chi-Square test showed that Greek consumers' attitude supporting that a "green" hotel should be equipped with ecological furniture and wooden constructions is statistically significantly correlated to their educational level (Pearson $X^2 = 33.509$ for df = 15 and importance level a = 0.005). Specifically, the higher the educational level of Greek consumers the more intense the belief that green hotels should be equipped with ecological furniture and wooden constructions.

The intention of Greek consumers to support the institution of "green" hotels is of great interest, as they state at a percentage of 94.1% that it is necessary to have "green" hotels in Greece, with 38.8% of them being sure about the practical support of this institution in Greece and 54.3% of them characterizing this intension as possibly positive (Fig. 2).

The support of green furniture institution in Greece does not have statistically significant differences in relation to sex, income, education and age of Greek consumers according to Chi-Square test at an importance level of a >0.05 and thus the 3rd research question (Q3) is being answered.

Practical support is proved by the fact that they are willing to pay more at an average of 7.0%, in order to stay in a "green" hotel instead of a conventional one of equivalent category. The majority of them, 36.8%, state that they are willing to pay an extra amount of 6–10%, 33.2% of them an extra amount of 1–5% respectively, 16.4% an extra amount of 11–20%, while 10.2% are not willing to pay any extra amount and finally 3.3% would pay an extra amount even higher than 20% (Fig. 3).

The intention of Greek consumers to pay an extra amount in order to stay in a "green" hotel instead of a conventional one of an equivalent category, is statistically significantly correlated to their annual income (Pearson $X^2 = 24.473$ for df = 16 and importance level a = 0.05. The higher the income, the stronger is the intention to pay an extra amount of money. Chi-Square test at importance level a > 0.05 showed that there is no statistically significant relation between the intention of Greek consumers to pay an extra amount of money in order to stay in a "green" hotel instead of a conventional one, and their sex, educational level and age. Thus the 4th research question (Q4) is being answered.
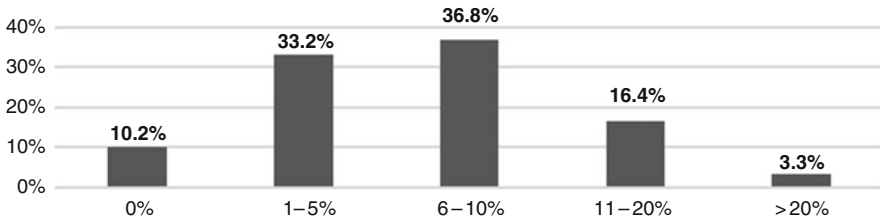
Fig. 3 Till what percentage % are you willing to pay more in order to stay in a "green" hotel instead of a conventional one of equivalent category?

5 Conclusions: Proposals

It is a fact that the vision for a rapidly growing hotel sector [6–9] based on resource efficiency, reveals the size and variety of innovation that could be developed by enterprises (both hotels as well as furniture manufacturers), and become part of the consumer experience, under the context of a transition to a more sustainable economy in those sectors, unlocking eco-innovations and offering a whole new perspective to the concept of "hospitality" [4, 5].

With the increase of tourist traffic in Greece over the last 2 years, hotel and furniture sector companies can develop win–win synergies with each other and benefit consumers by differentiating themselves from competition while at the same time consciously and actively supporting the protection of the environment, highlighting the institution of green hotels and green furniture as it is promoted at global level [12, 15]. The cooperation and synergies between these two sectors as well, is the prototype element of the present research at international level.

The target-group for green hotels equipped also with green furniture, consists of consumers with relatively higher income, as shown in the current research results (1st research question—Q1), although the support of this institution is independent of income, educational level, age and sex of the respondents (4th research question—Q4).

The intention of Greek consumers to pay more at a percentage of 7.0% on average (4th research question—Q4), in order to stay in a "green" hotel compared to a conventional one of equivalent category, creates very positive conditions for investments on this institution. This percentage is in line with the results of relevant studies in Greece [30] as long as in the U.S. [24]. This situation may become even more favorable if future survey examines the intention of foreign tourists, largest part of which have much higher income than Greek tourists, and which they spend during their holidays in Greek tourist destinations.

Finally, based on current survey's results, it is suggested to explore the development of a cooperation network regarding the potential eco-innovation that could be developed, with the aim of defining the discussion among stakeholders regarding green hotels as well as the wood and furniture sectors, under the context of economic, social and environmental approach and development of sustainable constructions. This proposal could be included in E.U. strategy for Sustainable

Touristic Growth of United Nations and Worldwide Tourism Organization, highlighting the competitive advantages of Greek tourism [17].

References

1. Karagouni G, Caloghirou Y (2013) The nature and dimensions of autotelic capabilities in knowledge-intensive low-tech ventures: an introduction. World Rev Entrep Manag Sustain Dev 9(2):230–245. https://doi.org/10.1504/WREMSD.2013.052361
2. Hirsch-Kreinsen H, Schwinge I (2011) Knowledge-intensive entrepreneurship in low-tech sectors. In: DRUID conference, Copenhagen Business School, Denmark
3. Robertson P, Smith K, von Tunzelmann N (2009) Introduction. Innovation in low- and medium-technology industries. Res Policy 38:441–446. https://doi.org/10.1016/j.respol.2008.10.019
4. OECD (2011) Isic rev. 3 technology intensity definition – classification of manufacturing industries into categories based on R&D intensities. https://www.oecd.org/sti/ind/48350231.pdf
5. Smith K (2008) Innovation, growth and policy in low and medium tech industries. A review of recent research, Department of the Australian Innovation Research Centre, University of Tasmania
6. Han H, Kim Y, Kim E-K (2011) Cognitive, affective, conative, and action loyalty: testing the impact of inertia. Int J Hosp Manag 30(4):1008–1019. https://doi.org/10.1016/j.ijhm.2011.03.006
7. Goodwin H, Francis J (2003) Ethical and responsible tourism: consumer trends in the UK. J Vacat Mark 9:271–284. https://doi.org/10.1177/135676670300900306
8. Weeden C (2002) Ethical tourism: an opportunity for competitive advantage. J Vacat Mark 8:141–153. https://doi.org/10.1177/135676670200800204
9. World Tourism Organization (WTO) (2002) Voluntary initiatives for sustainable tourism: worldwide inventory and comparative analysis of 104 eco-labels, awards and self-commitments. World Tourism Organization, Madrid
10. Eurostat (2018) Tourism statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tourism_statistics/el
11. Wu KS, Teng YM (2011) Applying the extended theory of planned behavior to predict the intention of visiting a Green hotel. Afr J Bus Manag 5(17):7579–7587. https://doi.org/10.5897/AJBM11.684
12. Manaktola K, Jauhari V (2007) Exploring consumer attitude and behavior towards green practices in the lodging industry in India. Int J Contemp Hosp Manag 19:364–377. https://doi.org/10.1108/09596110710757534
13. Delistavrou A, Tilikidou I, Sarmantiotis C, Gounas A (2012) Promoting ethical actions against unethical hotels. In: Proceedings of the international conference on contemporary marketing issues (ICCMI), 13–15 June 2012, Thessaloniki, Greece, pp 497–502
14. Laroche M, Bergeron J, Barbaro-Forleo G (2001) Targeting consumers who are willing to pay more for environmentally friendly products. J Consum Mark 18(6):503–520. https://doi.org/10.1108/EUM0000000006155
15. Tilikidou E, Delistaurou A (2014) Do beliefs affect customers' intentions to choose green hotels? Int J Strateg Innov Mark 1(1):51–60
16. Heesup H, Yunhi K (2010) An investigation of green hotel customers' decision formation: developing an extended model of the theory of planned behavior. Int J Hosp Manag 29 (4):659–668. https://doi.org/10.1016/j.ijhm.2010.01.001
17. SETE (2016) Green hotels in Greece. https://www.newmoney.gr/palmos-oikonomias/toyrismos/310081-a-andreadis-sete-perissotera-%C2%ABprasina%C2%BB-ksenodoxeia-kai-stin-ellada. Accessed 26 Aug 2018

18. Tilikidou I, Delistavrou A, Sarmaniotis C (2013) Intentions to boycott 'unethical' hotels: a conjoint analysis. Tourismos 8(3):21–38
19. http://www.greenkey.global
20. Jin-Soo L, Li-Tzang (Jane) H, Heesup H, Yunhi K (2010) Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions. J Sustain Tour 18 (7):901–914. https://doi.org/10.1080/09669581003777747
21. Green Hotels (2010) http://greenhotelsgr.blogspot.com/2010/11/blog-post_23.html. Accessed 26 Aug 2018
22. Yusof ZB, Jamaludin M (2013) Green approaches of Malaysian green hotels and resorts. Procedia Soc Behav Sci 85:421–431. https://doi.org/10.1016/j.sbspro.2013.08.371
23. Karavasilis G, Nerantzaki D-M, Pantelidis P, Paschaloudis D, Vrana V (2015) What generation Y in Greece thinks about green hotels. World J Entrep Manag Sustain Dev 11:268–280. https://doi.org/10.1108/WJEMSD-02-2015-0010
24. Yunhi K, Heesup H (2010) Intention to pay conventional-hotel prices at a green hotel – a modification of the theory of planned behavior. J Sustain Tour 18:997–1014. https://doi.org/10.1080/09669582.2010.490300
25. Statica (2014) https://www.statista.com/topics/1916/green-tourism/
26. Gao T, Sirgy M, Bird M (2005) Enriching customer value research with a relational perspective evidence from an empirical investigation of organizational buyers' value perceptions. J Relatsh Mark 4:21–42. https://doi.org/10.1300/J366v04n01_03
27. Gordon W, Langmaid R (1988) Qualitative market research: a practitioner's and buyer's guide. Gower, Aldershot
28. Anderson J (1995) Relationship in business markets: exchange episodes, value creation, and their empirical assessment. J Acad Mark Sci 23:346–350. https://doi.org/10.1177/009207039502300415
29. Hamdouch A, Depret M (2010) Policy integration strategy and the development of the 'green economy': foundations and implementation patterns. J Environ Plan Manag 53:473–490. https://doi.org/10.1080/09640561003703889
30. Papadopoulos I, Karagouni G, Trigkas M, Beltsiou Z (2014) Mainstreaming green product strategies: why and how furniture companies integrate environmental sustainability? EuroMed J Bus 9:293–317. https://doi.org/10.1108/EMJB-12-2013-0058
31. Papadopoulos I, Trigkas M, Karaguni G, Papadopoulou A (2013) The contagious effects of the economic crisis regarding wood and furniture sectors in Greece and Cyprus. World Rev Entrep Manag Sustain Dev 10:334–351
32. Papadopoulos I, Trigkas M, Ntalos G, Premeniotou E (2011) Green economy. The case of sustainable building cluster in Greece. In: Book proceedings of the 4th annual international EuroMed conference, business research challenges in a turbulent era, Crete, pp 1420–1442. ISBN: 9789963711017
33. Papadopoulos I, Karagouni G, Trigkas M, Platogianni E (2010) Green marketing. The case of Greece in certified and sustainable managed timber products. EuroMed J Bus 5:166–190. https://doi.org/10.1108/14502191011065491
34. Dillman DA (2000) Mail and internet surveys: the tailored design method. Wiley, New York
35. Green Hotels Association (2013) Why should hotels be green? https://greenhotels.com/

Exploring the Power of Certification Systems in the Development of Hiking Tourism in Greece: The Case of Menalon Trail from the Demand-Side

Alexios-Patapios Kontis and Georgia Dimopoulou

Abstract The issue of certification in the field of hiking tourism is crucial in the direction of creating interesting routes that will guarantee a high quality of hiking. The paper examines the issue of certification in the field of walking with the consumers' perception on the subject, the assessment of the certification as a whole and of its individual criteria by the consumer as well as the extent to which the certification scheme can influence the consumers' final decision and to help increase the number of visitors in a specific area. A special contribution to finding answers in relation to the above issues is the presentation of the survey conducted among the "Menalon trail" hikers, the first certified path in Greece with the European Ramblers Association's Leading Quality Trail (LQT) certification scheme. The ultimate aim is to evaluate the criteria that the LQT certification system is comprised of from the consumer's perspective and to link it to issues such as the profile and preferences of the individual hikers.

Keywords Hiking · Certification system · Multi-criteria assessment

1 Introduction

The benefits of hiking tourism in the development of the countryside are manifold and diffuse throughout the sectors of the local economy [1, 2]. At the same time, the fragmentation of space in small sections, the scale of the landscape and the particular character of settlements and areas combined with adaptation to tourist demand, i.e. changes in the values, aspirations and desires of the modern tourist, create the conditions for further growth of tourism in the country [3–7].

A.-P. Kontis (✉)
University of the Aegean, Chios, Greece
e-mail: apkontis@aegean.gr

G. Dimopoulou
Hellenic Open University, Patra, Greece

Within recent years, certification schemes have gained popularity as they benefit not only the tourism industry but also those who use the relevant services. The schemes can contribute to increased self-regulation in the tourism industry, resulting in less government control, while at the same time, consumers have information on products and services which are certified [8]. In the tourism sector, certification is mainly used to control the activities and level of tourism businesses, but can also cover issues of sustainability [9]. Key accreditation schemes include voluntary business engagement, well-defined criteria and standards, control and evaluation procedures, recognition of enterprises that meet the criteria through a logo and monitoring in due course for compliance checking [10–13], also certifications strengthen local identity and branding [14].

The certification system Leading Quality Trails (LQT) has been developed by the European Ramblers' Association (ERA) in order to provide a transparent system of criteria for assessment and improving the quality of trails in Europe. It takes into account the variety of different landscapes, infrastructure and the nature of the trails in similar dimensions [15, 16]. The individual groups of 23 criteria required for certification deal with issues such as: trail surface format that evaluates, among other issues, how natural or artificial the trail is, whether it crosses roads, etc.; the trail routing system/visitor guiding system, which examines inter alia, signaling, the route network; the nature/landscape where the characteristics of the natural environment, landscapes, natural tranquility, points of natural interest which are assessed; culture where the characteristics of the wider region are assessed, such as historical buildings, squares, historical and cultural sites, other attractions such as castles, monasteries, national monuments; infrastructures of the surrounding environment, such as accommodation, access points for public transport, other leisure and recreational areas, e.g. picnic tables, benches, etc.

The Menalon trail received the technical and safety Leading Quality of Trails (LQT) certification in May 2015, being the first certified trail in Greece and the tenth in Europe. It is 75 km in length, lies in the center of the Peloponnese in Arcadia and has an altitude of 420–1500 m, following ancient and old paths, linking important archaeological sites, early byzantine monasteries and nine old villages with basic touristic infrastructure.

The main reason that led the researcher to conduct the research on the assessment of the individual criteria that make up the Leading Quality Trail (LQT) certification system from the final consumer's point of view, has to do with the need to investigate the impact that certification systems may have on behavior and future consumers, linking certification to issues about the profile and preferences of the hiker, improving the quality of the services offered, and providing reliable information on the current profile and potential hikers. The findings of the research are expected to help bridge the gap in modern academic research with regard to hiking tourism and, in particular, the issue of certification in this area. In addition, they can provide a useful tool for hiking management operators to draw useful conclusions on the profile of the modern hiker visitor, the role of certification in planning and the promotion of hiking routes, factors influencing tourism demand and whether certification can be a driving force to increase the visitors to the area.

2 Methodology

The research involved hikers who have visited the Menalon trail at least once and were asked to complete a specific standardized questionnaire with open and closed-ended questions, clear and comprehensible to respondents. The sampling method applied was "simple random sampling", where each person has the same probability of being selected in the sample. It should be noted that since there was no database with all the hikers, the sampling format chosen was the voluntary announcement of the existence of the research through various means and the participation of the respondents was done on a voluntary basis motivated by their interest in the research issues.

The search for informants was made through touristic accommodation located in the area of the trail, tourist agencies that organize hikes in the area as well as individual people who were informed about the research on the official webpage of the Menalon trail. Eighty questionnaires were completed by people of all age groups, with different categories of education, employment, marital status and income. The questionnaire consists of twenty-nine (29) closed-ended questions and one (1) open-ended questionnaire.

3 Discussion

The quantitative variables were described by the positional (mean and median) and dispersion measures (standard deviation and interquartile range) derived from the sample, while the quality variables with the frequencies corresponding to each category. The tests used to evaluate the statistical significance of the variation of the continuous variables at two or more different categories of the variable were parametric t-test and ANOVA and non-parametric controls of Man-Whitney for two independent samples and Kruskal-Wallis for more. The independence between the qualitative variables was checked through the Chi-square test (Pearson and Fisher coefficients). At the second level of analysis multivariate factor analysis was performed, (method of main components). The intrinsic relevance and credibility of the estimated agents was controlled by the Cronbach α factor.

3.1 Demographic Characteristics

The outline of the most dynamic group of the profile of the Menalon trail visitor has the following characteristics: Unmarried or self-employed woman aged 30–49, third level education. These characteristics are combined in 15 out of a total of 80 visitors in the sample, i.e. 18.8%. In further analysis, when the low or middle income (up to

20,000€) is added to the above characteristics, then the above group of women amounts to 11 cases (13.8%).

3.2 Habits of the Hikers and Ways of Being Informed Regarding Menalon Trail

One third of the visitors is expected to be experienced hikers (with at least 10 years of experience), while a percentage of visitors of about 40% make more than 5 hiking trips per year. The optimum use of the trail requires the combination of hiking with various parallel nature activities in which visitors of the trail tend to participate. Such activities are Rafting, Kayaking, Mountaineering and Rappelling, with a relatively high percentage of visitors participate in. The issue of informing hikers is also of great importance as the most important source of information on the trail is word of mouth (WOM) from family and friends.

3.3 Access and Crossing of the Trail

A significant percentage of the visitors of the trail, 35%, are those who visited the trail on organized tours (tourist agencies, hiking clubs, etc.), with 22% arriving in the area on a tourist bus. This category of visitors comes with the main aim of visiting the hiking area. The percentage of hikers who visit the trail for the first time is particularly high, almost 50%. Indeed, this percentage is high even for visitors who have been walking 10 or more years (13/28, 46%). The percentage of visitors completing all 8 paths of the trail (11%), which combined with the increased number of same-day tourists (23%) shows that there is space for improvement in the provision of information and support to tourists but also possibilities for better use of the local tourism infrastructure.

3.4 Satisfaction of the Visitors

Particularly positive, the participants in the research evaluate the satisfaction they derive from their visit to the trail with positive opinions exceeding 96% and meeting the expectations they had prior to their visit, which had to reach 91%. The positive impression of the visitors is reflected in the expression of the willingness on the part of the hikers to visit the trail again (82% positive opinions) and to recommend it to their environment (99% positive opinions).

4 Assessment of the Trail and the Local Infrastructure

The participants in the research evaluated both the trail and the existing local support infrastructure by using a positively graded score scale from one to ten. The results of these evaluations in accordance with the Leading Quality trail evaluation system are shown in Table 1 where it can be observed that the criteria of natural silence, natural trail and natural resources have a median of 9 while the other criteria have a median of 8. This indicates that these three criteria have a higher number of higher scores than the rest of the criteria. The criterion of natural silence is also the one with the highest number of excellent scores, as 38 of the 80 hikers rated the trail according to the criterion of natural silence with 10. On the other hand, the smaller scores reflect the criteria for biodiversity and cultural spaces. In all criteria, there were excellent scores especially in the criteria of signing, natural silence, natural resources and biodiversity where the minimum score was 5, the criteria of cleanliness and cultural spaces the minimum score given was 4, while the criterion of the natural path is the lowest individual score given equal to 3. With regard to score dispersion, the highest concentration of values around the average is observed in the natural silence criterion (the standard deviation is 1.16), while the greater dispersion of scores is found in the criterion of cultural sites, where the typical deviation equals 1.52 and the interquartile range is 2.75°.

The extent to which ratings on the trail criteria are correlated was then checked. The zero hypothesis of non-correlation is rejected in all cases except the criteria of the signing and the natural trail. Weak positive correlation (accepted at a 5% significance level but not at a 1% significance level) is observed among the criteria of the signing and the natural silence, cleanliness and naturalness of the trail and between cleanliness and biodiversity. On the contrary, the correlation observed between biodiversity, cultural and natural resource scores is very strong (over 50%) (Table 2).

The participants in the research were also asked to rate five criteria for evaluating the existing support infrastructure in the area: accommodation services, restaurants,

Table 1 Normality check and descriptive measures of the trail evaluation criteria

Criteria (n)	Kolm.-Smirn. p-value	Lowest to highest	Average score ($\pm$TA)	Median
Signing (80)	0.001	5–10	8.40 (1.21)	8 (1.00)
Cleanliness (80)	0.036	4–10	8.30 (1.27)	8 (2.00)
Cultural sites (80)	0.008	4–10	8.25 (1.52)	8 (2.75)
Natural silence (80)	0.000	5–10	9.04 (1.16)	9 (2.00)
Natural trail (80)	0.000	3–10	8.28 (1.35)	9 (2.00)
Natural resources (80)	0.001	5–10	8.75 (1.27)	9 (2.00)
Biodiversity (80)	0.006	5–10	8.24 (1.33)	8 (1.00)
Μέσο Σύνολο (80)	0.755	5–10	8.46 (0.90)	8.43 (1.25)

Table 2 Correlations between the trail evaluation criteria (Pearson)

	Signing	Cleanliness	Cultural sites	Natural silence	Natural trail	Natural resources	Biodiversity
Signing	1						
Cleanliness	0.315[a]	1					
Cultural sites	0.289[a]	0.313[a]	1				
Natural silence	0.251[b]	0.444[a]	0.424[a]	1			
Natural trail	0.126	0.267[b]	0.286[a]	0.453[a]	1		
Natural resources	0.380[a]	0.399[a]	0.584[a]	0.496[a]	0.373[a]	1	
Biodiversity	0.325[a]	0.270[b]	0.619[a]	0.402[a]	0.336[a]	0.649[a]	1

[a]Correlation statistically significant at materiality level 0.01 (2-side control)
[b]Correlation statistically significant at materiality level 0.05 (2-side control)

local transportation, attractiveness of the villages and service/friendliness of local businesses and residents of the area; in this case the distribution of scores in the five infrastructure criteria does not approach the normal distribution (rejection of Kolmogorov-Smirnov's zero hypothesis at a 5% significance level), instead put the average sum of the allocation criteria which satisfactorily approximates the normal distribution. The smallest score was related to local transportation services followed by the criteria of accommodation, restaurants, service, and average of the total, while six was the minimum rating given to the criterion of the attractiveness of the villages. The above results show that despite the important existing tourist infrastructure in the area, the quality of the services offered is rated relatively low by the visitors and especially in the criterion of local transportation (Table 3).

Regarding the correlation coefficients between the ratings of the trail evaluation criteria and the infrastructure evaluation criteria, it can be observed that the criteria of transportation and service show the greatest degree of independence from the criteria of the trail. Also, it might be concluded that the correlations of the criteria for evaluating infrastructures are statistically significant in all cases (except for evaluation of the transportation and restaurants criteria), however, the correlation coefficients are not more than 50% in any case (Table 4).

All the criteria for the evaluation of the path score high, more than 8 while the criterion of natural silence stands out from the rest as it scores considerably higher than the rest of criteria. Statistics (rather than random) are also the difference in the rating of the natural resource criterion from the ratings of cleanliness criteria, cultural sites, natural pathways and biodiversity. The way in which the hikers of the trail evaluate the biodiversity criterion is broadly in line with how they evaluate the criteria of natural resources and cultural sites. These three scores are correlated to more than 50%. The creation of the Menalon trail and its certification resulted in the creation of an audience that tends to visit the trail frequently. The natural beauty, the many routes of varying intensity and difficulty, as well as the variety of nature activities (rafting, kayaking, and mountaineering), entertainment and recreation offered by the wider area create the conditions for attracting visitors with a focus on hiking. It is characteristic that the hikers who crossed the trail for the second or more times all express a positive mood to come back. However, it should be noted,

Table 3 Normality check and descriptive measures of the trail evaluation criteria

Criteria (n)	Kolm.-Smirn. p-value	Lowest Highest	Average score (±TA)	Median
Accommodation (80)	0.000	4–10	7.83 (1.24)	8 (2.00)
Restaurants (80)	0.015	4–10	7.57 (1.21)	8 (1.75)
Local transportation (80)	0.002	2–10	7.08 (1.80)	7 (2.00)
Villages (80)	0.005	6–10	8.62 (1.12)	9 (2.00)
Services (80)	0.011	4–10	8.32 (1.25)	8 (1.00)
Average sum (80)	0.384	4–10	7.89 (0.90)	7.80 (1.00)

Table 4 Correlations between the evaluation criteria of the trail and the evaluation criteria of the infrastructure

	Signing	Cleanliness	Cultural sites	Natural silence	Natural trail	Natural resources	Biodiversity
Accommodation	0.191	0.249[a]	0.251[a]	0.233[a]	0.294[b]	0.318[b]	0.309[b]
Restaurants	0.291[b]	0.174	0.340[b]	0.200	0.173	0.318[b]	0.330[b]
Local transportations	0.033	0.095	0.275[a]	0.059	−0.040	0.175	0.124
Villages	0.309[b]	0.346[b]	0.480[b]	0.283[a]	0.212	0.442[b]	0.426[b]
Services	0.047	0.231[a]	0.249[a]	0.166	0.171	0.188	0.166

[a]Correlation statistically significant at materiality level 0.05 (2-side control)
[b]Correlation statistically significant at materiality level 0.01 (2-side control)

that the recent creation of the trail, only in 2015, was not accompanied by a spectacular improvement of the services already offered in the region and, in particular, the handling of issues such as local transportation.

5   Conclusions

The adoption of a certification scheme is a powerful but not necessary condition for creating a hiking destination. Undoubtedly, faithful implementation of certification criteria is a non-negotiable principle as well as the commitment of all involved parties to continuous and steady quality in all services offered. However, particular emphasis should be placed on the complementary services offered to determine the degree of satisfaction of the visitor such as quality in accommodation, restaurants, local transportation and services provided by the local businesses and residents. Additional issues also arise in correspondence with the building of the identity of a hiking destination as well as the marketing and promotional mix in order to attract visitors. It is obvious that the approach of groups such as experienced high-income hikers is a complex process which, in order to bear fruit, requires, besides acquiring a certification system, a series of actions that will provide a strong advantage compared to competitive hiking destinations. Certainly, additional research is needed to explore the context of what is on offer for the tourist and the factors that make it a hiking destination as well as research on certified and non-certified paths that will determine the added value that eventually gives the trail certification in terms of increasing the number of visitors and revenue in the area from the certification of the trail.

References

1. Mpalomenou Ch, Lagos D (2007) The innovation in special interest tourism and its impact on regional development. In: 10th Uddevalla Symposium 14–16/6/2007 on institutions for knowledge generation and knowledge flows—building innovative capabilities for region, University West Sweden, Book of Abstracts, pp 205–213
2. Tsartas P, Sarantakou E (2016) Tourism market trends and their effect on entrepreneurship, cultural consumption and sustainability. In: Andreopoulou Z, Leandros N, Quaranta G, Salvia R (eds) Tourism and new media. Franco Angeli, Milano, pp 26–34
3. Sarantakou E, Kontis AP (2016) The development of enriched mixtures of cultural tourism, for the re-promotion of Greek mature destinations. Tourismos 11(2):280–301
4. Coccosis C, Tsartas P, Grimba E (2011) Special and alternative forms of tourism demand and offer of new touristic products. Kritiki, Athens
5. Stavrinoudis Th, Parthenis S (2009) The role and contribution of local, regional and national institutions and organizations in the development of alternative and special interest tourism. In Sotiriadis M, Farsari I. (eds) Alternative and special forms of tourism: planning, management and marketing. Interbooks, Athens (in Greek)

6. Maroudas L, Gouvis D, Kyriakaki A (2004) Community approach to mountain adventure tourism development. Anatolia 15(1):5–18
7. Kyriakaki A, Stavrinoudis Th, Doumi M, Riga A (2017) Factors influencing destination recommendation and tourists' revisit intentions. In: 6th MIRDEC, Lisbon, Portugal, 27–29 November 2017
8. Issaverdis JP (2001) The pursuit of excellence: benchmarking, accreditation, best practice and auditing. In: Weaver DB (ed) The encyclopedia of ecotourism. CABI, Cambridge, MA, pp 579–594
9. Graci S, Dodds R (2015) Certification and labeling. In: Hall M, Gossling S, Scott D (eds) The Routledge handbook of tourism and sustainability. Routledge, New York
10. Kontis AP, Gkoumas A (2017) "Greek breakfast": a new tourism brand name for an age-long gastronomy tradition. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer, Cham, pp 235–241
11. Casadesus M, Marimon F, Alonso M (2012) The future of standardised quality management in tourism: evidence from the Spanish tourist sector. Serv Ind J 30:2457–2474. https://doi.org/10.1080/02642060802712822
12. Albacete A, Fuentes M, Llorens J (2007) Service quality measurement in rural accommodation. Ann Tour Res 34:45–65. https://doi.org/10.1016/j.annals.2006.06.010
13. Go F, Govers R (2000) Integrated quality management for tourist destinations: a European perspective on achieving competitiveness. Tour Manag 21:79–88. https://doi.org/10.1016/S0261-5177(99)00098-9
14. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia, Austria. Tourism 61:289–312
15. European Ramblers' Association. Leading quality trails – best of Europe. http://www.era-ewv-ferp.com/programs/lqt/
16. Gkarane S, Vassiliadis C (2019) Small scale event product analysis based on conjoint analysis results: the case of Yedi Kule conquest monuments run. In: Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism, 7th ICSIMAT

Tourism, Design and Disability?

Maria Poli

Abstract As a person who my whole life have been a personal assistant of a wheelchair user and had my Master degree on Design for All, I wrote a paper which analyses a global idea about human discrimination of disabled people related to design and their everyday activities as Accessible Tourism is. Based on the idea that the 'ultimate goal of social development is to improve and enhance the quality of life for all people' (United Nations, Department of Public Information Standard Rules on the Equalization of Opportunities for Persons with Disabilities, pub. DPI 1476 (New York, May 1994)) design plays an important role to this. The focus is to examine: the needs and Targets for Accessible Tourism Policies, Accessible Principles, the design essentials for Accessible Hotels, what do we mean by 'accessible' and who are the customers that needs accessible facilities? How the principles of Universal design empower tourism destinations to improve the quality of their services, expand the tourism market and in conclusion to achieve and determine tourism policies focusing to the value of 'design for All'!

Keywords Universal design · Accessibility · Disability · Accessible tourism practices · Accessible travel and leisure · Social emancipation

1 Introduction

'If you do not see disabled people that does not mean they do not exist' [1]. The disability problem is complex and requires deep understanding and proper confrontation in many aspects. Every disability problem must be faced through an integrated approach. Partial solutions are not enough [2]. In this paper and in order to study social trends, we look at the social needs of disabled people related to the freedom of choice. Society must consider the needs of all of its citizens. We are all equal members. There are two main aspects to investigate. The social and the practical.

M. Poli (✉)
Interior Architecture and Design, University of West Attica, Aigaleo, Greece

Our role as designers is to find an answer to both; To combine ergonomics with aesthetics and with human needs. It is not enough to give an explanation about accessible interiors or exteriors by solving it alone enumerating dimensions or statistical data. Tourism, accessible vacations, leisure, is an example where designers should implementate Design for All. In the specific planning and implementation process of projects, designers are needed to design and create environments where people can go traveling and to develop capacities for promoting tourism's power.

It is necessary to demonstrate the economic and commercial feasibility of incorporating, disabled or ageing considerations in mass-market designs. The benefit for the non-disabled people must be clarified in the market policy. Researcher's perspectives should respect and represent a major change between users industries.

Society is structured differently; Cultural diversities must be respected. The main difference concerning disability problems is social justice, the democratic participation and the rule of law in the social community.

Design, which has an impact on social attitudes and human needs, can improve standards of life for the disabled community.

Accessible Tourism, Universal design and access for all, enables tourism organizations and destinations to expand their target markets but also to improve the quality of their service offering, leading to greater customer satisfaction and expansion of business.

2 What Disability Is?

Disease leads to Impairment leads to Disability leads to Handicap. Most diseases lead to impairment, (loss or abnormality of psychological, physiological, or anatomical structure or function), which leads to handicap (a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfillment of a role that is normal [3]. Disability, restriction or lack (resulting impairment) or ability to perform an activity in the manner or within the range considered normal for a human being. Three factors determine the presence of a disability. Each is a potential barrier limiting a person's freedom and independence: the objective, the ongoing condition results of medical, or injury conditions and the third the discrimination of our environment [3].

> Pirkl defines a handicap as the cumulative result of the obstacles which disability interposes between the individual and the maximum functional level. Society or the environment rather than the disability almost always cause the handicapping effects of disability [3].

He uses as an example the following: the loss of both legs is impairment, it creates a disability in that mobility is limited; but the physical handicap is created by a world arranged for people who can walk. If stairs were 1-m high, we would all be handicapped. Some factors other than physical disability can also inflict a handicapped: age, education, employment, sex, race etc. [3].

2.1 Social Emancipation

Full social emancipation for the disabled must ultimately be the goal of a human and democratic enlightened society. To enable the disabled to integrate fully there are some factors that allow effective emancipation and social integration. But who then can be considered as emancipated?

Those persons who can choose to participate in life. Those have the choice to work, to have a paid job. Those have a social life, friends, family and loved ones. They can shop, travel and get what they need to live without assistance. They are accepted by the society. They are visible.

2.2 What Is Accessible Design?

Accessible design seeks to accommodate the needs of the disabled (such as wheelchair users, the elderly and the blind) by providing special access or special solutions. However, an accessible design tends to lead to separates facilities for those people with disabilities. Universal design is an alternative to Accessible Design that can provide access to a greater portion of the population. What do we mean by 'accessible' and who are the tourism-customers that need accessible facilities?

Accessible means 'able to be used by disabled people', but we can realize that the benefits are not only for them. Accessible facilities will actually benefit all citizens. Disabled customers are: wheelchair users with manual or electric wheelchairs, with or without a helper/people with walking difficulties, who may use a walking stick or a wheeled stroller/with low vision or blind people/people with limited use of arms or hands/People with hearing difficulties and allergies. The disabled population figures from 12% to 20% in global [4]. The number of elderly people will rise at the beginning of the twenty-first century.

Other customers, who will benefit from an accessible environment and facilities, are: very small or large people in height, older people, who may have kinetic problems, or have any of the above disabilities/people with long term health problems/pregnant women/families with small children/persons with a temporally impairment as a person with a broken leg/tired, sleepy, customers in stress condition/even persons who have large and heavy pieces for luggage's [2].

3 Universal Design, Universal Approaches to Accessible Tourism

Human beings are all different. Individuals are short, young, old, quick, and slow. One's abilities to see, to hear, the speed at which one reacts and moves all vary. U.D. considers the widest possible range of physical, perceptual and cognitive

abilities, in order to provide solutions for all [4]. Universal Design is preferable to Accessible design. It is: Less expensive, Benefits to able-bodied, aesthetically preferable, Encourages full integration.

An enormous sum of money is currently being spent on accessible design. In the US Edward Steinfeld writes in his publication. The concept of Universal Design that between 1970 and 1980 40 billion dollars was spent to provide access on special products for 36 million disabled people. Fifty billion dollars in 1975 rose to 170 billion dollars in 1986 [5]. U.D., with its principles of full integration, is both less expensive and more likely to be successful in allowing the disabled to become fully employed and productive members of society.

3.1 An Accessible Environment

The built environment must be accessible and disabled persons be considered. Improved access may be achieved without higher costs. It will be much more expensive to correct the mistakes later. A hotel is not less attractive when it is accessible. A skilled designer who understands access requirements will be able to assimilate these into his design solutions.

3.2 Role of the Designers

To lead us towards social integration we have to consider the importance of the role of the designers. Designers are needed to design opportunities: to develop capacities, to obtain necessary purchasing power. If we accept the role of the designer we will accept a part of the solution. Designers play a role at least in two points: (1) in the physical emancipation of the disabled through the creation of accessible or Universal design and (2) to impact the social attitudes through informative design that will highlight disability and educate people from early childhood. We must learn to respect the user and to design products and environment adapted to human body. Only in this way we will achieve products and environment adapted to our body. Only in this way will achieve design to be ergonomic, easily used, aesthetically based on human needs.

4 Accessible Tourism Practice, Incorporation, Disability, Ageing Population

As consultants and architects, we must suggest practices in accessible tourism, in a way to easily show that tourism destinations and organizations have profit, and could learn from us how to serve this broad market. Tourism business and Travel destinations have to accept the needs of growing markets, to operate within the international meetings, to welcome the national legislation in order to be supportable. Inclusive design supports the social and the environment's sustainability.

Accessible tourism should consider not only the accessibility of the interior and the exterior environment space, but also the increasing number of travelers who have access needs and ask to participate equally, to the existing tourism chain, to all of the seasonal sports, such as climbing, diving, horseback riding and others.

People with access requirements are often discouraged with the lack of facilities and information. They become dissatisfied not only with the non-existent law enforcement, but also with the lack of the hotel's infrastructure, the refusal to understanding their needs as they would for any other consumer group and invest money to improve accessibility.

There are countries that the legislation and practice is not the potential point of their society system. There are many tourism operators; they express an inability to understand the emotional value of the whole subject and the complexity of that. They want simple practical guidelines and worry about the extra cost they spend to adapt their facilities. Our role is to prove that if we look ahead we will earn money. Design with knowledge, sensitivity, love to our fellow man, could prevent the misunderstandings from both of them (hotel owners and disabled users).

We can show how accessible tourism can be developed and how existing facilities can be converted and become inclusive and accessible to all. Small changes and adaptation can make the difference by providing access.

The investors have to reach new markets and improve their practical conclusions.

To understand the tourist with a disability we have to consider the followings: (1) the type of disability/dimensions of access (mobility, hearing, vision, cognitive and others), (2) the level of support needs of the individual (from the independent traveler with a disability to those with very high support needs), (3) their socio-economic circumstances and (4) the previous tourism experience. The needs of each individual will vary depending upon their positioning within these four interdependent and overlapping constructs and the particular situation [6].

5 Accessible Tourism and European Policies

According the European Network for Accessible Tourism, ENAT, there is a commitment for the European Union to adopt a 'Road map for Accessible Tourism'. As tourism services and facilities to all the Member States, have a big variation in access standards and this could be very inconvenient to many disabled travelers [7].

Some tourism providers have already realized the economic benefits of improved access. Better accessibility could renew their competitive advantage to the new market and being attractive to more visitors.

Accessible tourism is a large market. Older people (who increasingly want—and are able—to travel), will soon make up 25% of the European population. Around 50 million people with disabilities in Europe and their families wish to get on vacations.

That makes 130 million people in Europe could benefit from access travelling. Within a capitalist market system of economic organization, the rationales for intervening in the market are clearly defined. Government roles in tourism generally involve planning, legislation, government as entrepreneur and stimulation [8]. The policy of the European Union must be improved by supporting the human rights of persons with disabilities for equal participation in society which are getting stronger and therefore equal access to services must be taken from all the collaborators.

Policies have to become stronger, must direct information to all the tourism providers and deliver facilities and accessible services in an effective and profitable way. European Union must protect the rights of All the European citizens and especially disabled and elderly for travelling and enjoying tourism. There are needs of information for the older and disabled travelers and it is easy to realize that Tourism websites should give especially attention to them. We live in an era of great technological development. Technology and a world wild network must provide analysis, travel experiences of transport and travel services.

Innovative technologies, on line services, virtual reality and 3D videos provide information and allow people to select destinations specially to disabled people which everyone's disability and needs are unique. It is evident that universal design, management, training, site access and equipment each play an important role to the accessible tourism experiences. A global solution for the accessibility in general is: Import the issue into the education system, promote a suitable Environmental Psychology, evaluation of building design and public housing, accessibility and assistive technologies for disables and elderly people.

5.1 About Greece

Greece is situated in South-East Europe at the end of the Balkan Peninsula. Greece is with a lot of pleasure, sun and sea tourist destination, with a major part of international and domestic tourist population. The adjustment of the General Construction

and Urban Planning Regulations (L2831/2000) made obligatory the provision for accessibility in all new building, including ramps for access, elevators, and wide spaces in the interior [9]. Restoring accessibility for buildings older than 2000, is a legal requirement only for public buildings [9, 10].

The Presidential Decree (43/2002) for accessibility in the tourist sector requires the arrangement of one room in every five to be suitable for people with reduced mobility. This only applies for new hotels built after 2002. There is also a subsidy to the hotel owners to make their locales accessible to people with reduced mobility, run by GNTO [10].

There is lack of information on accessibility features. There is lack of information about the accessibility of tourist destinations and facilities, including information about accessible public means of transportation, access to beach and sea, access to cultural activities, access to buildings and activities of leisure, to restaurants, shops, available medical assistance and social services [11].

In 2007 new strategies by the Ministry of Tourist Development were developed for dimensional design and sustainable evolution, based on facilities and service, quality, diversity and sustainability [11, 12].

6 Guidelines for Accessibility

There are many hotel owners, who are not familiar with disabled people as customers, and could have doubts and worries whether their business buildings provide facilities and how to respond to users' needs. There are many books, guidelines, standards for accessible buildings, where they can find with a big variety of information and descriptions.

To improve access in general, should be given policies and directives in many areas of disabled users everyday life and activities. Especially for the handicapped tourists, guidelines must be provided in all areas (such as specific support services at airports or disability guides for cities), to empower them to participate easily and without extra cost, in their everyday's tourist activities. Focused on hotel accommodation as one of the most important links in the accessible tourism value chain, we give some main guidelines for hotel owners, managers and designers who should take them under consideration and start and find more.

6.1 Checklist for Accessible Hotels

Every building of hotels presents different problems especially if we have to renovate an existing building. There are some fundamental essential purposes for all hotel guests which are:

reach the enter the building/check in/move around-inside and outside/sleep/attend to one's personal hygiene, bathe/Eat and drink/use the available facilities, for business or leisure/evacuate the building safely in an emergency.

There are Access Standards used for outside and inside space:

Designed car parking, (dimensions of parking area 3.5×5 m), access routes and circulation (allow pedestrian and wheelchair user to pass each other, never less than 90 cm). Ramps with recommended inclination 5% and horizontal rest area every 10 m. Non-slip and smooth surfaces, no gaps more than 5 mm. Main entrances door without thick threshold, doors handles and light buttons in accessible height. Reception and services areas max height 80 cm. For lifts min. space 150×150. For toilets free turning circle 150 cm, door opening width 90 cm [10, 12].

6.2 General Recommendations

No thick carpets, furniture with rounded edges, non-reflecting surfaces, color contrast for doors, contrast marking on glass doors and height windows, window-ledges at 70–90, good lighting in all areas, signage easily understood, rooms with non-allergic bedding, emergency call system with vibrating and flashing lights, audible alarm system are the main principles. Accessibly may require more space than the usual and the accommodations for the wheelchair users. Sometimes a small room by careful choice of furniture could be as accessible as a wheelchair user need [10].

7 Benefits: Conclusions

Universally designed, barrier-free environments provide a better quality of life not only to the tourism with acceleration, but to families with young children or elderly persons. The principles of Universal Design also provide a protected environment, more socially equally and sustainable, as our life requires. With U.D the tourism industry is influenced directly in a profitable way. Designers can make accessible accommodation providing better services to everyone. Hotels owners should take the challenge to make their hotels as accessible as possible.

References

1. Abberley P (2002) Work, disability, disabled people, and European social theory. In: Barnes C, Oliver M, Barton L (eds) Disability studies today. Polity, Cambridge, pp 120–138

2. Poli M (1999) Design for ALL? Wheelchairs users and the food retail environments. Design Academy, Eindhoven
3. Pirkl J (1994) Transgenerational design. Van Nostrand Reinhold, New York, p 73
4. EIDD – Design for all Europe (2004) The EIDD Stockholm declaration 2004. http://www.designforalleurope.org/Design-for-All/EIDD-Documents/Stockholm-Declaration/
5. Steinfeld E (1994) The concept of universal design. Centre for Inclusive Design & Environmental Access, State University of New York
6. Buhalis D, Darcy S, Ambrose I (2012) Best practice in accessible tourism: inclusion, disability, ageing population and tourism. Channel View Publications, Tonawanda, NY
7. ENAT Study Report (2008) Towards 2010: disability policy challenges and actions for the European tourism sector
8. European Network for Accessible Tourism (2007) Services and facilities for accessible tourism in Europe supported by the commission of the European communities. ENAT Publications, Athens
9. Numbers from OSSATE (2005) Report accessibility and stakeholder market analysis
10. Hellenic Ministry of Environment, Office for Studies on People with Disabilities (1996–2000) Design guidelines for independent access of disabled people. Hellenic Ministry of Environment, Athens. http://www.designforalleurope.org/Design-for-All/EIDD-Documents/Stockholm-Declaration/
11. Hellenic Ministry of Public Works (1998) Designing for all (Greek publication). http://www.minenv.gr/1/16/162/16203/g1620300.html
12. Papamichail K (2012) Accessible hotels: design essentials. In: Buhalis D, Darcy S, Ambrose I (eds) Best practice in accessible tourism: inclusion, disability, ageing population and tourism. Channel View Publications, Tonawanda, NY, pp 241–262

Projected Destination Images Versus Visitor-Generated Visual Content in Brasov, Transylvania

Florin Nechita, Robert Demeter, Victor-Alexandru Briciu, Sotiris Varelas, and Androniki Kavoura

Abstract Visitor-generated visual content (VGVC) that is created and uploaded as travel photos allows researchers to examine tourists' behavior, as traditional tourism data collection methods (surveys, interviews and focus groups) were proved both expensive and time consuming. Tourists take photos, upload them to social networks and photo sharing platforms, leaving digital footprints on the Internet, footprints that can be subsequently used for tourism research. Photos tagged with "Brasov" between January 1st 2000 and July 1st 2018 were collected using Flickr API. A collection of 22,362 geotagged photos collected from Flickr was analyzed. Using DBSCAN algorithm, tourist attraction areas were identified, after eliminating the content created by people living permanently in the area. For detailed data analysis seasonal graphs were generated. The research method combines content analysis based on text tags and image data with structural analysis based on geospatial data. The resulting tourist attractions of the area as derived from the number of photos taken there were compared to the distribution of the attractions as resulted from Destination Management Organizations' (DMOs) promotional materials. The spatial patterns of tourist activity in Brasov revealed many similarities and differences compared to promoted attractions by the DMOs. The results indicate that geo-tagged photos in Brasov reflect the projected image of the destination as the data provided a hotspot distribution of popular tourist attractions. This paper explores the advantages of using VGVC for tourism research, but also highlights the limitations that have to be addressed. Implications for tourism marketing managers are provided thereafter.

Keywords Visitor-generated visual content · Geotagged photos · Projected destination image

F. Nechita (✉) · R. Demeter · V.-A. Briciu
Transilvania University of Brasov, Brasov, Romania
e-mail: florin.nechita@unitbv.ro

S. Varelas
Neapolis University Pafos, Pafos, Cyprus

A. Kavoura
University of West Attica, Aigaleo, Greece

1 Introduction

Tourism and destination image has been a research subject for many scientific articles [1–4] and books [5, 6]. With the advent of new technologies, images of places have been part of research associated with image analysis via the provision of geographic information or image tags [7]; or research by Yanai [8] on web images, and image analysis to infer location in the context of Flickr or research on approaches to determine the location of photos [9]. Zheng et al. [10] also discuss georeferencing for location landmarks and locations from photos from an image point of view. User-generated content (UGC) in social media is gradually being acknowledged, as can now be seen from numerous studies published in the literature, although there is claim [11] that it is a subject that still needs to be explored in greater depth.

The aim of this paper is to examine the visualization of the geographical positions of photographs taken by tourists as one of the methods to measure tourists' activity as most photo-sharing sites on the Internet offer the geotagging service. As a low cost and accessible source of data, tools and methods for analyzing visual content will be more and more popular among tourism researchers. The destination under study was chosen to be Brasov, Transylvania on the grounds that Brasov county was the second Romanian destination for foreign tourists in 2017, as 196.000 foreign tourists were officially registered [12]. Then, synergies can be established in relation to DMOs that can use VGVC that is created and uploaded from tourists so that the projected and the perceived image of a destination are consistent.

The sections of the paper are as follows: the authors present in Sect. 2 literature work that illustrates the significance of UGC in relation to photos that may be used for the creation of destination image. Section 3 presents methodology followed for collecting VGVC uploaded in Flickr for Brasov, Romania, then, results are presented where comparison took place between projected and generated image for Brasov and the authors in the last section, the conclusion managerial suggestions for DMOs.

2 Literature Review

2.1 Destination Image

Comparing the projected destination image and the perceived destination image has not been approached by many researchers [13–16]. DMOs should take UGC into consideration when projecting destination image in the online era, social media of official sites [17].

2.2 User-Generated Content for Tourism Destinations

User-generated content (UGC) is defined as being the media content that is produced by the general public and is primarily distributed online via Web 2.0 technologies [18]. User-generated content for tourism is termed in many ways, two of them being "tourist-generated content" (TGC) or "travel-related consumer generated media" or the travel-related content created and uploaded by tourists on the Internet [19–22].

2.3 (Geotagged) Photos and Tourism

Travel photos are considered to be a good source of understanding of tourists' perceptions of a destination [13, 23, 24]. Research [25] has indicated that photos are more suited to reflect the affective images of places from tourists' perspectives. Extracting and understanding tourists' point of interest from geotagged photos has been the focus of many researchers [26].

The image-based content sharing platforms typically have higher rates of geo-tagging. For example, 80% of images in the now-defunct Google Panoramio were geotagged, and most Flickr photos are geotagged where Flickr is the second social medium mostly used where the extraction of useful content from images and videos is easier from tags from content sharing web sites [27].

3 Method

3.1 Study Settings/Place Description

Brasov is located in the central part of Romania, about 166 km north of Bucharest. It is part of historical region of Transylvania and it is surrounded by the Southern Carpathians mountains. According to the latest Romanian census (2011), Brasov has a population of 290,743 (estimated at January 1st 2016 and 253,200 at 2011 census), but its metropolitan area is home to about 400,000 residents [28]. Four hundred objects are on the "List of Historical Monuments of Romania", with the Middle Ages, the Rennaisance, the Baroque, the Classicism, and the modern period leaving their marks on the city.

3.2 Sample, Data Collection and Filtering

Data used in this study have been retrieved using photos uploaded on Flickr from January 1st 2000 to July 1st 2018 and tagged with "Brasov". The most suitable

language for data mining is Python 3.6, with countless modules that can be installed as needed pandas, folium, numpy, scikit-learn, matplotlib. Other programs like R, Java or Scala are used by the Data Scientist, but Python is the best choise because is quite simple to use and understood. Another important reason to be considered: Python 3.6 is free of charge.

Two types of API searches were used, flickr.photos.search: after the brasov tag and geographic coordinates. Exact results were obtained after looking for geo-coordinates, because the tags are later placed on the post, and the GPS coordinates come from the camera. In our case around 2% of the pictures are from other cities, which may mislead the classification if they are not filtered and eliminated. Specifically, for Flickr is that it can be downloaded pictures and information about pictures using different search options related to the period, location or tags. To operate the system, data is entered in a 4000-page bounding box on 16 pages of 250 pictures. The application considered this restriction of not exceeding 4000 pictures, using a recursive algorithm, and the data was collected at intervals of one year. The photos with geolocation were collected for the city of Brasov from 2000 until now, but for this study data from 2006 until now have been used.

As the target group of this study was the foreign tourists, from the total sample was removed the local users of Flickr and user with unspecified address. The number of geolocalised photos and tagged with Brasov, by year, is 22,362 for the period of 1st January 2000–1st July 2018. The numbers for every year are: 2000–13 photos, 2001–15, 2002–13, 2003–170, 2004–31, 2005–252, 2006–118, 2007–1657, 2008–2095, 2009–1922, 2010–2375, 2011–2017, 2012–2273, 2013–2434, 2014–1594, 2015–1886, 2016–1029, 2017–968, 2018 (until 1st July)—500 photos.

It can be established if one user is tourist or local by using additional API calls for every user with unspecified location. It can be counted the photos uploaded on Flickr in order to evaluate the attractiveness of one specific place, but it was eliminated the multiple photos that have the same GPS coordinates.

The tool like OpenStreetMap, collects geographic information, which users do actively and with awareness and this is the purpose of VGVC while other research restricts OpenSteetMap as it considers this tool as an end in itself [27].

3.3 Data Clustering

Since there are many geographic points, a classifier should be used in order to reduce the number of points. The most used classifiers are K-Means and DBSCAN. In python, these classifiers are implemented in the sklearn module. The most popular classifier for geographic points is DBSCAN, which uses two parameters to give the classification: (1) the minimum number of objects in a cluster and (2) an epsilon that specifies the distance in kilometers from points which represents the maximum distance in kilometers that points can be from each other to be considered a cluster.

Table 1 Clustering algorithms [29]

Method name	Parameters	Scalability	Use case	Geometry (metric used)
K-Means	number of clusters	Very large n_samples, medium n_clusters with MiniBatch code	General-purpose, even cluster size, flat geometry, not too many clusters	Distances between points
DBSCAN	neighborhood size	Very large n_samples, medium n_clusters	Non-flat geometry, uneven cluster sizes	Distances between nearest points

The K-Means classifier has a single parameter: the number of clusters. A comparison of the clustering algorithms in scikit-learn.org is presented in the next table (Table 1).

For the classification, the Council Square and the Black Church, two important and close targets, were detected and marked separately as points of interest, and epsilon was set at 10 m and at least 5 objects in a cluster. Therefore, 64 clusters were obtained for 2973 points.

In addition, content analysis took place for DMOs promotional materials. Content analysis is a technique for gathering and analyzing the content of text. The content refers to words, meanings, pictures, symbols, ideas, themes, or nay message that can be communicated" [30] and a picture could be considered a unit of content containing several prominent features [13].

4   Results and Discussion

From the distribution of the geotagged photos for the last three years and a half, it can be observed that are very few differences on spatial distribution (see Figs. 1 and 2).

As resulting from the map generated by the application on geotagged photos posted on Flickr by the foreign tourists, the following points of interest for Brasov were extracted: Council Square, Black Church, White Tower, Tampa Belvedere, Railway Station, Rope Street, Muresenilor Street, Titulescu Park, Cable Station, Black Tower, Schei Gate, Republicii Street and First Romanian School.

Other points of interest such as Poiana Brasov, Belvedere and Cetatuia (Citadel) was identified using K-Means though not seen using DBSCAN classifier. So, in order to have an overview, both K-Means and DBSCAN classifiers should be used together.

Since research findings of previous research have shown that UGC sources have an indirect effect on tourist satisfaction since most UGC sources have an influence on tourist expectations, which will later be compared with the real tourist perception
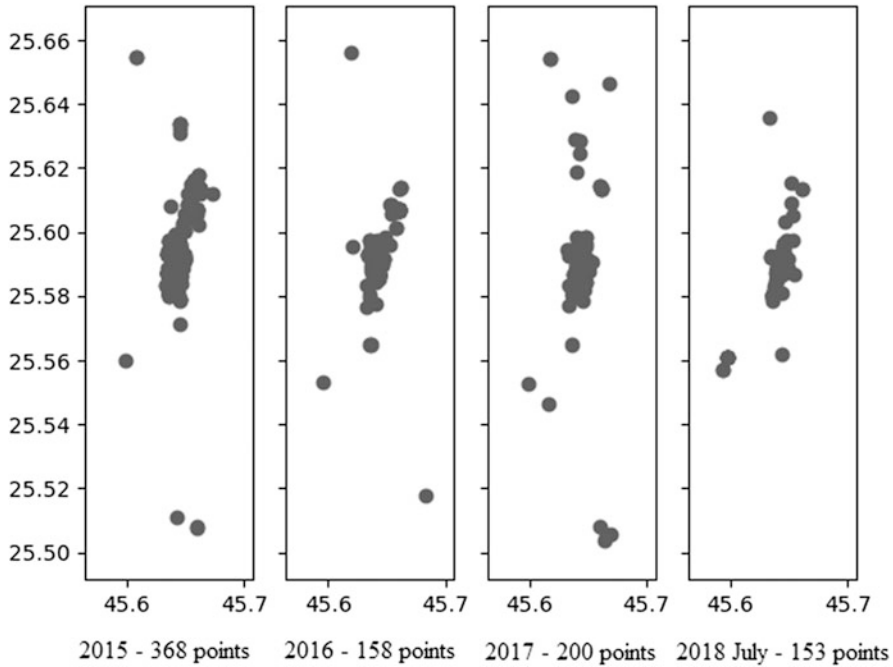
Fig. 1 Spatial distribution of the tourist hotspots as results from geotagged photos uploaded on Flickr for the years 2015, 2016, 2017 and 2018 (until 1st July 2018)

[31, 32], geotagged photos generated by tourists should be taken into consideration for the projection of a destination.

The new trends present a perfect integration between geographic information and virtual reality. In its turn, the usage of Virtual Reality in tourism is also currently increasing. Presently, the usage of geographic information tools that use Virtual Reality have become more common, more specifically one of its variations—the Augmented Reality [33].

As far as the DMOs promotional material in Brasov, the research revealed many similarities with the geotagged photos. The results indicate that geotagged photos in Brasov reflect the projected image of the destination as the data provided a hotspot distribution of popular tourist attractions. The map depicted at Fig. 3 represent an overlapping between point of interest present on promotional materials provided by Brasov Info point (marked with flags) and clusters generated by geotagged photos uploaded by foreign tourists.

Perceived destination image is considered to be significant in people's choices; literature has illustrated that people nowadays with the implementation of social media and new technologies create online communities to discuss, comment, suggest, review contribute to other like-minded people's choices [34]. Thus, projected image should aim for the creation of synergies with what is being uploaded by tourists.
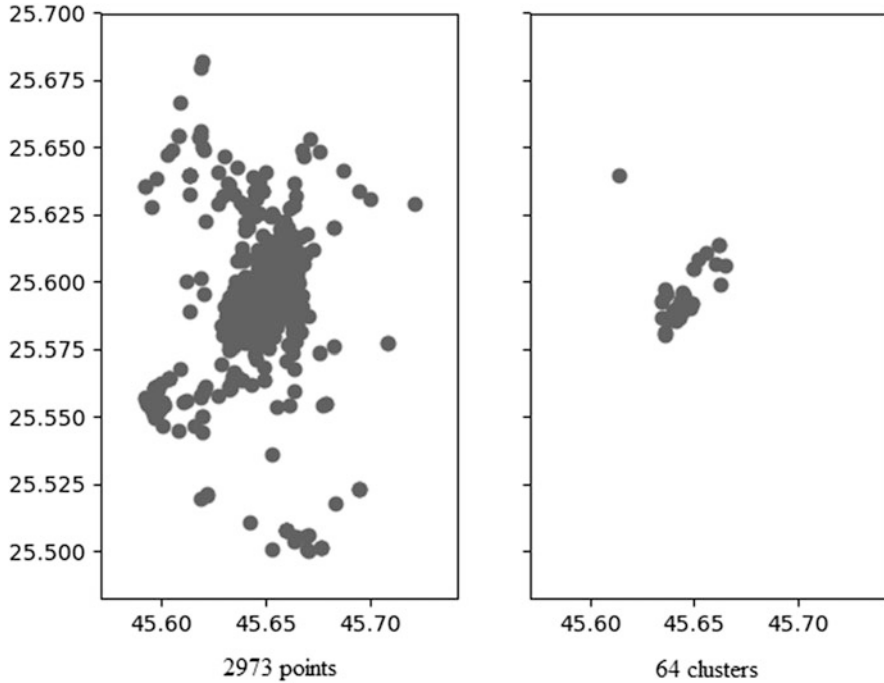
Fig. 2 Geographical points collected from geotagged photos for Brasov (left) and centers of the point of interest detected with DBSCAN for the photos uploaded between 1.01.2006 to 1.07.2018

5   Conclusion

This paper illustrated via the analysis of 22,362 geotagged photos collected from Flickr tourist attraction areas in Brasov, Transylvania and the comparison that followed with DMOs promotional materials in regard to the images of the area that geotagged photos in Brasov reflect the projected image of the destination. DMOs need to take into account the UGC that is created which in the specific case is the VGVC and incorporate this content as a database in their material lowering in that way any kind of discrepancies between the projected and the visitor generated content of a destination. Perceived destination image is considered to be significant in people's choices; literature has illustrated that people nowadays with the implementation of social media and new technologies create online communities to discuss, comment, suggest, review contribute to other like-minded people's choices as social media and photography facilitate social comparison [35– 38]. Thus, projected image should aim for the creation of synergies with what is being uploaded by tourists.
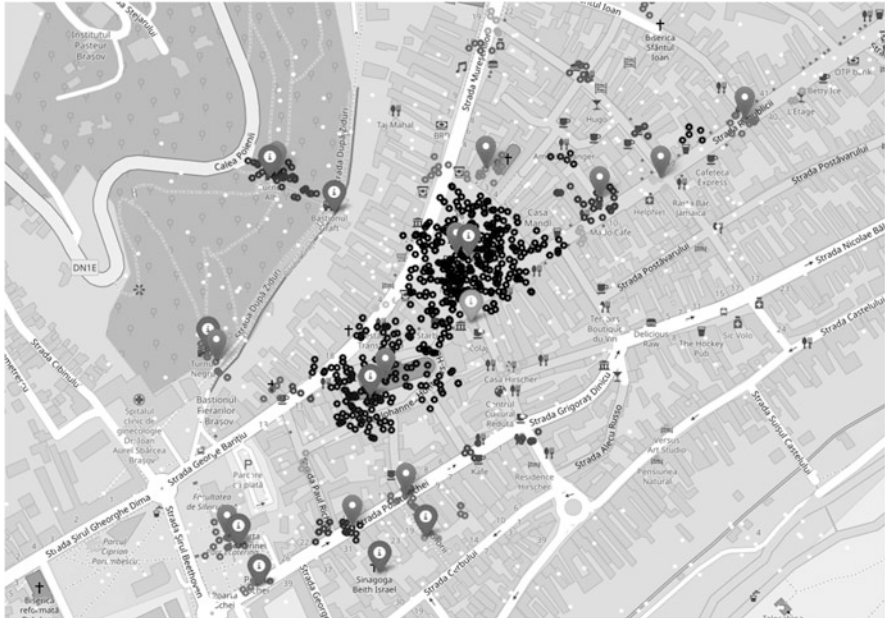
Fig. 3 Map of Brasov Old City that includes points of interest extracted from promotional materials (projected image) and clusters generated by geotagged photos uploaded by foreign tourists (perceived image)

References

1. Echtner CM, Ritchie JB (1991) The meaning and measurement of destination image. J Tour Stud 2(2):2–12. https://doi.org/10.1177/004728759303100402
2. Jenkins OH (1999) Understanding and measuring tourist destination images. Int J Tour Res 1 (1):1–15. https://doi.org/10.1002/(SICI)1522-1970(199901/02)1:1<1::AID-JTR143>3.0. CO;2-L
3. Tasci AD, Gartner WC (2007) Destination image and its functional relationships. J Travel Res 45(4):413–425. https://doi.org/10.1177/0047287507299569
4. Tasci AD, Gartner WC, Tamer Cavusgil S (2007) Conceptualization and operationalization of destination image. J Hosp Tour Res 31(2):194–223. https://doi.org/10.1177/ 1096348006297290
5. Kotler P, Haider DH, Rein I (1993) Marketing places: attracting investment, industry, and tourism to cities, states, and nations. The Free Press, New York
6. Morgan N, Pritchard A (1998) Tourism promotion and power: creating images, creating identities. Wiley, Chichester
7. Liu Z (2011) A survey on social image mining. Intell Comput Inf Sci 134:662–667. https://doi. org/10.1007/978-3-642-18129-0_100

8. Yanai K (2015) A review of web image mining. ITE Trans Media Technol Appl 3(3):156–169. https://doi.org/10.3169/mta.3.156

9. Luo JD, Yu J, Gallagher A (2011) Geotagging in multimedia and computer vision: a survey. Multimed Tools Appl 51(1):187–211

10. Zheng Y, Zha Z, Chua T (2011) Research and applications on georeferenced multimedia: a survey. Multimed Tools Appl 51(1):77–98

11. Zeng B, Gerritsen R (2014) What do we know about social media in tourism? A review. Tour Manag Perspect 10:27–36. https://doi.org/10.1016/j.tmp.2014.01.001

12. http://www.bizbrasov.ro/2018/02/23/brasovul-ramane-primul-judet-dupa-capitala-ceea-ce-priveste-atragerea-de-turisti-straini/

13. Stepchenkova S, Zhan F (2013) Visual destination images of Peru: comparative content analysis of DMO and user-generated photography. Tour Manag 36:590–601. https://doi.org/10.1016/j.tourman.2012.08.006

14. Ji S, Wall G (2015) Understanding supply-and demand-side destination image relationships: the case of Qingdao, China. J Vacat Mark 21(2):205–222. https://doi.org/10.1177/1356766714542189

15. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural transylvania. In: Driving tourism through creative destinations and activities. IGI Global, Hershey, PA, pp 45–66

16. Marine-Roig E, Ferrer-Rosell B (2018) Measuring the gap between projected and perceived destination images of Catalonia using compositional analysis. Tour Manag 68:236–249. https://doi.org/10.1016/j.tourman.2018.03.020

17. Deng N, Li X (2018) Feeling a destination through the "right" photos: a machine learning model for DMOs' photo selection. Tour Manag 65:267–278. https://doi.org/10.1016/j.tourman.2017.09.010

18. Daugherty T, Eastin MS, Bright L (2008) Exploring consumer motivations for creating user-generated content. J Interact Advert 8(2):16–25. https://doi.org/10.1080/15252019.2008.10722139

19. Mak AH (2017) Online destination image: comparing national tourism organisation's and tourists' perspectives. Tour Manag 60:280–297. https://doi.org/10.1016/j.tourman.2016.12.012

20. Sun M, Ryan C, Pan S (2015) Using Chinese travel blogs to examine perceived destination image: the case of New Zealand. J Travel Res 54(4):543–555. https://doi.org/10.1177/0047287514522882

21. Yoo KH, Gretzel U (2011) Influence of personality on travel-related consumer-generated media creation. Comput Hum Behav 27(2):609–621. https://doi.org/10.1016/j.chb.2010.05.002

22. Xiang Z, Gretzel U (2010) Role of social media in online travel information search. Tour Manag 31(2):179–188. https://doi.org/10.1016/j.tourman.2009.02.016

23. Hunter WC (2016) The social construction of tourism online destination image: a comparative semiotic analysis of the visual representation of Seoul. Tour Manag 54:221–229. https://doi.org/10.1016/j.tourman.2015.11.012

24. MacKay KJ, Couldwell CM (2004) Using visitor-employed photography to investigate destination image. J Travel Res 42(4):390–396. https://doi.org/10.1177/0047287504263035

25. Pan S, Lee J, Tsai H (2014) Travel photos: motivations, image dimensions, and affective qualities of places. Tour Manag 40:59–69. https://doi.org/10.1016/j.tourman.2013.05.007

26. Kisilevich S, Mansmann F, Bak P, Keim D, Tchaikin A (2010) Where would you go on your next vacation? A framework for visual exploration of attractive places. In: Advanced geographic information systems, applications, and services (GEOPROCESSING), 2010 second international conference on. IEEE, pp 21–26

27. Bae SH, Yun HJ (2017) Spatiotemporal distribution of visitors' geotagged landscape photos in rural areas. Tour Plan Dev 14(2):167–180

28. INSSE, National Institute of Statistics (2016) https://web.archive.org/web/20171027131447/http://www.insse.ro/cms/ro/content/popula%C5%A3ia-rom%C3%A2niei-pe-localitati-la-1-ianuarie-2016

29. http://scikit-learn.org/stable/modules/clustering.html
30. Neuman W (2003) Social research methods: qualitative and quantitative approaches. Academic Press, Boston: MA
31. Narangajavana Kaosiri Y, Callarisa Fiol LJ, Moliner Tena MA, Rodríguez Artola RM, Sanchez García J (2017) User-generated content sources in social media: a new approach to explore tourist satisfaction. J Travel Res 58(3):1–13. https://doi.org/10.1177/0047287517746014
32. Stock K (2018) Mining location from social media: a systematic review. Comput Environ Urban Syst 71:209–240. https://doi.org/10.1016/j.compenvurbsys.2018.05.007
33. Miguel Nuno Pereira MN, Pazos Otón M, Cotos J, Remoaldo PC (2018) Applying an augmented reality tool to the Camino de Santiago in Portugal advances. In: Hospitality, tourism, and the services industry, InfoSci-books, InfoSci-business and management, business, administration, and management, InfoSci-computer science and information technology, InfoSci-government and law, science, engineering, and information technology
34. Lo S, McKercher B (2015) Ideal image in process: online tourist photography and impression management. Ann Tour Res 52:104–116. https://doi.org/10.1016/j.annals.2015.02.019
35. Stavrianea A, Kavoura A (2015) Social media's and online user-generated content's role in services advertising. AIP Conf Proc 1644:318–324. https://doi.org/10.1063/1.4907853
36. Ntalianis K, Kavoura A, Tomaras P, Drigas A (2015) Non-gatekeeping on social networks: a reputation monitoring approach. J Tour Serv 10:19–44
37. Kavoura A, Tiago T (2016) Understanding online communities on social networks via the notion of imagined communities: The case of TripAdvisor. Int J Web Based Communities 12:238–261. https://doi.org/10.1504/IJWBC.2016.077759
38. Siakalli M, Masouras A, Papademetriou C (2017) e-Marketing in the hotel industry: marketing mix strategies. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer proceedings in business and economics. Springer, Cham, pp 123–129. https://doi.org/10.1007/978-3-319-33865-1_15

The Dawn of GDPR: Implications for the Digital Business Landscape

Charalampos Tziogas and Naoum Tsolakis

Abstract Digital-enabled business paradigms (e.g. Industry 4.0 in Germany, Industrial Internet in the US) allow, amongst others, real-time end-to-end value chain visibility, enhanced customization and quality delivery. In this context, data management and analytics are the determinant constituents in driving growth to a plethora of economic activities, from distributed manufacturing and pharmaceutical processing to bio-based applications and e-commerce services. However, as the global business landscape increasingly relies on data, cybersecurity issues emerge with regards to confidentiality, integrity, and availability. To this end, in the light of recent data-related scandals and the enacted EU General Data Protection Regulation, the purpose of this session is threefold: (1) to increase our understanding with regards to business-related barriers and challenges stemming from data protection regulations, (2) to identify emerging growth opportunities that can drive sustainable development of businesses, and (3) to articulate meaningful business practices with regards to data collection, processing and utilization.

Keywords General Data Protection Regulation · Digital economy · Data management

1 Introduction

The digital economy discourse highlights the security challenge of sensitive, predominantly private, information and data. To that end, the European Union recently enforced, on the 25th of May 2018, the General Data Protection Regulation (GDPR)

C. Tziogas (✉)
Laboratory of Business Administration, Aristotle University of Thessaloniki, Thessaloniki, Greece
e-mail: ctziogas@auth.gr

N. Tsolakis
Centre for International Manufacturing, Institute for Manufacturing, University of Cambridge, Cambridge, UK

to prevent the misuse of personal information from data aggregators, controllers and processors, and safeguard the data protection rights of end-users [1, 2]. Notably, the GDPR applies to almost every stakeholder involved in data gathering, storage and analytics operations, from non-profit organizations to cloud service providers and public authorities. Considering that the European data protection landscape is at the dawn of a new era, businesses experience practical challenges towards the conformance to the GDPR mandates while the relevant academic literature is still rather limited.

In this regard, the aim of this concept paper is to provide a review of academic studies on GDPR, summarize the basic imposed changes and discuss any opportunities. The remainder of this study is organized as follows: Section 2 presents the methodology deployed to conduct this research. Then, Sect. 3 presents an overview of the GDPR and summarizes the major changes it imposes compared to traditional data protection schemes. An academic literature taxonomy also identifies the sectors being affected. We wrap-up with conclusions and future research potentials in the last Sect. 4.

2 Methodology

In order to achieve the aims of this study, we reviewed relevant academic publications identified through Boolean searches using appropriate keywords in the Scopus® of Elsevier and Web of Science® of Thomson Reuters databases. More specifically, we used the terms the terms "GDPR" (in the "Article Title" category) and "data protection" (in the "Article Title, Abstract, Keywords" category), while selecting only "Articles" (in the "Document type" category). The analysis was limited to publications that are written in English.

By the 21st of August 2018, our search retrieved a total of 27 results. The distribution of the retrieved publications per year is depicted in Fig. 1. Accordingly, the allocation of the studies by journal of publication is inserted in Fig. 2.
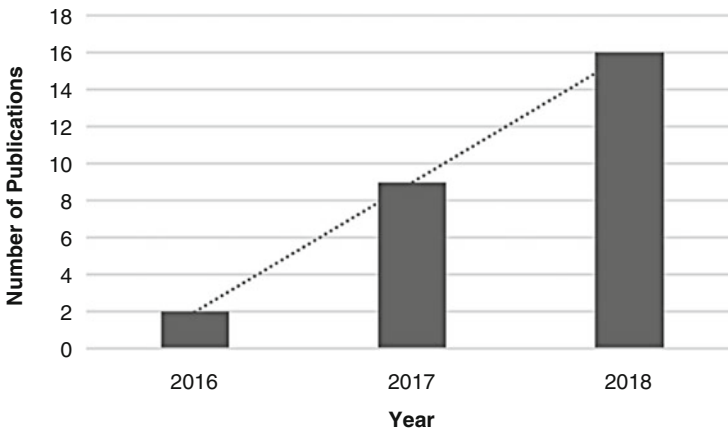
Fig. 1 Distribution of publications by year
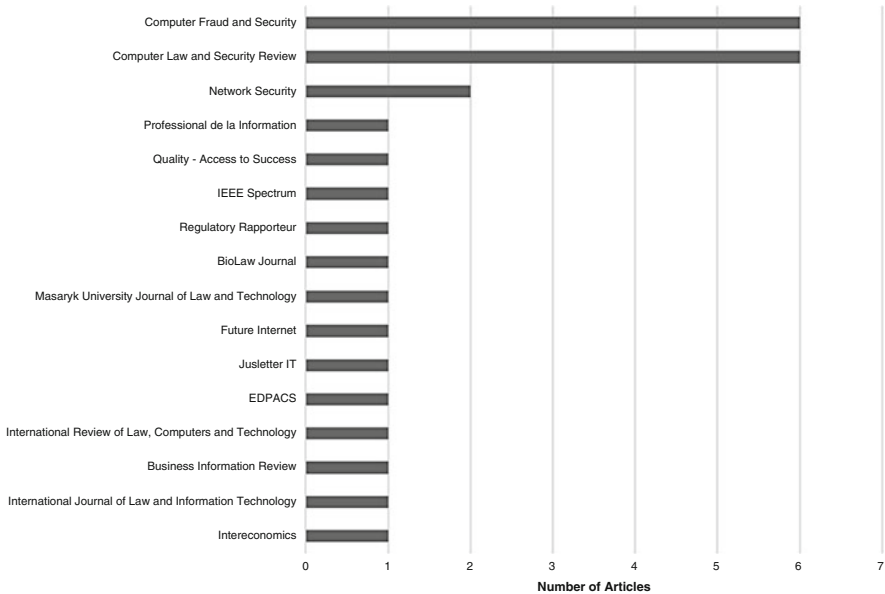
Fig. 2 Distribution of publications by journal

3   GDPR: An Overview

In this section we aim to provide an overview of the main changes that the GDPR entails, as these are summarized by Tankard [3]. The compliance with the GDPR could entail costs for businesses but enhance consumers' trust.

In principal, the GDPR has its roots on the Data Protection Directive which was adopted by the EU in 1995 [4]. The GDPR is characterized by an extended scope on data protection as it affects all individuals and organizations, regardless of their geographical location, that record data and process information related to European citizens. Furthermore, the GDPR considers 'personal data' in an extended context covering information and identifiers like Internet Protocol (IP) addresses and cookies. The former directives were vaguely accepting as personal information any information that could directly or indirectly link to specific individuals. Moreover, notifications about discovered data breaches is now mandatory within 72 h of the incident, with imposed penalties ranging from 2–4% of an organization's global annual turnover during the previous fiscal year [5]. For companies involved in intense data processing activities, the appointments of a data protection officer is being provisioned. GDPR requires that an impact assessment is performed to identify data security risks and mitigation strategies adopted by every organization.

The GDPR also foresees that individuals have the right to: (1) provide their consent to organizations for processing their data, and (2) access any stored

Table 1 Comparative assessment of traditional vs GDPR schemes

Data protection attribute	Traditional Directive(s)	GDPR
1. Scope of data protection	Myopic	Expanded
2. Reporting on data protection authorities	Pan-European	Individual EU countries
3. 'Personal data' definition	Myopic	Expanded
4. Breach notification	Optional	Compulsory
5. Data protection officer	Optional	Compulsory (for organizations with data-intensive activities)
6. Data impact assessment	Optional	Compulsory
7. Individual data subjects' rights	Limited	Expanded

information related to them. Table 1 summarizes the changes that the GDPR entails regarding data management per each identified data protection attribute.

The GDPR also raises burdens to public authorities which have to comply with the provisioned data protection regulations. Indicatively, in 2017 the Data Protection Agency of the United Kingdom imposed a fine to the Gloucester City Council of £100,000 due to a cyber-attack that granted access to sensitive personal information of the council's employees [6]. To that end, [6] suggest the update of the GOV.UK Verify's Data Protection Impact Assessment to tackle inherent flaws like the erroneous selection of legal bases.

4 Concluding Remarks and Further Discussion

The announcement of the final version of GDPR two years ago raised concerns in the business landscape particularly with regard to the associated economic ramifications. According to an Ovum's report commissioned by Intralinks in 366 businesses, 52% of the business leaders were expecting GDPR to result in substantial fines while the need to comply with the imposed regulations was anticipated (68%) to significantly increase business cost [7]. The report also communicates that to accommodate the GDPR ramifications would require an increase in business budgets of about 10%. The ultimate goal of the GDPR is to reinstate trustiness with consumers through transparency and security [8].

To sum up, indicative challenges confronted by the previous data protection schemes include [8, 9]:

- Hacking—Use of stolen credentials and use of backdoor or command-and-control servers
- Social—Phishing
- Malware—Spyware/keylogger, command-and-control servers and export data
- Services classification vague.

GDPR addresses the aforementioned challenges by [6, 8, 9]:

- Harmonizing of data-protection rules
- Fostering transparency and reporting obligations and updating the legal basis for processing personal information
- Allowing the switch of service providers in an easy and cost-effective manner
- Imposing the use of an advanced web application firewalls
- Detecting mobile app tampering
- Taking advantage of scalable multi-cloud advances
- Preventing malware from stealing credentials from victims' devices.

GDPR is still in its infancy and we wait to see further implications in different sectors [10–12].

References

1. EU: Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation). Brussels: European Commission
2. EU (2018) Question and answers-general data protection regulation. Brussels: European Commission
3. Tankard C (2016) What the GDPR means for businesses. Netw Secur 6:5–8. https://doi.org/10.1016/S1353-4858(16)30056-3
4. EU (1995) Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the Protection of Individuals with Regard to the Processing of Personal Data and on the Free Movement of Such Data [1995] OJ L 281/31. Brussels: European Commission
5. Rodger A (2017) Ovum's mini-guide to GDPR. Ovum TMT Intelligence, London. https://ovum.informa.com/~/media/Informa-Shop-Window/TMT/Files/Brochure/Ovum-MiniGuide-to-GDPR-Sept-2017.pdf
6. Stalla-Bourdillon S, Pearce H, Tsakalakis N (2018) The GDPR: a game changer for electronic identification schemes? The case study of Gov.UK Verify. Comput Law Secur Rev 34:784–805. https://doi.org/10.1016/j.clsr.2018.05.012
7. Rodger A (2015) Data privacy laws: cutting the red tape. Ovum TMT Intelligence, London. https://www.intralinks.com/blog/2015/12/data-privacy-regulations-bad-business
8. Sydekum R (2018) Can consumers bank on financial services being secure with GDPR? Comput Fraud Secur 6:11–13. https://doi.org/10.1016/S1361-3723(18)30054-X
9. Krämer J, Wohlfarth M (2018) Market power, regulatory convergence, and the role of data in digital markets. Telecommun Policy 42:154–171. https://doi.org/10.1016/j.telpol.2017.10.0041
10. Ferrag MA, Leandros Maglaras L, Helge Janicke H (2019) Blockchain and its role in the internet of things. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
11. Varelas S, Georgitseas P, Nechita F, Sahinidis A (2019) Strategic innovations in tourism enterprises through Blockchain technology. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
12. Coita CD, Abrudan MM, Constanta Matei MC (2019) Effects of the Blockchain technology on human resources and marketing. An exploratory study. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer

Strategic Synergies and Co-marketing: A Case Study of the Airline Sector

Sotiris Varelas, Androniki Kavoura, Apostolos Giovanis, Teresa Borges-Tiago, and Flavio Tiago

Abstract The research provides synergies with a comprehensive and integrated approach to the discipline of cooperation between the critical private and public sector of tourism. The research follows a modern approach to providing the necessary knowledge for the understanding of co-marketing and measuring the contribution has on revenue and profits of the destination stakeholders. Through the research we understand the dynamic and the modern way to co-create valuable innovation in the field of marketing, in the updated promotion of destinations, and other sectors such as airline enterprises. The paper highlights the modern ability to connect and promote stakeholders within an ever-growing frame of the globalized environment.

Keywords Co-marketing · Strategic synergies · Airline sector

1 Introduction

Synergies can be created among different industries for the benefit of all stakeholders. Co-marketing strategies play an important role in enabling companies to better deal with their competitive position [1]. Nonetheless, it is a field that is under-researched [1] and this paper sheds new light taking as a case study the airline sector may employ co-marketing. More specifically, the authors aim in exploring ways that air transportation develops a sense of cooperation in networking in the airline

S. Varelas (✉)
Neapolis University Pafos, Pafos, Cyprus
e-mail: s.varelas@nup.ac.cy

A. Kavoura · A. Giovanis
University of West Attica, Egaleo, Greece

T. Borges-Tiago · F. Tiago
University de Ponta Delgada, Fundaçao Gaspar Frutuoso, Ponta Delgada, S. Miguel, Açores, Portugal

industry. It is a field where synergies can take place. Air transportation contributes in tourism of a region and its development [2] and more research needs to take place.

For the purpose of this research, databases such as google scholar and Emerald were searched under keywords strategic synergies, co-marketing, airline sector. The review that is presented is not exhaustive although it provides useful insights in regard to strategic synergies that can be initiated.

The paper aims to illustrate the way stakeholders can be promoted and connected within an ever-growing frame of the globalized environment.

2 Literature Review

2.1 Strategic Synergies

Strategic synergies consist of common determination between organizations and the common vision but also the long term aims for dealing with common aims [3, 4]. Cooperation among firms may provide a competitive advantage for all, is based on mutual dependence of one company with the other and is associated with coordination among partners [5]. The need of cooperation for the creation of competitive advantage has been observed early enough [6, 7].

Shared attitudes and motivations among actors create a network of interconnected ideas [8]. On the other end, one may argue that the existence of two brands and their cooperation, may influence the significance attached to them [9] by the customer rendering the choice of partner of key importance [10]. It is typical to note that literature also mentions free riding as a natural phenomenon in tourism destinations' marketing activities where companies may work on their own [8] while coopetition (collaboration between competitors) brings participating firms together even if they are direct or indirect competitors [9]. Coopetition brings Porter's theory (1980) vice versa in regard to the competitive benefit [3].

The concept of cooperation in combination with innovation and new technologies has transpassed horizontally every structure at the economic level (sharing economy), at governmental level (smart cities) etc. New synergies come to change every approach of management.

The fact that research has called for an emerged gap concerning a literature review on co-marketing alliances and put support for future research in this field of study may illustrate the significance attached for this specific study.

2.2 Co-marketing in the Airline Sector

The use of new technologies and new methods of communications in the travel industry has reinforced the need for dialogue among providers (airlines, travel agencies and so on) and users (passengers) [11].

Strategic alliances in the airline sectors such as Star Alliance members, that in a global competitive environment framework has prerequisites for common security and a minimum level of provision of services and loyalty programmes for customers of all companies (miles and bonus). These relations according to Dev and Klein [12] have expanded in participative networks between airline companies, hotels, rental car services.

Another important practice that we meet in the synergy between destinations and airlines are via public–private alliances between the state and companies. Among the first alliances between the public and private sector that aimed at tourist investments are those of Partnership Australia, Polish Tourist Authority, Canadian Tourist Commission, US State Tourism Departments [13].

3 Study Settings: Kalamata Greece Airport

In this paper a case study of synergy at marketing level is presented for Peloponnese destination and a network of airline companies aiming at strengthening incoming tourism at this destination. The airport under study is the International Airport of Kalamata "Kaptain Vasilis Konstantakopoulos".

The periphery or Peloponnese consists of one of the 13 Peripheries in Greece and in the Greek total has the 6.9% of tourist accommodation. Peloponnese for many years was not at the forefront of investment as it was the case with other popular destinations and this had as a result the limited number of small and medium enterprises [3].

Destination Management Organization of Periphery of Peloponnese contributed to the development of the programme co-marketing with airline companies. Based on Heath and Wall [14] destination management organizations aim to deal with activities associated with the development, the maintenance of competitiveness of a destination.

4 Results

4.1 Contributing Role of Destination Management Organization of Region of Peloponnese

The Destination Management Organization of the Peloponnese Region contributed to form Peloponnese's strategy by

- Representing the interests of interest groups
- Being responsible for marketing the destination and coordinating activities.

It is perceived that the executive structure that was chosen was the most appropriate given the rigidities that a public organization would create in its effort to work with private actors such as airlines. The objectives and the desired results were as follows: Improvement and strengthening the cooperation of the Peloponnese Region with international air carriers. Notification of destination and direct flights to foreign visitors. Enhancement of the penetration of the tourist offer for thematic tourism to foreign visitors.

For the implementation of this action a team was created within the Destination Management Organization, which totals 100 h of negotiation with airlines and exchanged about 1200 contact emails.

The result of co-marketing program was the implementation of at least 30 annual campaigns in Airline news media resulting in 561,000 impressions of the Peloponnese in a portal of airlines, sending 226,000 newsletters from airlines to the Peloponnese, projection of the Peloponnese at Airports in Europe. Other activities that took place also included

1. Advertising online campaign
2. A special tribute to this tourist product in international newspapers
3. Television spots
4. Promotion of the Peloponnese Region with posters at the main metro stations in Vienna
5. Online viewing of the monthly airline newsletter
6. Online View through the social media channels of airlines

It is noteworthy that the destination managed through the co-marketing program to be advertised in international media and reach out to critical audiences that it would never be able to do. The specific co-marketing actions were essentially a tie between the destination and the "strong" players in the tourist market.

4.2 Airlines' Sector's Results for the Region of Peloponnese (2011 and 2017)

The Periphery of Peloponnese consisted of a destination with 70% of its flights to be mainly charters and domestic ones and was transformed to a destination where 70% were external flights. A contemporary model of co-marketing was created with the biggest airline companies internationally such as Aegean Airlines, British Airways, Easyjet, Austrian, Brussels, Swiss, Niki, Cedar, Edelweiss.

The International Airport Kaptain Vasilis Konstandakopoulos had 64,653 arrivals and departure in 2011 and basic markets (Table 1).

In 2017, Peloponnese developed a programme with more than 30 destinations and cities such as Milan, Amsterdam, Frankfurt, Birmingham, Munich, Moscow, Zurich, Bratislava etc. Arrivals and departures of the destination reached 279,808 while the basic markets were the following (see Table 2).

Table 1 Basic markets of the periphery of Peloponnese for 2011

Country	
Cz Republic	1444
Germany	5055
Holland	5184
Norway	2639
UK	14,953

Table 2 Basic markets of the periphery of Peloponnese for 2017

Country	
Austria	6898
Cz Republic	2394
Denmark	6400
France	16,343
Germany	22,979
Israel	1348
Italy	5322
Holland	7440
Norway	2864
Poland	3089
Russia	3770
Slovakia	645
Cyprus	1070
Sweden	3489
UK	37,745

5 Discussion

The results above before the co-marketing synergy of the private and public sectors clearly illustrates the competitive advantage for the Periphery of Peloponnese and the new markets for the airline companies.

From 5 in 2011, the markets increased to 15 on 2017. For these five markets, that existed both in 2011 and in 2017, Germany had an increase of 7924 arrivals, Cz Republic had an increase of 950, Holland an increase of 2256 people, Norway with the smallest increase of the five markets with 225 more people in 2017 while 18,792 more came in the Periphery of Peloponnese from the UK in 2017 in comparison to 2011.

The paper examined the way synergies between the public and private sector may exist and be beneficial for all involved sectors. It was illustrated that strategic synergies may coexist in the airline sector in combination with the public sector for the promotion of a destination.

The Region of Peloponnese has successfully pursued a process of negotiating with airlines seeking to increase incoming tourism. Through a modern co-marketing model, it managed to combine the Peloponnese Region with international airlines networks that contributed so that it developed in terms of visibility and branding.

6   Conclusion

Future research may focus on all Greek airports that are in cooperation with other business sectors for the benefit of all. The companies involved in co-marketing may carefully select their partners for effective results from such cooperation.

The creation of a cooperative network that has in the centre co-marketing with airline companies, for a destination such as Peloponnese that had a decrease of its basic tourism market due to the economic crisis had very positive results as this research illustrated. The destination managed to approach new markets and raise the existing ones within a 6-year period. A more consistent plan and organization is needed for co-marketing and remains to be seen in the future.

Destinations via synergies may increase to a big degree their competition and the attractiveness of the destination. As literature illustrates [1, 10] alliances need to be carefully chosen and the synergy between the public–private sector in this case was successful.

References

1. Grieco C, Iasevoli G (2017) Co-marketing alliances: definitions and approaches. Insights from a literature review. Manag Res Rev 40:971–989. https://doi.org/10.1108/MRR-11-2016-0270
2. Tsiotas D, Spyros Niavis S, Polyzos S (2019) The dynamics of small and peripheral airports in tourism and regional development: the case of Greece. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
3. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res 18:121–131
4. Gkarane S, Lenoudias EM, Vassiliadis C, Vassiliadis G (2019) Combining traditional and digital tools in developing an international guerilla marketing strategy: the case of a SME Greek company. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
5. Bucklin LP, Sengupta S (1993) Organizing successful co-marketing alliances. J Mark 57:32–46. https://doi.org/10.2307/1252025
6. Contractor F, Lorange P (1998) Why should firms cooperate? The strategy and economic basis for cooperatives ventures, cooperative strategies in international business. Lexington Books, Lexington, MA
7. Quinn JB (1992) Intelligent enterprise. Free Press, New York
8. Khalilzadeh J, Youcheng W (2018) The economics of attitudes: a different approach to utility functions of players in tourism marketing coalitional networks. Tour Manag 65:14–28. https://doi.org/10.1016/j.tourman.2017.09.018
9. Nguyen C, Romaniuk J, Faulkner M, Cohen J (2018) Are two brands better than one? Investigating the effects of co-branding in advertising on audience memory. Mark Lett 29:37–48. https://doi.org/10.1007/s11002-017-9444-3
10. Kraus S, Meier F, Niemand T, Bouncken RB, Ritala P (2018) In search for the ideal coopetition partner: an experimental study. Rev Manag Sci 12:1025–1053. https://doi.org/10.1007/s11846-017-0237-0
11. Kavoura A, Kefallonitis E (2018) The effect of social media networking in the travel industry: the connected passenger. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, PA, pp 4052–4063

12. Dev CS, Klein S (1993) Strategic alliances in the hotel industry. Cornell Hotel Restaur Adm Q 34:43–45. https://doi.org/10.1016/0010-8804(93)90029-I
13. Evans N (2005) Assessing the balanced scorecard as a management tool for hotels. Int J Contemp Hosp Manag 17:376–390. https://doi.org/10.1108/09596110510604805
14. Heath E, Wall G (1992) Marketing tourism destinations: a strategic planning approach. Wiley, New York

Cyprus's Wine Market: Influencing Factors of Consumer Behaviour as Part of Destination Marketing

Andreas Masouras, Ioannis Komodromos, and Christos Papademetriou

Abstract The aim of this article is to highlight some of the intangible factors influencing consumer's behaviour when it comes to purchasing wine in Cyprus's market. By the term intangible factors the article refers to the external influences that affects an individual's judgment; this could be its culture, environment, lifestyle or social status, across with many more. The article focuses on unveiling the average price that locals and tourists are willing to spend for a bottle of wine. The most common location of purchase and how often this occurs. Finally, it will show the most effective marketing technique that influence both local and tourist consumers to "seal the deal" and make the purchase. The collection of data was a 2-phase procedure; originally, 300 questionnaires were distributed through face-to-face interaction with consumers or through an online questionnaire send by email. Valid questionnaires (173) were then recorded to a shared database for analysis (Microsoft Excel). This procedure has formed the conclusions and recommendations of this article.

Keywords Consumer behavior · Wine marketing · Destination marketing · Oenological marketing

1 The Winemaking in Cyprus

Cyprus's history as a wine producer and trader was acknowledged in the past and it was considered as a competitive advantage. Soil, landscape and climate resources qualify Cyprus as a high quality wine producer and may be seen as a major selling point. Nowadays, Cyprus is trying to get back to trading paths of wine but not as a low quality producer. By introducing internationally popular grape varieties such as Cabernet Sauvignion the island is seeking once again to become competitive in

A. Masouras (✉) · I. Komodromos · C. Papademetriou
Neapolis University Paphos, Paphos, Cyprus
e-mail: a.masouras@nup.ac.cy

terms of quality and price [1]. New incentives are given by the European Union towards the establishment of high quality wine production sector.

2 Literature Review

2.1 Marketing Mix of Culture and Taste

Promoting wine has several peculiarities that will be analyzed in this section. One of the most important characteristics and influential criteria of any wine is identified by its "location" of production/country of its origin, due to the fact that each location has its own unique cultural features. It is no coincidence that wine producer's branding features emphasis on the country or place of their wine origin. As Vrontis et al. [2] argues, branding strategy in the case of wine, is one of the most important issues since consumers have a wealth of choices to choose from. High-quality competition requires qualitative diversification, and this differentiation can take place through the characteristics of the place where the grapes are harvested.

However, the issue is inherently complicated, since it involves the factor of culture that is inextricably linked to local food and local wine. It is what Tellström et al. [3] characterizes as a "consuming heritage" and the results of their study have shown that promoting a food as a "local" or "regional" and linking it to culture is an attractive mix of marketing. This detachment pushes consumers to be interested in selected food and product brands depending from the country visiting. As with food, so in wine the connection of the product with the local culture is a "smart" blend for attractive product differentiation.

2.2 Wine Destination Marketing

In Cyprus and in countries with similar climatic profile, where vineyards thrive, a special link has been made to wine producers regarding destination marketing. For example, institutions in Cyprus such us Cyprus Tourism Organization (CTO) are promoting the so-called "wine roads" as part of the cultural tourism campagne, in order to attract more tourist at the rural parts of the island. The identification of wineries with the promotion of destinations is a widespread practice, considering the 'wine routes' that the island has. In addition, this aids the process of clarifying the profile of travellers who choose these routes and the reasons for visiting the wineries [4].

Kotler et al. [5] define the image of a destination as the set of beliefs, ideas and impressions that people have for the destination. Wineries can make a significant contribution to the image of the destination, since various activities can be created. This may give boost to local wineries [6]. The image represents the simplification of a large number of relationships and information associated with the destination, and

yet people's perception of a destination does not necessarily disclose their attitude towards it [7].

2.3 Wine Selection and Preferences

What is being examined in this study are the consumer's preferences and, in particular, the criteria that they affect them and ultimately determine their decision when selecting a wine. Gil and Sánchez [8] conclude that important factors set from consumers before for purchasing a bottle of wine, are the geographical origin of the wine, the selling price and the grape vintage year. Elements that concern our study by associating them with branding elements are also the packaging issue/visual of the bottle. On the other hand, Mehta and Bhanja [9], making a more extensive analysis, encode five attributes that are important for wine consumers. Specifically, Mehta and Bhanja [9] refer to brand, price, origin, taste and taste of wine therefore, they associate branding with product quality. Below, it can be seen the case of Cyprus regarding the preferable location and price of wine purchasing, but also the intangible characteristics that influence the purchase.

Another issue that concerns our study is the behavior of consumers as regards to the online wine market, which is discussed below and considered in the conclusion. Pelet et al. [10] argue that new technologies open up new opportunities for winemakers and intermediary resellers in order to strengthen their relationship with the consumer and to enrich their brand by using new tools such as reliability and the delivery method of wine. On the other hand, social networks can play an alternative role in the wine market, as consumers can now benchmark wine, see product reviews, and exchange views with other consumers [11].

3 Research Methodology

The nature of the article will be quantitative since its main purpose is to quantify attitudes, opinions, and behaviors. The collection of data and analysis was a two-phase procedure. Originally 200 printed copies were hand delivered to businesses (and were then distributed to their clients in Papho's area (hotels, restaurants, bars, supermarkets and wineries), and another 100 were distributed online in an electronic form. After collecting the questionnaires and the online data, the second phase of the procedure was to include both information to a shared database for analysis (Microsoft Excel). Regarding the number of valid questionnaires used to conduct the study, 170 out of 300 questionnaires where returned valid. The results of the analysis have formed the following tables and graphs, which aided in the conclusions and recommendations.

The aims were to establish: (a) the influencing criteria of wine selection, (b) the average price that the consumer would pay for a bottle of wine (75 cl), (c) most

common location of wine consumption and (d) post consumption experience of local wine. The study managed to unveil the intangible aspects that consumers considered before purchasing a bottle of wine and this can be used in the future as guidelines for an in-depth market research that can aid in the creation of a wine brand.

4   Analysis

The study is not designed to provide statistical analysis of the wine industry of Cyprus but to reveal in a quantitative way the consumers understanding when purchasing a bottle of wine (0.75 L). The profile of the respondents, both male participants and female, are the same with 85 from each gender, where the majority of those are between 31–40 and 41–60 years of age (27% and 31% representatively). Age groups between 18–25 and 26–30 contributed to the study with 19% and 15% representatively, and the minority of the study were people over 60 (8%).

The research found that 66% of the respondents are tourists visiting the island and 12% being foreigners currently living or studying in Cyprus, while the remaining 21% are locals. The majority of respondents that took part to the study are British, Greek and Cypriots with 24%, 19% and 18% representatively followed by participants from Russia (15%) and Israel (13%), while the remaining 10% are Germans (6%) and Scandinavians (4%). The divergent nationalities detected to the article are the most common visitors visiting Cyprus during the summer months.

Further down to the questionnaire, the participants were asked out of a list of four alcoholic options which is their favourite; 39% of them prefer wine, 22% beer, 21% spirits and the remaining 18% cocktails. Moreover, they were asked how occasionally they consume wine in a weekly basis, where 35% of respondents are habitual wine consumers (more than 2 times per/week) and 34% do not consume wine every week. The remaining 32% are occasional wine consumers (less than 2 times per/week). Regarding the consumption habits of the article's respondents, 40% consume less than a bottle per/week, 28% 1 bottle per/week, 22% 2 bottles per week and the minority with 9% more than 2 bottles per week.

Overall, the articles main respondents profile are people between 30 and 60 years old most probably foreigner, either tourist or living in Cyprus, employed and prefer wine to other alcoholic beverages. Finally yet importantly, usually consumes wine twice a week and each time consuming less than a bottle.

Furthermore, the participants of the study where asked which is the most preferable country of origin when it comes to selecting wine. Approximately 1/3 of the respondents prefer Greek origin wine, followed by Cyprus and France with 29%, 25% and 21% representatively. The rest of the respondents prefer wines from Italy (19%), Spain (7%), South Africa (4%), Portugal (3%) and Chile (1%).

It is important to mention that 61% of participants purchase wine most usually from restaurants or bars, 22% from local supermarkets or corner shops and the remaining 17% from local wineries (15%) or other sources (2%).
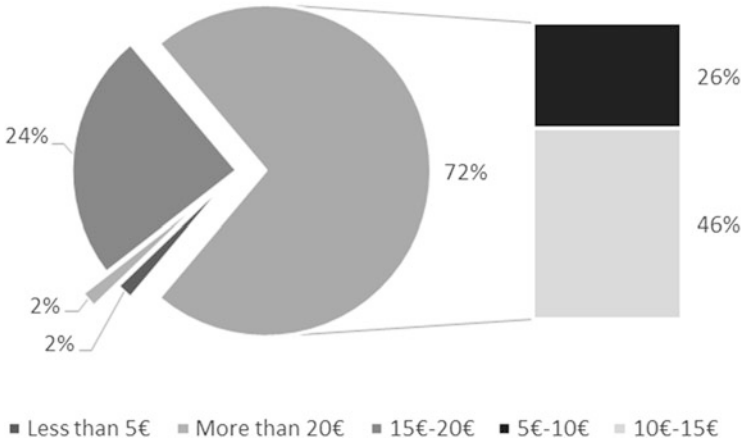
Fig. 1 Average purchasing price of a wine bottle (0.75 L)

But what is the purchasing behavior of wine consumers when it comes to a bottle of wine (0.75 L). As it can be viewed at Fig. 1, usually most of the respondents (67%) spend on average 5–15 € per bottle (0.75 L) with 40% of those being willing to spend 10–15 € and the remaining (27%) 5–10 €. Also (19%) of the participants are usually spending 15–20 € per bottle (0.75 L), if combined with the previous results (47%) of participants are willing to spend between 10 € and 20 € per bottle (0.75 L). The remaining (14%) usually spends either more than 20 € (8%) or less than 5 € (6%). Overall, most of the participants are willing to pay on average 15 € per bottle, which can be helpful for the local producers when it comes to calculating production costs and setting prices for reselling purposes.

In addition, the participants of the study where asked to select the most important characteristic that triggers them to make the purchase of a bottle of wine (0.75 L). Overall, approximately 1/3 of the participants (31%), believe that price is one of the main characteristics influencing them to make the purchase followed by the country of origin (21%) and the visual of the bottle (19%). The remaining (30%) is being shared equally to brand name (15%) and grape variety (15%). The figure could be useful to local wine producers when it comes on creating a marketing strategy for their winery or enhancing an existing one. By acknowledging the consumers' needs, the local producers could adjust any necessary changes regarding their operations and management of their facilities in order to meet those needs.

Additionally, the respondents were asked to select the most efficient promotional technique that influences them to make a purchase of a bottle of wine (0.75 L). Word-of-mouth is one of their most efficient techniques when it comes to influencing the decision of consumers, with (31%) of the respondents' believing so. Second most efficient technique of influence, is the reduction of prices and special offers (22%), followed by the curiosity (20%) of each individual. Seller's recommendation comes fourth with (16%) and finally shelf testing and display notes with (12%).

The results categorize online consumer interaction on two levels: first, whether they bought wine from an online store and secondly, whether they are willing to buy wine from an online store. The results show that only 12% bought wine online and that a percentage of 32% is willing to buy wine from an online store.

In addition, the questionnaire unveiled a small part of the post consumption experience, where a product creates to the consumer during the consumption process. At this stage of assessing Cyprus's wine quality, the participants were asked to rate Cyprus wine, in a scale of 1–5 (1 being low and 5 being high quality wine), 145 out of 170 participants of this study have tried Cyprus wine and the average quality was calculated to be 3.33 out of 5.

Finally, the participants that have tried Cyprus's wine where asked if local wine had any room of improvement and compete with other international brands. The majority of those 145 participants where positive that local wine could 1 day improve its standards and compete other well-known brands.

Overall, the data of this study have shown us the profile of Cyprus's wine consumers, their most preferable country of origin, their most common location of purchasing it, the average price of purchasing it and the intangible characteristics that influenced their purchase. Also, the article introduces a new selling tool of wine through online sources and some notable conclusions that have been created through the participants' responses. Moreover, the study has unveiled a part of post consumption consumer's beliefs regarding Cyprus's wine quality. Last but not least, the data analysis section presents the participants' beliefs regarding the future of Cyprus's wine quality and its international recognition.

5   Discussion

The above results have driven us to some interesting conclusion and lead us to discuss further as to the issue of wine promotion. Although this study focuses on the case of Cyprus, the discussion may be generalized. First of all, what should be observed, is that the promotion of wine does not resemble the promotion of other products. It has its own peculiar features that spring from the peculiarities of the product itself, the way it is produced, the place of production and the delivery process. We could say that wine is in itself a marketing mix, since its production process is enough to deflect the stigma of its promotion. For example, in other products the marketing mix—that is to say the components that will form the core of the product identity—can be decided at a later stage, even after the product is complete. In the case of wine, product identity begins from the moment that the grapes are in the vineyards.

It is for this reason that this research has focused at the place of production/origin of wine, since the "place" of production can become its own brand. An interesting finding, based on the results of the survey, is the support of locals for local wine. If we observe the results of this article, we come at the conclusion that local consumers prefer to buy products produced within their region. (After the survey was carried

out in Cyprus, we see the Cypriots' tendency to choose Greek and Cypriot wines). In future research, a survey could be based on geographical segmentation, in order to look at the trends in different regions. For example, by examining the consumers of small country's region, in order to identify their wine preferences and how it relates to the place of origin.

The place of production of a wine is one of its main components in its marketing mix and the identity of a wine is created mainly around the place of production. For example, the taste of wine—something that is directly related to its quality—has to do with the quality of the grapes, with their taste, thus the variety of grapes used to produce wine has to do with the place of their production. In particular, for the Cypriot market, what emerges from the survey is the opportunities that exist and which should be exploited—not only at the corporate level of winemaking but also at its national branding and exposure to foreign markets, either by official agencies in the country or through private initiatives. A typical example is the case of commodaria which, as a wine, its production method, and its history, is directly interlinked with Cyprus, irrespective of the fact that due to various factors it has not managed to become an internationally established brand [12], although there are those components which could give this wine a sophisticated marketing mix and narrow tourist boundaries and interaction in an international market.

Another issue that arises and should be taken into consideration when creating a promotion strategy of a wine is its selling price. This is not an autonomous feature but it depends on the whole process of production and promotion. If a wine brand want to be competitive with its price then the operational costs play an important role, which is particularly difficult for small local winemakers, since production costs are higher. What should be of concern to the wine industry is the importance of wine pricing to the consumers, which is shown by the results of this survey. In fact, based on the results, it appears that consumers pay more attention to price than to quality (the quality is reflected, for example, by the variety of grapes). So it should not be overlooked. From then on, other issues arise, and more specifically, how the sale price of wine is ultimately associated with its quality.

As mentioned earlier, one of the issues addressed by this study is the case of online promotion and online wine market. Low percentages in the online wine market mean different things. First of all, future studies should be concerned on how easy it is to purchase wine from an online source. Besides, wine testing is an important procedure when selecting it and should not be overlooked by the wine promotion process. As discussed above, wine's flavour is one of the key factors influencing consumers' decision, an experience that clearly cannot be spotted through an online source. Last but not least, the percentage that shows us the intention of consumers to buy wine from an online source shows us the dynamics that can be developed on a web store basis, but by being properly exploited and taking into account the influencing factors of consumer's decision process when it comes to selecting a bottle of wine.

As mentioned above, this study deals with the case of Cyprus, through the articles findings it can be seen the tendency for promoting Cyprus's wine is a necessity for its future reputation. The elements of this study may also be applicable in other

countries because oenology and oenological promotion share common fields of application. For example, countries or regions with the same or similar climatic characteristics as Cyprus or countries and islands with the same potential in wineries can be described as similar cases.

References

1. Cyprus Hotel Association (2018) Annual report 2016. http://www.cyprushotelassociation.org/statistics
2. Vrontis D, Thrassou A, Czinkota MR (2011) Wine marketing: a framework for consumer-centred planning. J Brand Manag 18:245–263
3. Tellström R, Gustafsson IB, Mossberg L (2006) Consuming heritage: the use of local food culture in branding. Place Brand 2:130–143
4. Bitsani E, Kavoura A (2012) Connecting oenological and gastronomical tourisms at the wine roads, Veneto, Italy, for the promotion and development of agrotourism. J Vacat Mark 18:301–312
5. Kotler P, Asplund C, Rein I, Heider D (1999) Marketing places Europe: attracting investments, industries, residents and visitors to European cities, communities, regions and nations. Financial Times Prentice-Hall, Harlow
6. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res 18:126–137
7. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for Southeastern Rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, PA, pp 45–66
8. Gil JM, Sánchez M (1997) Consumer preferences for wine attributes: a conjoint approach. Br Food J 99:3–11
9. Mehta R, Bhanja N (2018) Consumer preferences for wine attributes in an emerging market. Int J Retail Distrib Manag 46:34–48
10. Pelet JE, Lecat B, Khan J, Rundle-Thiele S, Lee LW, Ellis D, Wolf MM, Kavoura A, Katsoni V, Wegmann AL (2018) Winery website loyalty: the role of sales promotion and service attributes. Int J Wine Bus Res 30:138–152
11. Pelet J, Lecat B, Khan J, Lee L, Vigar-Ellis D, MC Gary-Wolf M, Rundle-Thiele S, Kavoura N, Katsoni V, Wegmann A (2014) Influences of M-commerce and social media on wine purchases: a multi-cultural study. In: 8th academy of wine business research conference, Germany, 28–30 June 2014
12. Vrontis D, Thrassou A (2011) The renaissance of Commandaria: a strategic branding prescriptive analysis. J Glob Bus Advancement 4:302–316

The Evolution of Demographic Changes in Greek Society and Proposed Administrative Management Model

George Pierrakos, Evangelia Maritsa, Charalampos Platis, Dimitra Latsou, and Sotiris Soulis

Abstract The nature of family has changed over time creating new trends, that run through all the European countries. Within this framework the four main trends associated with the family are late marriage, postponement of childbirth, involvement of men in care activities and economic independence of women, which can be formulated in a family policy pattern. The Greek society and economy in the current context of fiscal consolidation addresses the consequences of a demographic switch, the most determinant of which is the decline in birth rates, the ageing population and a social protection system under risk. The aim of this study is to portray the current demographic switch in Greece, the risk faced by the family as the structural element of demographic policy and to suggest community-based interventions in order to empower family and strengthen demographic policy. Although, the search was not exhaustive, it is hoped that it contributes as a comprehensive resource in the demographic evolution research. The literature review was conducted in PubMed, Cochrane library and Scopus in April–May 2018. Also, data were obtained and elaborated from the Eurostat and OECD databases, and Hellenic Statistical Authority as well. The study highlighted the urgent need of maternity protection, and work-life balance as essentials to increase birth rates, to sustain the social protection system, to acknowledge the key role of local community, to promote gender equality at work, promote decent work for both genders, primarily for the groups of people in need.

Keywords Birth rates · Economic crisis · Childcare services · Family-friendly policies

G. Pierrakos (✉) · E. Maritsa · C. Platis · D. Latsou · S. Soulis
Health and Social Care Management, University of West Attica, Athens, Greece

1   Introduction

Until the early 1960s a significant increase in birth rates (baby boom) made its appearance in most developed countries, foreshadowing an upcoming period of demographic balance. Yet, that phenomenon has overturned after the mid-1960s (second demographic transition) with a significant decrease in fertility rates below the 'replenishment level' [1]. The 1970s were marked by a shift of the age that women bear children, an incidence that was explicated as an annual decrease of birth numbers and was initially ascribed to the postponement of fertility, meaning women would not have changed their total fertility (tempo effect), they would have just spread out the same number of births over a longer period of time [2]. The afore-mentioned view was confirmed to a certain extent for some countries (Holland, Denmark, Norway, Sweden) with an increase in fertility after the mid-1980s. Other countries expected a reversal of the low fertility, yet low rates persisted (Austria, Spain, Greece, Portugal) and remained below 1.5 births per woman for more than 20 years [3, 4]. During the past 20 years women gradually increased their participation in the socio-economic, political life, higher education and in the labour market with a respectively taking-up of responsibilities [5] and in the Nordic countries it has been proved that affordable public childcare with high availability for children increases maternal employment [6]. Significant demographic changes have occurred during the past decades across Europe affected by the family forms and structures [7–9].

2   The Case of Families in Greece

In Greece from 2011 and onwards, the amount of total population has steadily declined, while in parallel crude birth rate considerably dropped significantly below the EE-27 average, which actually means that deaths outnumber births at that point of time [10]. Meanwhile, the projections [11] foresee that total fertility rate (TFR) will range still below two, indicating that women's preference of having only one child isn't about to change in Greece. The declined birth rates combined with the current socio-economic constraints and challenges.

Greece has introduced a Minimum Income Scheme (MIS) with a pilot imple-mentation at 13 municipalities (November 2014–April 2015) and soon after that the Greek administration replaced that programme with the so called 'Social Solidarity Income (SSI)' that was implemented only in 30 municipalities [12]. Hence, families cannot actually be comprehensively supported, that is there is a lack of a general minimum income scheme for people in need who are pushed to poverty due to the austerity measures [13]. Reports on May 2017 depict that from the total amount of the requests for the SSI, 35% were households with at least one child, 65% were single-person [14]. Moreover, from the total number of registered as unemployed

(job seekers) on July 2018 the number of long-term unemployed accounted for one third of the total number of the unemployed [15].

The highest rates of unemployment in Greece are gathered for women in the 30–44 age group [16], creating an unfortunate juncture with the shift in the women's fertility. Adequate income support, employment promotion and access to quality care services are the three main pillars of smooth social inclusion and social integration of families and children, aiming at reducing the negative impact of the economic crisis, maintaining the social cohesion policy and facing up to the demographic challenges. In the aforementioned socio-economic environment of precariousness with a simultaneously constant changing of living conditions (long-term unemployment, increase of domestic violence, melancholy) young women—members of new families and households will certainly choose to further postpone their first childbirth or give birth to fewer children or even not having children at all [17].

There are several pinpointed impacts of the non-systematic implementation of demographic planning, protection, support of families in Greece on the reconciliation of work, family and private life. First and foremost, extensive budgetary cuts in the funding of pre-school childcare facilities leading to the reduction of their quality (less kindergarten teachers per child), thus nurseries are curtailed. What is more, there is a non-use or assertion of legal parental rights, owing to the fear of unemployment or loosing of one's job, such as reduced granting of parental leave. Furthermore, increased unofficial work has a huge negative impact on parents' rights, such as non-access to parental rights, zero benefits related to parenthood with a concurrently loss for the social security system [18]. Moreover, one in three households declare that they live with an annual family income of less than 10,000 € (36.3% of the population), which is the lower income scale [19]. Additionally, families face immense inequities when participating in the labour market, accompanied by great job insecurity, which was depict as an increase in complaints relating to redundancies due to pregnancy or child-care leave, that is 42.46% and 21.79%, respectively, of the total complaints the year 2011. In addition to that, during the period 2010–2012 a significant increase of unintended job contract changes has taken place, such as illegal conversion from full-time to part-time employment [20].

3 Interventions

To start with, local government's participation in the provision of welfare services is fundamental to the balance between work and family life, applying the principles of subsidiarity with targeted solutions [21] adapted to the environment of the local community (social norms, local economies). The central and regional strategic initiatives for social inclusion involving different ministries, agencies, etc. should be further strengthened with specific objectives and indicators and should provide for local adaptability.

The concept of social innovation involves all stakeholders (i.e. charities, social entrepreneurs, the public sector) focusing local Small and medium-sized enterprises

(SMEs) attracting new ideas to the market (smart specialization) in order to tackle social challenges, increase innovation and competitiveness, and consequently rise jobs [22].

This know-how can be exploited so that local communities target and prioritize their needs, even without interdependence from one region to another [23]. In this way local government is transformed into a 'centralized local development body' [24] with the development of sustainable and effective strategies for families using innovative 'social tools' through the mobilization of the economic and social sector [25], using all available resources (material and human), constitute the answer addressing the challenges of the current socio-economic context (i.e. poverty, unemployment, immigration).

On the one hand, by fostering networking between local and regional actors, cooperation and coordination between social services, one stop employment centres and services providing reconciliation of work and family life, shall Greece directly obtain social inclusion and integration into the work market, mid-term influence the size of the family (number of first, second, third births) and even more decrease the mean age of women at birth of first child and consequently in the long run positively affect the social security system through the reversal of demographic ageing, quality childcare services and the overall well-being of families [9, 17]. Even though, passive subsidiarity policies (Greece's social protection system) can be positively correlated with the size of the family, yet not the stronger way of increasing birth rates. The greatest correlation seems to be inherent in the availability, affordability and accessibility of childcare services, which in turn lead to the full entrance of women in the work market, reduce the risk of poverty and ultimately increase total family income [26].

On the other hand, permanent employees ('parents' or 'want to be parents') should be adequately prepared to adapt in rapidly changing economic environment through formal training which is linked to high wages, higher productivity and lower unit labour costs, while the increase in temporary employment is associated with lower wages and lower productivity [27]. It is a higher priority within the economic crisis of growing unemployment and scarce jobs, to focus on job security policies, by means of human resource policies. That is, parental leave entitlements affect not only labour participation, by means of boosting the initial entrance in the labour market, but preservation of the workforce as well. Consequently, it stands to reason that job security is in other words job preservation [8, 9]. Investing in human resources equally for both genders with the equivalent maternity and paternity protection methods (i.e. continuous training, adequate parent leave schemes, childcare facilities within the organization) will lead to the desired corporate environment of stability and innovation and ultimately reinforce people's intention to acquire one and more children and will therefore positively affect birth rates. The growing participation of companies in such agreements with workers will further strengthen women's integration into the labour market, considered the fact that in 2013 in the EU-28 more than 8.6 million inactive working women were willing to work. Gender gaps in the labour market remain significant in most Member States, as well as gender differences in quality and patterns of employment. Work for both sexes is not just a source

Fig. 1 Interdependent factors of positive demographic policies
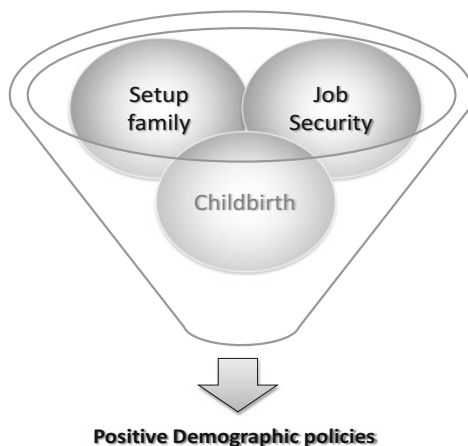
of income that ensures an adequate standard of living, it is also an important mechanism for social inclusion, which is the main path through which citizens connect themselves with the local community and contribute to its preservation. All in all, it should be noted that 30% of US income growth in the period 1929–1956 derived from investing in the human factor [5, 28].

The development of respective methods to address the growing family care deficit, to enhance quality, equality, successful parenting, children nourishment and balance between life and work (Fig. 1), is a necessity towards tackling the impacts of the economic crisis on families [29].

4   Conclusions

The under-representation of the role of the family in society, the lack of family support in the community, the budgetary cuts in the funding of pre-school childcare centres, the high unemployment rate and the socio-economic environment of pre-cariousness, are definitely attached to the lowest birth rates that Greece has ever faced.

The 'triple gain' is the enhance of family's well-being, the increase of birth rates and the boost of economic development. Family-friendly policies should be consistent over time so that they do assist in the resilience and the sustainability of the social security system and the inversion of the demographic ageing as well.

It goes without saying that, family-friendly policies should promote full entry of the woman into the full-time work market and access to affordable and qualitative childcare services and facilities. Specifically, the harmonization of the policy objectives sets the following remarks: (a) The existing need of qualitative childcare services and facilities can be transformed to policies achieving to empower family, (b) The willing of successful parenting can be turned into supporting family-friendly

policies and a culture of fostering parenting within them, by means of flexible leave options and consequently affect the demographic switch and (c) The desire of equal entry of women into the labour market can be embraced by a policy of extended childcare and elderly care (morning to afternoon hours/all over the year) in the community, thus stretching the goal of community based interventions and strengthening the demographic policy. These policies lead to family well-being growth, optimization of the annual family income, downturn in poverty risk and reinforce of economy (increased human labour). Hence, will impact on fertility intentions and on TFR's rise, influencing mid-term the size of the family and demographic evolution.

Finally, state, regional and local policies that will combine an increase of women's participation in the labour market with a simultaneous qualitative childcare nourishment in line with a reinforce of successful parenting responsibility, will play an important role in fostering family well-being, family cohesion, reconciling work and family life and reversing of the demographic ageing rates of Greek society.

References

1. Balourdos D (1997) Demographic transition and demographic problem of Greece: theoretical and methodological concerns. Soc Res Rev 94:3–44 (in Greek)
2. Sobotka T (2004) Is lowest-low fertility in Europe explained by the postponement of child-bearing? Popul Dev Rev 3:195–220. https://doi.org/10.1111/j.1728-4457.2004.010_1.x
3. Eurostat (2018) Statistics explained, fertility statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php/Fertility_statistics
4. Lesthaeghe R, Permanyer I (2014) European sub-replacement fertility: trapped or recovering? Population studies center research report 14-822. University of Michigan
5. Soulis S (2015) Applied social policy: planning social protection services. Papazisis, Athens
6. Kangas O, Rostgaard T (2007) Preferences or Institutions? Work family life opportunities in seven European countries. J Eur Soc Policy 17:240–256. https://doi.org/10.1177/0958928707078367
7. Eurostat (2015) People in the EU: who we are and how do we live? Publication Office of the European Union, Luxemburg
8. Thevenon O, Neyer G (2014) Family policies and diversity in Europe: the state-of-the-art regarding fertility, work, care, laws and self-sufficiency. Families and Societies Working Paper Series by European Union's 7th Framework Programme, vol 7, pp 1–67
9. Eurofound (2015) Families in the Economic crisis: changes in policy measures in the EU. Publications Office of the European Union, Luxemburg
10. Eurostat (2017) Statistics explained, mortality and life expectancy statistics. https://ec.europa.eu/eurostat/statistics
11. United Nations (2017) Revision world population prospects. Department of Economic and Social Affairs, New York
12. Law 4389/2016 (Official Government Gazette 94/Issue A'/27-5-2016), Urgent Provisions for Implementing the Agreement on Fiscal Targets and Structural Reforms and Other Provisions

13. Amitsis G, Kokkori V (2012) Peer review in social protection and social inclusion: area-based policies in urban-areas – how to promote good living conditions for children and youth – the situation in Greece. Norway, 13–14 Nov 2012
14. Marinos S (2017) Social solidarity income statistics, February 2017. https://kea-tech.blogspot.gr/2017/03/. Accessed 8 Aug 2017
15. Manpower Employment Organization – OAED (2018) Summary report of the registered people in OAED – July 2018. www.oaed.gr/2018-ioul
16. ELSTAT (2017) Labour force survey – unemployed (1981–2016). http://www.statistics.gr/el/statistics/-/publication/SJO03/2016
17. European Institute for Gender Equality – EIGE (2015) Reconciliation of work, family and private life in the European Union: policy review. EIGE, Lithuania
18. Ministry of Health (2017) World Women's Day, March 8, 2017 on "Be Bold For Change" (WHO). Women's Rights in Health, IDA: 7.3.2017, Athens
19. Social Policy (2016) Survey of the institute of small enterprises – Hellenic confederation of professionals, craftsmen & merchants (IME-GSEVEE): 2016 is the year of low expectations and reduced prospects. http://socialpolicy.gr
20. The Greek Ombudsman (2012) Summary special report: abusive unilateral forced labor rotation of workers after maternity leave. Gender Equality Round, July 2012, Ombudsman's Greek Independent Authority
21. Equal Tempora (2004) Groupe de travail transnational 2, Nouveaux services locaux pour la qualite de la vie quoditienne. Project Equal Tempora, Barcelona
22. European Commission (2010) Europe 2020 flagship initiative innovation Union. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Brussels
23. Pierrakos G (2017) Social economy – social entrepreneurship. Open eClass. Athens University of Applied Sciences, Athens
24. Pierrakos G (2008) Primary Health Care & Local Society. Papazisis, Athens
25. Amitsis G (2016) Emblematic initiatives safeguarding the social cohesion during the period of memorandums: the model of the national strategy of social integration. Papazisis, Athens
26. Peristera P (2010) Policies for the family in Greece. Demo News 9:1–4
27. ILO (2017) World employment social outlook – sustainable enterprises and jobs: formal enterprises and decent work. International Labour Office, Geneva
28. Eurofound (2016) The gender employment gap: challenges and solutions. Publications Office of the European Union, Luxemburg
29. Balourdos D, Pierrakos G, Kikilias I, Demertzis N (2018) The low fertility in Greece, the demographic crisis and the policies. The National Center of Social Research, Athens

Reasons for Using Daily Deal Sites

Aikaterini Stavrianea, Evangelia-Zoi Bara, and Spyridon Mamalis

Abstract Due to the economic crisis that Greece is going through, consumers are experiencing continuous cutoffs, while there are not few that have lost their jobs and try to make ends meet. Under these circumstances, citizens have become rational in purchasing products and services and engage in information seeking and purchasing in lower prices, targeting for good value for money. Because of changing consumer purchasing behavior, daily online deal sites have emerged and expanded. This paper presents a research dealing with the reasons for purchasing products and services from the Greek daily deal sites. Quantitative research via the internet was implemented with an online questionnaire, generating a sample of 323 questionnaires over a 3-month period. Data analysis included descriptive statistics (frequencies, percentages and means).

Keywords Daily deal sites · Motivation · Consumer behavior · Marketing · Greece

1 Introduction

Due to the economic crisis that Greece is going through, consumers are experiencing continuous cutoffs, while there are not few that have lost their jobs and try to make ends meet [1]. Under these kind of circumstances, citizens have become rational in purchasing products and services and engage in information seeking and purchasing in lower prices, targeting for good value for money [2].

Because of changing consumer purchasing behavior, daily online deal sites have emerged and expanded. Daily deal sites are the new type of e-commerce—online shopping deals with e-vouchers. They offer to consumers who are members only of the site daily discounts of products and services of local businesses [3]. Deals only

A. Stavrianea (✉)
National and Kapodistrian University, Athens, Greece

E.-Z. Bara · S. Mamalis
Eastern Macedonia Thrace Institute of Technology (EMaTTech), Kavala, Greece

become active after a certain minimum number of coupon are purchased and are valid for a specific time, after which the deal is expired [4].

The pioneer of this type of e-purchasing was launched by Groupon in 2008 with huge profits and expansion in many countries [5], while it also simultaneously triggered the entrance in the market of many competitors [6].

Daily deals first appeared in the Greek market place in 2010 with the pioneering, Groupon, and which left the country in 2015, due to economic losses [7]. At the moment, in Greece function more than 30 daily deal sites [8], while official data of their sales and consumer volume do not exist. Under this context, this paper provides with descriptive research results answering the following questions:

1. Do Greek consumers use daily deal sites?
2. What product or service categories do they purchase?
3. With what way do the pay for the purchased products or services?
4. Are customers satisfied from daily deal sites and are they willing to recommend them?

This paper fills the following gap in literature. Daily deal sites are new way of purchase and have an increasing interest in academic literature. Though, it is still an understudied issue, and as regards the Greek reality, only one paper has been found [9].

2   Literature Review

While daily Deal sites give enormous revenues and have expanded since their entrance in the market place in late 2000, there are relatively few papers compared to other consumer purchasing themes. A lot of papers deal with how daily deal sites provide profitability for businesses, the way they function or their business potential [10–16]. As emerging in interest, academics also deal with the customer, investigating their purchasing behavior [3, 17–19]. Though, for the Greek reality only one paper was found, i.e., that of Drossos et al. [9]. Drossos et al. [9] identified factors that may have an effect on e-voucher sales, in daily-deal sites by content analysis of 596 vouchers from different daily-deal websites. Thus, there is no research regarding customers point of view for daily deal sites and motivation for purchasing.

3   Methodology

At first an online asynchronous qualitative research was carried out using an open-ended questionnaire which was forwarded through Facebook accounts, thus using convenience sampling [20]. Upon the results of the qualitative research and extensive literature review, a questionnaire was developed in Google docx and forwarded via the internet [1]. In 1 month, 323 valid questionnaires were collected. The SPSS

ver. 24 was used, and analysis included descriptive statistics, i.e. frequencies, percentages and means.

4 Results

4.1 Sample Profile

As to gender, 44.6% of the sample was males and 55.4% females. Respondents mean age was 36.67 years old (StD = 9.948) and participants were grouped into four groups: 18–25 (14.2%); 26–35 (34.3%); 36–45 (28.5%); and 46–56 year of age (22.9%). Additionally, 59.1% was married; 35.3% was single and 5.6% was either divorced or widowed. Also, 1.5% had primary education; 32.6% and 17.3% had secondary and postsecondary education and 46.1% were highly educated with at least a university degree. As to profession, 10.2% were business people; 56.0% were salaried (private and federal employees a on a pension); 2.8% were workers; and 30.9% were dependent (university students, housekeepers, unemployed). Lastly, as to family net monthly income, 43.0% had income up to 1000.00 €; 46.2% ranged from 1000.01 to 2000.00 €; and 10.8% had an income that exceeded 2000.00 €.

4.2 Participants Purchasing Behavior

First participants were asked if they purchase products from daily deal sites, providing with the feedback that only 39.6% (n = 128) purchase products and services from them, while 60.4 (n = 195) do not. Thus, the question referring to the reasons for purchasing from these sites was addressed only to the 128 participants that answered yes in the previous question.

Regarding the frequency of using daily deal sites, 71.3% answered frequently or very frequently; 28.1% answered sometimes and 1.6% answered rarely or very rarely.

Table 1 presents the 20 statements that refer to the reasons for purchasing products or services from daily deal sites. Respondents (n = 128) were asked to rate how much they agree with every statement on a 5-point Likert scale (1 = completely disagree up to 5 = completely agree). Results revealed that no statement has mean score (MS): MS > 4.50; seven statements have MS > 4.00; twelve statements with 3.00 < MS < 4.00; and one statement with MS < 3.00. Specifically, the statements with the higher MS, reflecting the main reasons for purchasing were: "I have access 24 hours per day" (MS = 4.50); "Products and services are cheaper from these sites" (MS = 4.30); and two statements both having MS = 4.17; "They bring the products at home" and "They have variety of products". The statement that has the lowest MS (MS = 2.75): "It is an "in" way of purchasing products".

Table 1 Reasons for purchasing from daily deal sites

Statements	1	2	3	4	5	Mean MS	Std. D.
Products and services are cheaper from these sites	0.0	1.6	8.6	48.4	41.4	4.30	0.69
I have access 24 hours per day	0.8	0.0	3.1	40.6	55.5	4.50	0.64
I do not have a physical store in my area that sales this kind of products and services	1.6	11.7	34.4	28.9	23.4	3.61	1.02
The site is easy to manage/operate	0.0	2.3	25.0	53.9	18.8	3.89	0.72
They have good offers	0.0	1.6	21.9	49.2	27.3	4.02	0.74
As a member I am continuously informed of new deals	0.8	3.1	12.5	46.9	36.7	4.16	0.82
They deliver the products at my home	0.8	0.0	21.1	37.5	40.6	4.17	0.81
I do not have to spend much time for searching and purchasing these products	3.9	4.7	17.2	45.3	28.9	3.91	1.00
The products and services that I want I can only find at these sites	7.8	22.7	38.3	21.9	9.4	3.02	1.07
I do not spend time and money on going to the stores	5.5	7.0	25.0	43.0	19.5	3.64	1.05
I can compare prices from site difference at the same time without spending time and money	0.8	0.8	16.4	45.3	36.7	4.16	0.78
They have a good variety of products	0.0	0.8	11.7	57.0	30.5	4.17	0.65
They have good customer service	1.6	7.0	32.8	49.2	9.4	3.58	0.82
The site was recommended to me	7.0	18.0	39.1	28.1	7.8	3.12	1.02
It is an "in" way of purchasing products and services	18.0	25.8	31.3	13.3	11.7	2.75	1.24
The site belongs to a well-known company group	12.5	17.2	33.6	25.8	10.9	3.05	1.17
The daily sites' credibility is high	2.3	7.0	30.5	48.4	11.7	3.60	0.87
I can rate the products purchased	2.3	5.5	21.1	58.6	12.5	3.73	0.84
I can see reviews of the products and services	0.0	6.3	21.9	48.4	23.4	3.89	0.84
I have the personal anticipated service	3.9	11.7	28.9	51.6	3.9	3.40	0.89

The three main categories of products and services that consumers purchased through daily deal sites are travel products/services such as tourism packages (74.2%); hotel services (room booking) was second in purchasing behavior with 69.5% of the sample purchasing; and computer products and services (50%). On the other hand, the least purchased categories regard action services and products and tarot-astrology-divination services (3.9% each), and heating products and services (7.0%). As to the main ways that customers pay the products and services purchased, 64.1% pay on delivery, 36.7% via PayPal, and 29.7% with their credit card.

Regarding satisfaction from the sites; 12.5% were neither satisfied nor dissatisfied; 71.9% satisfied; and 15.6% very satisfied. Referring to recommendation of the daily deal sites, 1.6% would not recommend purchasing from these sites; 14.1% are

indifferent (neither would/would not); 57.8% would probably recommend; and 26.6% would surely recommend these sites to other customers.

5 Conclusions: Limitations—Directions for Further Research

This research had as its aim to explore the Greek consumer use of daily deal sites which was accomplished by a questionnaire—research approach with 323 participants. Four questions were to be answered in this paper: the first regards if Greek consumers use daily deal sites. Results revealed that only 40% of the sample purchase from daily deal sites, a result that was not fully expected, since it was our belief that at least half of the sample would purchase. The second question that needed to be answered was the kind of product or service categories do they purchase. Results revealed that the main categories were travel products/services; hotel services (room booking); and computer products and services. The third question to be answered dealt with the payment procedure. Results showed that in majority customers pay on delivery. The last question to be answered dealt with satisfaction and recommendation, with consumer being satisfied (87.5%) and the 26.6% would surely recommend these sites to other customers.

This research has some limitations which could be considered as directions for future research. It incorporated a non-probability sampling method, thus lacking the possibility of generalizations of results. It also had a small sample (n = 323). Research with a probability sampling method would confirm and generalize current findings. Additionally, this research was descriptive in nature. Even though this research has the above limitations, it is considered significant because it gives insight into the motivations of Greek customers of daily deal sites, a subject that lacks research and in-depth knowledge.

References

1. Stavrianea A, Kamenidou I (2017) Generation Z and religion in times of crisis. In: Kavoura A, Sakas DP, Tomaras P (eds) Strategic innovative marketing. Springer, Cham, pp 205–211
2. Jung K, Lee BY (2010) Online versus offline coupon redemption behaviors. Int Bus Econ Res J 9:23–36
3. Ong BS (2015) Attitudes, perceptions and responses of purchasers versus subscribers-only for daily deals on hospitality products. J Hosp Mark Manag 24:180–201
4. Edelman BG, Jaffe S, Kominers SD (2016) To Groupon or not to Groupon: the profitability of deep discounts. Mark Lett 27:39–53
5. Erdoğmus IE, Çiçek M (2011) Online group buying: what is there for the consumers? Procedia Soc Behav Sci 24:308–316
6. Deninno N (2011) Top 12 best daily deal Groupon copycat discount web sites. Int Bus Times. http://www.ibtimes.com/articles/206670/20110831/top-12-best-daily-deal-groupon-copycat-discount-web-sites.htm

 7. Souki S (2015) Why Groupon gathers its things and leaves Greece. Proto Thema Newspaper, August 24. https://www.protothema.gr/economy/article/502892/giati-i-groupon-ta-mazeuei-kai-feugei-apo-tin-ellada
 8. Tsig.gr (2018.) https://tsig.gr/lang-el/deals
 9. Drossos DA, Maragoudakis M, Kokkinaki F (2015) Buying behavior on daily-deal sites: the role of face value, product involvement, information and website quality. J Int Commer 14:200–232
10. Magno F, Cassia F, Ugolini M (2014) Local versus global social couponing sites: a study of merchants' satisfaction. In: Toulon-Verona conference "excellence in services". http://www.toulonveronaconf.eu/papers/index.php/tvc/article/view/158/155
11. Park JY, Chung CW (2012) When daily deal services meet Twitter: understanding Twitter as a daily deal marketing platform. In: Proceedings of the 4th annual ACM web science conference. ACM, pp 233–242. https://dl.acm.org/citation.cfm?id=2380748
12. Hughes S, Beukes C (2012) Growth and implications of social e-commerce and group buying daily deal sites: the case of Groupon and living social. Int Bus Econ Res J 11:921–934
13. Dholakia UM, Tsabar G (2011) A startup's experience with running a Groupon promotion. SSRN Electron J. https://doi.org/10.2139/ssrn.1828003
14. Dholakia UM (2010) How effective are Groupon promotions for businesses? SSRN Electron J. https://doi.org/10.2139/ssrn.1696327
15. Dholakia UM (2011) What makes Groupon promotions profitable for businesses? SSRN Electron J. https://doi.org/10.2139/ssrn.1790414
16. Dholakia UM (2011) How businesses fare with daily deals: a multi-site analysis of Groupon, Livingsocial, Opentable, Travelzoo, and BuyWithMe promotions. SSRN Electron J. https://doi.org/10.2139/ssrn.1863466
17. Kukar-Kinney M, Scheinbaum AC, Schaefers T (2016) Compulsive buying in online daily deal settings: an investigation of motivations and contextual elements. J Bus Res 69:691–699
18. Ardizzone A, Mortara A (2014) Consumers' motivations and daily deal promotions. Qual Rep 19:1–15
19. Dholakia UM, Kimes SE (2011) Daily deal fatigue or unabated enthusiasm? A study of consumer perceptions of daily deal promotions SSRN Electron J. https://doi.org/10.2139/ssrn.1925865
20. Priporas CV, Kamenidou I, Kapoulas A, Papadopoulou FM (2015) Counterfeit purchase typologies during an economic crisis. Eur Bus Rev 27:2–16

Does Sharing Economy Shape Consumers' Attitudes?

Merve Yanar Gürce

Abstract Sharing economy platforms have become very common in the last years and they have changed the way in which people consume, travel, and borrow among many other activities. Associated with sharing different goods, services among different organizations and customers have started to play an important role in today's economic environment. According to that, the aim of this study is to investigate people's motivations to participate in collaborative consumption in other words shed light to the attitudes and intentions of consumers about the collaborative ownership of products and services. Two focus groups were carried out with participants whose ages differ from 18 to 45. According to the results of this preliminary study, consumers' perceived economic, environmental, and psychological benefits were found to shape their attitudes and intentions towards collaborative consumption.

Keywords Sharing economy · Collaborative consumption · Qualitative · Focus groups · Ownership

1 Introduction

Consumers' attitudes towards consumption have come over in today's World and their concerns about ecological, societal or economic issues are increasing day by day. A growing concern about this fields have made the collaborative consumption or sharing economy a charming alternative for consumers and it is defined as the peer to peer based activity of obtaining, giving or sharing the access to goods and services, coordinated through community based online services [1]. The terms "sharing economy", "collaborative consumption" and "peer to peer economy" are popular to define the phenomenon which prioritizes utilization and accessibility over ownership [2]. As an emerging economic and technological phenomenon the sharing

M. Yanar Gürce (✉)
İstanbul Gedik University, Istanbul, Turkey

economy is sharpened by information and communication technologies, increasing consumer awareness, proliferation of web communities and social commerce sites [3]. Online collaboration, social commerce, the concept of sharing online and consumer opinion are important qualities of the sharing economy [4].

This study explores people's motivations to participate in collaborative consumption. In the study, it is analyzed how sustained participation is motivated in the sharing economy that is stated namely sharing the consumption of goods and services through activities such as trading, renting or swapping. These services include Airbnb, Uber, Zipcar etc. Sharing economy services are usually qualified as a necessity to do good for the other people or the environment such as sharing, helping others for a more sustainable World. In addition to all these it also gets economic benefits such as saving money and simplifying access to resources [5].

2   Literature Review

The term sharing economy usually refers to sharing goods and includes redistribution, mutualisation and shared mobility and any companies that carry out sharing transactions over the peer to peer systems [6]. It refers to economic issues and goes beyond renting goods at lower costs or with lower transactional overhead, than buying or renting through a traditional provider [7]. In the last years sharing economy platforms have a significant proliferation and this rapid proliferation is related to social-economic conditions, reducement of ecological impacts, technology rising and consumers' changing attitudes towards product ownership and the need for the social relations [8]. These platforms promote information technology to empower users to share and make use of underutilized goods and services. When examining the services covered by the sharing economy differ from transportation to accommodation to finance [9]. In addition to these, it is also important for sharing economy companies work hard to establish trust since it is a prerequisite for conducting business in this environment [10]. According to the literature reviews the variables of the study consist of attitude, economic benefits, sustainability and psychological benefits and they are explained as follows in the context of the related literature.

Attitude
Attitude is explained as an important determinant of behavior [11]. Consumer attitudes about information systems may affect consumers' intentions [12], in this study attitude explains the feelings of people towards collaborative consumption.

Economic Benefits
Participating in sharing economy usefulness increasing behavior that the consumer replaces ownership of goods with lower-cost substitutes from within a collaborative consumption place [13], in related literature, cost reductions were found one of the most significant factors in collaborative consumption [14].

Sustainability

Collaborative consumption platforms are used to spark a more sustainable marketplace [15], and is stated that they optimizes the environmental, social and economic results of consumption to meet the needs of current and next generations [16]. Considering sustainability is usually expected to be mostly ecological benefits [17], but the other side, also, open source software development systems and participation in peer production such as Wikipedia can be seen as important sustainability issues in the context of the altruistic motives [18].

Psychological Benefits

Collaborative consumption provides some important features for people such as start and maintain social relationships [19]. It is also defined Airbnb emphasizes that people live like locals while traveling [20], and it encourage the unforeseeable satisfaction of interacting with the hosting people [21]. In a study it is stated that sharing goods or services with relatives, friends, neighbors or all of them plays an important role in attitudes and intention to use [22]. For all of these it can be deduced that social interactions can increase the value of sharing economy services [23].

3 Methodology

The current study is conducted with focus group interviews to explore consumers' motivations for using sharing economy services. The focus group works were conducted in İstanbul province that is most crowded city in Turkey between the dates 15–20 August in 2018 and convenience sampling method was used to reach the participants. The aim for using focus group interviews is to provide better understanding of consumer behavior [24]. As an important contribution, qualitative research enables to shed light to the meaning of phenomena and to reach a better understanding of real-life behavior [25]. A comprehensive view of consumers' motivations to use sharing economy services is obtained from the focus group interviews and 16 participants (eight females and eight males) are recruited whose ages ranged from 18 to 45 with different socio-demographic backgrounds in Turkey. During the focus group studies, the participants were not directed specifically by researches to bring out their motivations to use sharing economy services. Each focus group work lasted approximately 2 h.

4 Results

From the focus group works, an extensive view of consumers' motivations obtained from their collaborative consumption behaviors. According to the results of this works, the variables of the study were determined as economic benefits, psychological benefits, trust, sustainability and it was found that all of these effect the attitudes

of people to use collaborative consumption services. The participants reported that they care about sustainability issues such as ecological benefits for more sustainable World or participation in peer production such as Wikipedia to develop open source software information systems. They also stated that using collaborative consumption services are very interesting, enjoyable and they can meet people from different cultures and experience different traditions. They explained that in this way, they can make new friends all around the World and maintain their relationships. It is also deduced from the focus group works, cost advantage is very important for people to use collaborative consumption services. Especially, when sharing economy compared to the traditional economy, it has a significant superiority in terms of costs. Trust is also found as an important factor for people to use collaborative consumption, especially for accommodation services such as Airbnb.

5   Managerial Implications

This research aimed to examine the motivations to use collaborative consumption services. Synergies are then ones that need to be created [26]. According to the results, almost all the participants have commonly given importance to sustainability issues, economic benefits, enjoyable and social interactions and trust for using collaborative consumption services. In line with the findings, it is critical for service providers to focus on these factors while promoting or positioning their services to consumers. Some similarities can be determined for the motivations both sharing economy services and traditional services. Like traditional service providers, executives in the collaborative consumption services should transfer trust such as showing national licenses or comments of previous customers'. They also should emphasize that strong consumer relationships with service providers or the other users can develop to friendship because of they consider social benefits. Like traditional service providers, sharing economy services providers should give special interest to users with relationship marketing programs, in this way; they can maintain current customers and attract the new ones.

6   Limitations and Future Research

The proposed model of this study can be considered as an antecedent for future research. The findings of the focus group works can't be generalized all of the consumers but provide theoretical insight only for Turkish consumers and it can be extended to different countries. The framework of this study is also restricted with focus group works, for future research it can be extended to a quantitative study with new added variables.

References

1. Albinsson PA, Perera BY (2012) Alternative marketplaces in the 21st century: building community through sharing events. J Consum Behav 11:303–315. https://doi.org/10.1002/cb.1389

2. Wang C, Zhang P (2012) The evolution of social commerce: the people, management, technology, and information dimensions. Commun Assoc Inf Syst 31:105–127. https://doi.org/10.2753/MIS0742-1222290211

3. Prothero A, Dobscha S, Freund J, Kilbourne WE, Luchs MG, Ozanne LK, Thøgersen J (2011) Sustainable consumption: opportunities for consumer research and public policy. J Public Policy Mark 30(1):31–38. https://doi.org/10.1509/jppm.30

4. Phipps M, Ozanne L, Luchs M, Subrahmanyan S, Kapitan S, Catlin, J (2013) Understanding the inherent complexity of sustainable consumption: a social cognitive framework. J Bus Res 66:1227–1234. http://hdl.handle.net/11343/33100

5. Luchs MG, Naylor RW, Rose RL, Catlin JR, Gau R, Kapitan S (2011) Toward a sustainable marketplace: expanding options and benefits for consumers. J Res Consum 19:1–12. http://www.jrconsumers.com/academic_articles/issue_19/Sustainability_academic4.pdf

6. Oreg S, Nov O (2008) Exploring motivations for contributing to open source initiatives: the roles of contribution context and personal values. Comput Hum Behav 24:2055–2073. https://doi.org/10.1016/j.chb.2007.09.007

7. Kankanhalli A, Tan BCY, Wei KK (2005) Contributing knowledge to electronic knowledge repositories: an empirical investigation. MIS Q 29:113–143. https://www.jstor.org/stable/25148670

8. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50:179–211. https://doi.org/10.1016/0749-5978(91)90020-T

9. Cohen M, Sundararajan A (2017) Self-regulation and innovation in the peer-to-peer sharing economy. U Chi L Rev Dialogue 82:116–133. https://doi.org/10.1016/j.techfore.2017.07.006

10. Zervas G, Proserpio D, Byers J (2015) A first look at online reputation on Airbnb, where every stay is above average. Boston University Working Paper, pp 1–22

11. Demailly D, Novel AS (2014) The sharing economy: make it sustainable. Studies No: 03/14, IDDRI, Paris

12. Demary V (2015) Competition in the sharing economy. IW Policy Paper No: 19/2015, Institut der deutschen Wirtschaft Köln

13. Schor JB (2015) Collaborating and connecting: the emergence of the sharing economy. In: Reisch L, Thogersen J (eds) Handbook on research on sustainable consumption. Edward Elgar, Cheltenham

14. Schor JB (2015) The sharing economy: reports from stage one. https://www.bc.edu/content/dam/files/schools/cas_sites/sociology/pdf/TheSharingEconomy.pdf

15. Böckmann M (2013) The shared economy: it is time to start caring about sharing; Value creating factors in the shared economy. Bachelor's thesis, Faculty of Management and Governance, University of Twente, Enschede

16. Widlok T (2004) Sharing by default? Outline of an anthropology of virtue. Anthropol Theory 4:53–70. https://doi.org/10.1177/1463499604040847

17. Hamari J, Sjöklint M, Ukkonen A (2016) The sharing economy: why people participate in collaborative consumption. J Assoc Inf Sci Technol 67:2047–2059. https://doi.org/10.1002/asi.23552

18. Crompton JL (1979) Motivations for pleasure vacation. Ann Tour Res 6:408–424. https://doi.org/10.1016/0160-7383(79)90004-5

19. Bellotti V, Ambard A, Turner D, Gossmann C, Demkova K, Carroll JM (2015) A muddle of models of motivation for using peer-to-peer economy systems. In: Proceedings of the 33rd annual ACM conference on human factors in computing systems, Seoul, pp 1085–1094. https://doi.org/10.1145/2702123.2702272

20. Davis FD (1993) User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. Int J Man-Mach Stud 38:475–487. https://doi.org/10.1006/imms.1993.1022
21. Gremler DD (1994) Word-of-mouth about service providers: an illustration of theory development in marketing. In: Park CW, Smith D (eds) AMA winter educators' conference proceedings, vol 5. American Marketing Association, Chicago, pp 62–70
22. Yang S, Song Y (2017) Why are customers loyal in sharing-economy services? A relational benefits perspective. J Serv Mark 31:48–62. https://doi.org/10.1108/JSM-01-2016-0042
23. Van der Heijden H (2004) User acceptance of hedonic information systems. MIS Q 28:695–704. https://www.jstor.org/stable/25148660
24. Burgoyne C, Young B, Walker C (2005) Deciding to give to charity: a focus group study in the context of the household economy. J Community Appl Soc Psychol 15:383–405. https://doi.org/10.1002/casp.832
25. Cornish LS (2012) It's good for me: it has added fibre! An exploration of the role of different categories of functional foods in consumer diets. J Consum Behav 11:292–302. https://doi.org/10.1002/cb.1388
26. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector-the case of a Greek tourism destination. J Tour Res 18:121–131

Spatial Planning Principles as an Active Agent: Making Greece a Global Market for Sensitized Tourism

Chara Agaliotou, Loukia Martha, and Maria Vrasida

Abstract The urban, built, or natural environment is the host of all human activities including tourism. For many years though it has been treated as the background or the scenery for tourism and its role had not been fully explored. It is clear the tourism relies on the environment in order to establish the attraction factor but that is not and should not be the only correlation. The environment is not there merely for observation and admiration, it has an active role to formulate the experience, educate its user and be an active player in the tourism industry. Tourism is evolving from the observation era, to the age of experience and it is time to move one more step further into interaction and co-creation. This paper underlines the importance of negotiating tourism with spatial terms and managing the development of tourism with spatial tools such as participatory planning. The concept is taken a step further by examining the importance of tourists as individuals and as a group that can volunteer and with the spirit of solidarity take active part in the development and prosperity of a destination.

Keywords Alternative tourism · Volountourism · Participatory spatial planning · Participatory tourism · Sustainability

1 Introduction

The tourism sector is ranked within the first three most profitable activities worldwide and the second major employer. With its economic revenue and increase in most countries GDP as well as its continuous increase and job creation, tourism can support the economy of any country—destination and offer an economically viable

C. Agaliotou (✉) · L. Martha · M. Vrasida
University of West Attica, Aigaleo, Greece
e-mail: cagaliot@teiath.gr

solution for the future. Still the economic benefits cannot outweigh the negative impact that tourism can have on local communities or the natural and built environment depending on the type of tourism that each destination mainly attracts.

For international tourism, Greece has been a well known mass, summer tourism destination for many years incorporating the sea, sand, sun, (3S) model. This is considered the less sustainable type of tourism, with limited economic benefits for the local community and maximum environmental pressures on local assets and ecosystems. Greece has been trying for the past, at least 20 years, to attract a more sustainable, more alternative, less invasive type of tourism demand by promoting its cultural identity and variety of experiences [1]. The Olympic Games Organization, despite the negative effect that they may have had on the economy, acted as a strong alternative image to mass, sun tourism as well as the organized and focused efforts of GNTO. Sightseeing, archaeological trips, nature related tourism even hiking and skiing winter sports tourism, all have managed to enrich the tourism product. Still, the coastline and beaches remain and will always be the major attraction factor for tourist and residents alike. Since most human activities (residential, economic, spiritual and more) are located in the coastal zone but at the same time most sensitive ecosystems are also located along the coastline, the importance of protection and better organization of activities through land use and protection policies becomes a necessity in ensuring the longevity of tourism and the destination (Fig. 1).
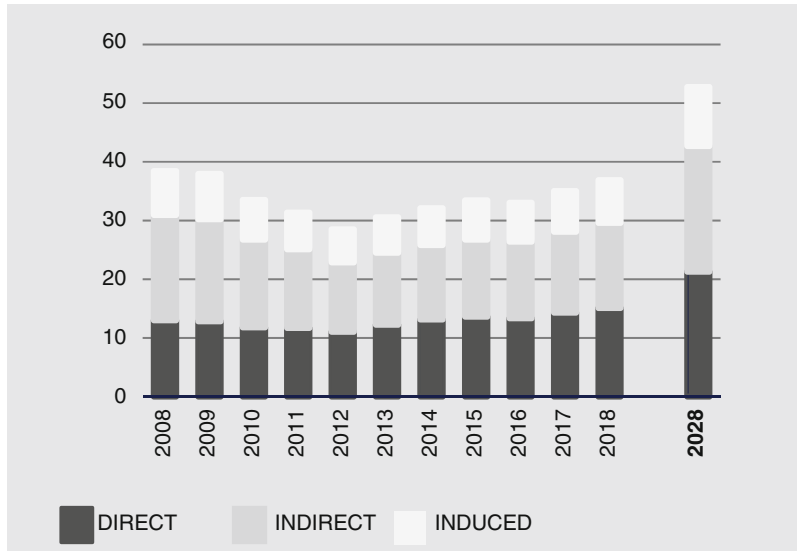
Fig. 1 Total contribution of Travel and Tourism to GPD. Source: WTTC (2018) [1]

2   Socio-political Aspects of Tourism

As mobility increased and technology brings people, places and cultures even closer, tensions based on the socio political differences tend to arise [2]. Kaul in 1980 [3], argues that tourism can act as a vital force or a catalyst in bridging the cultural gaps between people, while remaining in its core a peaceful activity. Later scholars compared the tourist to a cultural bee transporting different cultures from place of origin to different destinations. As tourism numbers began to rise the phenomenon has been characterized as the modern form of imperialism with the western culture prevailing, a cultural tsunami or a force of nature. Tourism has in comparison to other industries strong spatial ties, and is dependent on national, regional and local resources (e.g. destinations, attractions, etc.) of a country. It is an industry which is bound to territory and the most important question in tourism is "where?" Other industries generally depend on natural resources and/or services but tourism is also interested in traditions, culture, local communities, and all the intangible characteristics of a destination such as feeling, air, mystery etc. [4]. These features are incorporated into tourism businesses becoming part of the tourism product. This in turn creates a cross-sectoral, dynamic approach to tourism with a corresponding management scheme and has a desired economic spillage to all form of production and employment which is not directly related to tourism (e.g. food production, banking and many more). The main argument in this paper is that tourism, regardless of its economic and social implications, remains in its essence and activity that should and must be negotiated in spatial terms [5]. Spatial policies due to their intersectoral approach have the flexibility and the necessary legal status to create a framework within which tourism will prosper economically but will also ensure the viability of the host destination and community.

Tourists are increasingly becoming more informed, choosing their own travel itinerary and are moving away from mass, all inclusive, non sustainable travel behaviors. With ecology, energy and water saving, leading the sensitization carriage, social and cultural preservation issues are also considered very important and lately economic support to counties in need and volunteerism are also issues that concern tourist worldwide. As tourists become more informed and more sophisticated in their destination choice, the trend is to move from a passive experience of sightseeing and observation, to participation and the idea of creativity and participatory experience starts emerging. Moving a step further from participation the new trend is co-creation and actually shaping the experience according to the tourist and destination needs and aspirations. Space and culture acquire an added value and mental meaning to tourists and the idea of volunteering their recreational time in order to be a part of "something good" in an area that carries special historic meaning becomes an important factor in their destination choice. The catch phrase "we are all Greeks", which was widely used by Hollywood stars visiting Greece, has acted as a strong motivation for choosing Greece as a destination for many visitors, with 2018 reaching a phenomenal increase in tourist's arrivals. This type of solidarity tourism due to its differentiation in motives, remains outside the mainstream tourism flows,

thus, needs to be acknowledged as an important generator of tourism flows with strong spatial implications [6].

Accepting the complexity of the tourism phainomenon, the diversity of the stakeholders but also the importance to the destination [7], this paper aims to explore the spatial dimensions of tourism and the potential of planning tourism based on spatial planning principles like participatory planning. The timing for such an adaptation of a core regional and town planning theory into tourism derives from the new trend of solidarity tourism or voluntourism which are new form of alternative tourism that appeared in Greece during the economic crisis. A participatory approach to tourism can pose a planning challenge due to the many different involved groups which may in many situations have conflicting interests as well (private, public sector, tourists, locals etc.).

3   Issues Arising from Tourism Growth

Although tourism has been acknowledged for its tremendous economic and social benefits, being an economic savior providing jobs and increase in GDP, it has been accused as a source of a wide range of serious problems, especially in developing economies. For example, the fact that it creates huge economic leakage as the most investment of tourism is coming from western multinational companies (MNEs) in which the income from tourism sector would flow back [8].

Macleod [9] supports that tourism change the composition of the working population from traditional industries of agriculture to service-based tourism and hospitality industries disturbing the community and its cultural identity. Four main influential phenomena led to the need of a different approach in tourism, these are: (1) economic issues like the fact that economic growth did not solve the poverty problem, (2) environmental issues referring to mass tourism influence on the environment, (3) political issues reflecting the political economy of the international tourism industry which turned to be a natural continuation of historical inequalities between the First World and the Third World, and (4) social issues including the new traveler market of post-modern culture. Thus, the "new" form of alternative tourism aroused and many people accepted it instinctively even though they could not precisely defined it. It is important to underline at this point that spatial planning policies, due to their long-term horizon, their multidisciplinary character and their sustainability concerns, are the only integrated planning framework that can address all of the issues mentioned above [10]. Sensitivity and participation have been part of the special planning process and the adaptation toy the tourism sector may pose an interesting paradigm for ensuring sustainability by introducing participatory tourism or sensitive tourism as part of the tourism development planning procedure. Including the tourist as well as the local communities and all the stakeholders, thus following a more spatial approach to tourism planning can actually act as an integrated tool for creating a long term tradition in tourism.

4   Alternative Forms of Tourism

Sustainable tourism nowadays lies on the premise that it can only be achievable through development of alternative forms of tourism [11–17]. This will allow future tourists to meet their purest needs and wants and to manage to meet their preferences. Alternative forms of tourism aim to preserve environmental, economic and socio-cultural impacts that tourists have on a certain destination. By doing this, they allow sustainable growth of the destination in particular, and of the country in general. This will allow more sensitivity for local, social and economic demand and revenues from the tourism can be spent on future development of that particular destination. Negotiating the destination with spatial principles, even at the scale of urban design, can have a significant effect of the behavioral patterns of tourists. Sensitivity, a more environmentally friendly attitude and finally participatory behavior can act as catalysts in eliminating the negative impacts of overcrowding in a destination.

This different approach would have fewer and less severe negative effects on destination areas and their populations, and would still enjoy the positive economic effects, so as to appear as the optimal solution. Spatial planning principles traditionally have a more sensitive approach to the built and natural environment, taking sociocultural issues under consideration [18]. It is important to define the needs of a destination not only in economic terms, but also in terms of development, preservation, cultural identity, community integration and political stability. Tourism is a private sector activity mainly and in many situations it is only governed of motivated by profit. It is the role of a strong central government and local authorities, to implement the tools offered by spatial planning policies in order to create a protection barrier between long term sustainability goals (local community) and private sector profiting (tourism operators).

Alternative tourism is quality enhanced, more hospitable which initiates the discrete integration of visitors within the host community, creates economic benefits for the local population with minimum external spillage, creates a sense of solidarity between locals and tourist, respects the natural and built environment and the socio cultural characteristics of the host community [7]. This can only be achieved through active participation of tourist in the local life. Planning policies traditionally included participation and participatory planning as a tool of active involvement of the community and the same principle can be transposed to tourism.

5   Volountourism or Solidarity Tourism

Volunteer tourism, or volountourism [19], is a considerably new emerging trend of travel linked to "doing good" [20]. The trend of volountourism has come about partly through initiatives by large-scale, well established organizations such as UNICEF, Save the Children, CARE International and World Vision. They raise money for programs they have developed for orphans and vulnerable children. The main criticism of such movements is that tourism is at large a free time, recreational

activity and cannot have a lasting effect on host communities. Local communities do not wish to be viewed as charitable cases, but as hosts and especially in western counties like Greece there is a strong conflict between this type of tourism and local dignity and civic pride. Therefore, volountourism cannot be applied in cases of temporary economic crisis and in Greece [21]. The term solidarity tourism will be used as an attempt to enrich the "doing good" motive of such tourists with a political ideology and sensitivity. Sensitized solidarity tourism has the notion and the motive of standing by a nation or a region in need as a co-fighter not as a charitable case. Destination planning and management offer the framework within which help can be offered in the form of collaborative support and help in the decision making process and the implementation of any strategy. It is a longer term relation between the destination and the visitor-solidarity tourist [13].

6 From Participatory Spatial Planning to Participatory Tourism

The constantly changing cultural, economic, social, environmental etc. circumstances, dictate the active participation of all involved partied in every level of planning. The main goal of the participatory process is to gain access to a wider information network, exchange ideas, find solutions and in many cases collectively implement them toward achieving overall sustainability [22]. Participation can be defined as the involvement of the general public and special interest groups in the decision making process (groups of people, individuals, different bodies public of private, NGOs etc.). The aim is to enrich, influence and localize the decision making process and ensure approval [23]. Participation is a two way process between the experts and the end users and is very widely implemented in all levels and scales of spatial planning. In this case the planning expert has to act as a mediator-co-creator alongside the recipient an interested person who expresses his desires and experiences, defining a new framework of creation with a common goal of "social prosperity", quality of life, protection of the cultural heritage and the environment and, above all, interest [24]. Participation is the key to setting and achieving a common goal for every stakeholder, be it the locals, tourists of businesses.

The empirical knowledge of the design recipients—that is society—acquires special value, interacts and works in addition to the scientific knowledge of spatial planning experts [25]. Participatory Design acts as a constantly changing "communication platform" [26] in which scientific knowledge, experience, history, tradition, culture are equally shared [27]. The approach of participatory planning appears more specific in the 1960s. Design theories are under the influence of major political and social changes, which has had a catalytic effect on both the design approach itself and the role of the designer in the design process [28]. The design moves towards a more human-centered approach based on cooperation, interaction, interpersonal communication and negotiation between the parties involved, while at the same time it is a field of interdisciplinary cooperation [29]. In accordance to spatial

participatory planning as previously mentioned, the same principles can apply in order to achieve participatory tourism. This concept presupposes the active participation of the tourist in various actions at his destination, according to his particular interests. The concept of participation in tourism can be found in all kinds of alternative types of tourism and with all the known benefits in all aspects: participation, co-creation, exchange of experience and knowledge, cooperation, creation of relationships, acceptance of the local community and sustainability.

7 Conclusion

Tourism has been defined mainly as an economic activity with many negative effects in the natural and built environment and with many objections from local communities. As the economic crisis turned Greece as a solidarity destination and tourist became more sensitive, new forms of tourism activity started to emerge. Negotiating tourism with spatial planning principles can provide the necessary toolkit for ensuring the long-term survival of any destination and integrate tourism within the local communities. As argued in this paper, participatory planning principles can act as the mediator between private tourism companies, local communities and the tourists, in order to maximize the local economic benefits, eliminate conflicts with the local population and ensure sustainability for area not just as a destination but also as a viable community. Participatory planning principles which will in term lead to sensitive tourists which will actively participate in the planning and management of the tourism product can provide the necessary consensus between locals, stakeholders, private businesses and finally tourists. There must be an understanding that all the involved parties must co-decide and must cooperate in tourism planning in order to achieve long term sustainability goals.

References

1. World Travel and Tourism Council (WTTC) (2018) Travel & tourism economic impact 2018 Greece. www.wttc.org
2. Nyaupane G, Teye V, Paris C (2016) Tourism and attitude change: the case study of abroad students tourism travel and research association. Adv Tour Res Glob 64. http://scholarworks.umass.edu/ttra
3. Anson C (1999) Planning for peace: the role of tourism in the aftermath of violence. J Travel Res 38:57–61
4. Zaidan Em Kovacs J (2017) Residents attitudes towards tourists and tourism growth: a case study from the Middle East Dubai in UAE. Eur J Sustain Dev 6:291–307
5. Council of Europe Publishing (2002) Links between the sustainable development of tourism and regional/spatial planning. Council of Europe, Strasbourg
6. Hassani A, Moghavvemi S, Hamzah A (2016) The impact of emotional solidarity on residents' attitude and tourism development. PLoS One 11(6):e0157624. https://doi.org/10.1371/journal.pone.0157624

 7. Bunghez CL (2016) The importance of tourism to a destination's economy. J East Eur Res Bus Econ. https://doi.org/10.5171/2016.143495

 8. Smith BP, Misumi J, Tayeb M (1989) On the generality of leadership style measures across cultures. J Occup Psychol 62:97–109

 9. Macleod DVL (2004) Tourism globalisation and cultural change: an island community perspective Cleveland. Channel View, Bristol

10. Bailoa S, Cravo P (2010) Spatial planning and tourism development in Portugal. Regionalni Disparity 7

11. Martha L, Agaliotou C, Panos P (2015) Cultural festivals on sites of cultural heritage as a means of development of alternative forms of tourism. In: Strategic innovative marketing: 4th IC-SIM Mykonos Greece. Springer, Cham, pp 455–462

12. Gkarane S, Vassiliadis C (2017) Blueprinting an event and tourist service marketing strategy: the case of the SMF Greek tourism small-scale sport event. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer proceedings in business and economics. Springer, Cham, pp 19–24. https://doi.org/10.1007/978-3-319-33865-1_3

13. Gkarane S, Vassiliadis C (2016) Blueprinting an event & customer oriented marketing mix: the case of the Sfendami Mountain Festival small scale event. Int J Strateg Innov Market 3:13–28. https://doi.org/10.15556/IJSIM.03.01.002

14. Bitsani E, Kavoura A (2012) Connecting oenological and gastronomical tourisms at the Wine Roads, Veneto, Italy, for the promotion and development of agrotourism. Tourism 18:301–312. https://doi.org/10.1177/1356766712460738

15. Kavoura A, Bitsani E (2014) E-branding of rural tourism in Carinthia, Austria. Tourism 61:289–312

16. Bitsani E, Kavoura A (2012) Accessibility versus advertising for mountain tourism: the case of Nafpaktia. Tourismos 7:217–235

17. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66

18. Deffner A, Vrassida M (2004) The relation between tourism and entertainment in coastal urban environments: the case of Volos, International conference 'borderless frontiers', Cyprus

19. Clemmons D (2008) VolunTourism and the M3 travelers. Voluntourist 2. Available http://www.voluntourism.org/news-feature224.htm

20. Kontogeorgopoulos N (2017) Finding oneself while discovering others: an existential perspective on volunteer tourism in Thailand. Ann Tour Res 65:1–12

21. Holmes K, Smith KM, Lockstone-Binney L, Baum TG (2010) Developing the dimensions of tourism volunteering. Leis Sci 32:255–269

22. http://www.symmetoxi.eu/

23. Zwirner B (2008) Participatory mechanisms in the development implementation and review of national sustainable development strategies, ESDN quarterly report. www.sd-network.eu

24. Vassenhoven L (2010) Spatial governance theory European experience and the case of Greece. Kritiki, Athens

25. Innes J (1995) Planning theory's emerging paradigm: communicative action and interactive practice. J Plan Educ Res 14:183–189

26. Kamhis M (2007) The integration of the European space 1986–2006. Kritiki, Athens

27. Agaliotou C, Martha L, Panos P (2017) Cultural festivals in memory venues: architecture as a vehicle of tourism and civilization junction. In: 6th international conference on tourism and hospitality management, Athens, pp 658–666

28. Stratigea A, Papadopoulou Ch-A (2013) Multicriteria evaluation in spatial planning: a participatory approach. Territorio Italia Land Administration, Cadastre, Real Estate, Agenzia del Territorio, vol 2, pp 85–97

29. Pozoukidou G (2000) Land use models – review and prospects of their role in spatial planning. Aichoros 13:118–140

Understanding Consumers' Attitudes and Behavioural Intentions Towards Corporate Social Responsibility in the Airline Industry: The Role of Perceived Value and Expectations

Kleopatra Konstantoulaki, Ahmet Yigitbas, Apostolos Giovanis, and Ioannis Rizomyliotis

Abstract The purpose of this paper is to investigate consumers' attitudes and behavioural intentions towards corporate social responsibility (CSR) practices in the airline industry by exploring the role of consumers' perceived values and expectations towards CSR initiatives in the airline industry. Data collected from airline industry customers, were used to empirically test the role of consumer values and expectations in relation to the attitudes and behavioural intentions towards CSR initiatives. Results indicate that consumer perceptions of value dimensions and CSR expectations have a significant positive effect on customer attitudes when purchasing services in the airline industry. Results also indicate that customer attitudes have a significant positive relationship with consumers' purchase intentions in the airline industry. The paper offers valuable insights to airline company managers with on how CSR initiatives can be used towards increasing companies' value proposition.

Keywords CSR expectations · Airline industry · Perceived value

1 Introduction

The context of Corporate Social Responsibility (CSR) has been argued over 50 years, and it has never been this vital for companies even before this time [1]. Also, consumer support for CSR is well established and companies are now

K. Konstantoulaki (✉) · A. Yigitbas
University of Westminster, London, UK
e-mail: K.Konstantoulaki@westminster.ac.uk

A. Giovanis
University of West Attica, Aigaleo, Athens, Greece

I. Rizomyliotis
University of Brighton, Brighton, UK

expected to engage in some form of CSR [2]. Over the last 25 years, consumers have become much more aware of the environmental issues caused by human activity [3]. There is a growing interest towards companies that in relation to their social responsibility whilst doing business [2]. Tourism sector has received a significant attention at this point that while providing economic and social benefits to the society, it also has negative impacts socially, economically and environmentally [3]. As the industry is expected to grow significantly, pressure on the companies within the sector for socially responsible tactics is also increasing [4]. Within the tourism sector, airline industry has attracted consumers' attention in relation to socially responsible tactics within its businesses [3]. For this reason, there is a growing interest among the society towards the Corporate Social Responsibility (CSR) initiatives within the airline industry and companies are now expected to engage in some form of CSR [5]. CSR literature, suggests that expectations and values are important factors for understanding consumers' behaviours towards socially responsible companies and their CSR initiatives. Consumers' evaluation of CSR initiatives can be related to consumers' expectations; consumer's expectations on CSR initiatives are one of the variables that affect society's opinion about companies [6, 7]. In addition, literature suggests that consumers' behaviours may be dependent on the value they receive from a specific service/product [8–10]. However, none of the studies has explicitly measured consumers' perceived values and expectations from CSR within the airline industry [10]. For this reason, the current study focuses on the consumers' attitudes and behavioural intentions in order to underpin the reasoning behind the consumer behaviour towards CSR initiatives in the airline industry. The roles of values and expectations have examined in order to explore both attitudes and behavioural intentions of the airline industry consumers.

2 Theoretical Background

Although CSR importance is increasing, there is still no clear identification for CSR in the literature [11, 12]. The reason can be the unclear boundaries and debatable legitimacy, or different definitions and unidentified corporate benefit of it [13]. Among the dispute about the CSR and its borders, Carroll's [14] four-part model of CSR (The Pyramid of CSR) is a widely accepted approach [1, 15–26]. Although many researchers have used Carroll's [14] four categories of CSR in the past, it still carries some weaknesses that identified by Schwartz and Carroll [27]. However, because of its incomplete structure and the increasing need to provide better and much clearer definition for the four-part approach, Schwartz and Carroll [27] provided a revised version of the pyramid of CSR by Carroll [14]: The Three-Domain Model of CSR. The three-domain model consists of three domains (Economic, Legal, and Ethical) which, in total, include seven sub-categories: (i) purely economic, (ii) purely legal, (iii) purely ethical, (iv) economic/ethical, (v) economic/legal, (vi) legal/ethical, (vii) economic/legal/ethical [27]. The current study employs the revised Three-Domain Model [27], to

empirically investigate CSR and its relationship with consumer attitude and purchase intentions in airline industry.

2.1 CSR Initiatives in Airline Industry

There is a growing interest towards CSR initiatives in the airline industry in order to decrease the negative effects of the industry and contribute to sustainable development [3, 25]. However, there isn't enough number of studies that explore CSR practice in the airline industry, and additionally the industry's adaptation of CSR has been relatively slower compared to the one in other industries [5] and it is still considered very limited [4]. Most of the studies towards CSR initiatives in airline industry focus on specific case studies [4], environmental management or limited aspects of CSR [25] and tend to have a limited depth in order to provide an overview towards the CSR initiatives in airline industry.

2.2 Consumers' Perceived Value Dimensions and CSR Initiatives

In the marketing literature, perceived value has been identified as one of the most important measures for gaining competitive edge [28] and it has been argued to be the most vital indicator of purchase intentions. However, in the leisure and tourism services, including the airline industry, attitudes, purchase intentions and consumer loyalty are usually forecasted by measuring consumer satisfaction and/or service quality [29]. Woodruff [30] concluded that, perceived value that underlines customer evaluation has to be taken in to consideration in order to forecast consumer attitudes and purchase intentions. Some studies suggest that the value consumers receive from CSR is variable [10] and consumer behaviour may be dependent on the value they receive [6–10]. Prior studies in the literature also agree that consumer perceived value is an important pointer of the purchase intentions and attitudes [29–31]. Since consumer perceived value has been found to be an important pointer of purchase intentions and attitudes, consumers' perceived values need to be examined in order to understand consumer attitudes and behaviour intentions towards CSR initiatives in airline industry. Seth et al. [32] suggest five different dimensions: (a) social, (b) emotional, (c) functional, (d) epistemic and (e) conditional value, regarding purchase decision at a product level or at a brand level. Their work gives the most useful foundation in the literature for extending existing value constructs since it was also validated in many fields including economics, social and clinical psychology [33]. Based on Seth et al. [32] framework for values, Green and Peloza [10] argued that CSR could provide three types of values for the customers; emotional value, social value and functional value: (a) emotional value is received when a consumer

buys a product/service that incorporate social or environmental attributes; (b) social value occurs from purchases related to companies that are applying CSR initiatives. This is due to the fact that people are making judgments about each other on the basis of their purchases and lastly, and (c) functional value, which is the benefit that consumers receive from the actual product or service that has been purchased.

2.3   Consumers' Expectations of CSR Initiatives

Expectations are playing an essential role in many types of consumer decisions [6] and they are linked with CSR [7]. In the last decade, CSR issues have become a major driver for society's opinion [34] and as Creyer [6], consumers form expectations about the ethicality of corporate behaviour. Expectations towards CSR initiatives are increasing and consumers are intolerant towards companies, which are failing to do their obligations [34]. The evaluation of CSR initiatives by consumers can be defined via the consumer expectations [34], since the consumer expectations are one of the variables that affect society's attitudes about companies [6, 7]. Consumers' expectations of CSR represent the minimum level of CSR initiatives that companies are expected to apply. On the other hand, recent studies suggest that consumer beliefs and expectations of CSR actually form consumer responses towards corporate behaviour [6, 7]. Consumer beliefs and expectations of CSR actually form the consumer responses towards corporate behaviour [6, 7]. In addition, consumers tend to project their expectations and concerns into their behaviour towards companies [35, 36]. Specifically, consumer expectations towards CSR initiatives significantly impact the consumer behaviour towards the companies [6, 37].

2.4   Consumer Attitudes, Behavioural Intentions and CSR Initiatives

Many studies support a positive relationship between CSR and consumer attitudes along with positive affective, cognitive and behavioural responses [38–40]. Also, it is suggested that some consumers pursue purchases based on company's engagement with CSR initiatives. Consumers have a supportive attitude towards companies which are involved in CSR initiatives and/or companies that are well known to have higher level of support and connection with the community. On the other hand, some studies suggest that CSR applications are not accepted easily by consumers and that the consequences (reward or punishment towards the company) when involving in CSR initiatives are still unknown [6, 41, 42]. Finally, some studies suggest that consumers punish the firms that are not considered sincere [42]. This inconsistency might be due to the fact that there is a significant range of consumer reactions and

different ways to develop attitudes when it comes to CSR initiatives [10]. Thus, it also makes sense that different attitudes evoke variance in behavioural intentions, which could lead to important implications for the companies engaging in CSR initiatives. As Green and Peloza [10] suggest, consumers assess how companies' CSR behaviour matches their own values, morals, standards, expectations and priorities and how CSR initiatives can add extra value to their purchase. In sum, following what is written in existing literature on the CSR practices, the consumers' expectations and perceived value of CSR related services, and in relation to their behaviour, this study aims to offer new knowledge and data in a quite neglected area, the airline industry. For this purpose, the following hypotheses are proposed:

H1 Consumers' perception of value dimensions positively affect consumers' attitudes towards CSR initiatives in the airline industry.

H2 Consumer expectations from CSR initiatives in the airline industry positively affect consumers' attitudes towards CSR initiatives in the airline industry.

H3 Consumers' attitudes towards CSR initiatives positively affect consumers' purchase intentions towards services involving CSR initiatives in the airline industry.

3   Methodology and Results

A conclusive research design was selected in order to examine the relationships described in the conceptual framework. Convenience sampling was employed and an online questionnaire was developed and distributed via the social networks; 201 respondents agreed to participate. The sample consisted of 41.3% male and 58.7% female, similar to the gender structure of the airline industry customers [26]. The questionnaire was pretested in order to increase the validity and reliability and a pilot survey was conducted. The scale proposed by Kolodinsky et al. [43] was adopted to measure attitudes towards CSR in airline industry while the PERVAL scale [44] was used to measure the three consumer perceived value elements (functional, social and emotional), which can be gained via CSR initiatives [10]. The scale for measuring expectations towards CSR initiatives in airline industry was taken from [6] and purchase intention was measured with the use of the scale taken from David et al. [45] study. All variables where measured on 7-point scales ranging from "Strongly Disagree" (1) to "Strongly Agree" (7). All scales were proved to be reliable and internally consistent (Cronbach's alpha index) and the summated multi-item scales were constructed based on the mean scores [46]. Moreover, all measures were found to be unidimensional and valid in terms of both discriminant and convergent validity. To check the validity of our research hypotheses and the significance of all causal relationships of the model, we followed SEM analysis. According to the results (Table 1) there is a good fit of the hypothesized model to our data, and all hypotheses are accepted. Consistent with the previous

Table 1 Fit indices and path coefficients

Path CFI = 0.90, RMSEA = 0.07	Std. beta	t-value	Sig.
PV → CA	0.13	4.33	<0.05
CE → CA	0.09	2.25	<0.05
CA → PI	0.52	3.14	<0.05

Note: Customer Perception of Value (PV); Customer Attitude (CA); Purchase Intentions (PI)

findings, the significance tests for the path coefficients indicate a significant positive influence of all tested variables on Consumers' attitudes towards CSR initiatives. Moreover, the latter were found to positively affect customers' purchase intentions.

4   Discussion

Even though there is a growing interest, there still aren't enough studies on CSR practices in the airline industry [4, 5]. Also, the studies towards CSR initiatives in airline industry have a limited depth and are insufficient to provide an overview towards the CSR initiatives in airline industry [3]. This study contributes to the marketing literature by providing an insight to the consumers' attitudes and purchase intentions towards CSR practices in the airline industry via examining consumer perceived values and expectations. To begin with, this study revealed that the CSR practices in the airline industry increases the perceived quality of the airline companies, and it supports the idea that CSR initiatives is a useful tool for marketing tactics that aim to increase the perceived value of the airline companies. Moreover, data analysis revealed that there is a positive between consumers' attitudes towards CSR initiatives in the airline industry and consumers' purchase intentions in relation to services involving CSR initiatives in the airline industry. The results were consistent with the existing literature [47–49], and stressed out the role of attitudes as a significant predictor of purchase intentions within the airline industry. Expectations were also found to be a significant predictor of attitudes towards the companies with CSR initiatives in the airline industry. Airline companies can benefit from market research in order to thoroughly investigate consumers' profile and, thus, can determine the level of investment that is required in order to meet consumers' expectations. This can lead to the creation of favorable attitudes towards the company and, in turn, to increased purchase intentions. Advertising and promotion campaigns can also increase the perceived value of the consumers by focusing on the CSR initiatives of the company within the airline industry. Future research could be directed towards the CSR expectations research in the airline industry. Specifically, the development of a new scale to measure consumer expectations for CSR initiatives could increase the efficiency of measuring the expectations within airline industry. Last but not least, networking via social media in the travel industry may provide ways for airline companies to have a better communication with passengers and their customers [50].

References

1. Smith WJ, Wokutch RE, Harrington KV, Dennis BS (2001) An examination of the influence of diversity and stakeholder role on corporate social orientation. Bus Soc 40:266–294. https://doi.org/10.1177/000765030104000303

2. Rundle-Thiele S, Ball K, Gillespie M (2008) Raising the bar: from corporate social responsibility to corporate social performance. J Consum Mark 25:245–253. https://doi.org/10.1108/07363760810882434

3. Cowper-Smith A, de Grosbois D (2011) The adoption of corporate social responsibility practices in the airline industry. J Sustain Tour 19:59–77. https://doi.org/10.1080/09669582.2010.498918

4. Tsai WH, Hsu JL (2008) Corporate social responsibility programs choice and costs assessment in the airline industry – a hybrid model. J Air Transp Manag 14:188–196. https://doi.org/10.1016/j.jairtraman.2008.04.003

5. Lynes J, Andrachuk M (2008) Motivations for corporate social and environmental responsibility: a case study of Scandinavian Airlines. J Int Manag 14:377–390. https://doi.org/10.1016/j.intman.2007.09.004

6. Creyer EH (1997) The influence of firm behavior on purchase intention: do consumers really care about business ethics? J Consum Mark 14:421–432. https://doi.org/10.1108/07363769710185999

7. Podnar K, Golob U (2007) CSR expectations: the focus of corporate marketing. Corp Commun Int J 12:326–340. https://doi.org/10.1108/13563280710832498

8. Menon S, Kahn B (2003) Corporate sponsorships of philanthropic activities: when do they impact perception of sponsor brand? J Consum Psychol 13:316–327. https://doi.org/10.1207/S15327663JCP1303_12

9. Peloza J (2009) The challenge of measuring financial impacts from investments in corporate social performance. J Manag 35:1518–1541. https://doi.org/10.1177/0149206309335188

10. Green T, Peloza J (2011) How does corporate social responsibility create value for consumers? J Consum Mark 28:48–56. https://doi.org/10.1108/07363761111101949

11. Carrigan M, Attalla A (2001) The myth of the ethical consumer: do ethics matter in purchase behavior. J Consum Mark 18:560–577. https://doi.org/10.1108/07363760110410263

12. Melo T, Galan J (2011) Effects of corporate social responsibility on brand value. J Brand Manag 18:423–437. https://doi.org/10.1057/bm.2010.54

13. Lantos GP (2001) The boundaries of strategic corporate social responsibility. J Consum Mark 18:595–632. https://doi.org/10.1108/07363760110410281

14. Carroll AB (1979) A three-dimensional conceptual model of corporate performance. Acad Manag Rev 4:497–505. https://doi.org/10.5465/amr.1979.4498296

15. Wartick S, Cochran P (1985) The evolution of the corporate social performance model. Acad Manag Rev 10:758–769. https://doi.org/10.5465/amr.1985.4279099

16. Wood DJ (1991) Corporate social performance revisited. Acad Manag Rev 16:691–718. https://doi.org/10.5465/amr.1991.4279616

17. Swanson DL (1995) Addressing a theoretical problem by reorienting the corporate social performance model. Acad Manag Rev 20:43–64. https://doi.org/10.5465/amr.1995.9503271990

18. Swanson DL (1999) Toward an integrative theory of business and society: a research strategy for corporate social performance. Acad Manag Rev 24:506–521. https://doi.org/10.5465/amr.1999.2202134

19. Aupperle K, Carroll AB, Hatfield J (1985) An empirical examination of the relationship between corporate social responsibility and profitability. Acad Manag J 28:446–463. https://doi.org/10.5465/256210

20. Spencer B, Butler J (1987) Measuring the relative importances of social responsibility components: a decision modeling approach. J Bus Ethics 6:573–577. https://doi.org/10.1007/BF00383750

21. O'Neill H, Saunders C, McCarthy A (1989) Board members, corporate social responsiveness and profitability: are tradeoffs necessary? J Bus Ethics 8:353–357. https://doi.org/10.1007/BF00381726

22. Strong K, Mayer G (1992) An integrative descriptive model for ethical decision making. J Bus Ethics 1:89–94. https://doi.org/10.1007/BF00872315

23. Ibrahim N, Angelidis J (1995) The corporate social responsiveness orientation of board members: are there differences between inside and outside directors? J Bus Ethics 14:405–410. https://doi.org/10.1007/BF00872102

24. Burton B, Hegarty W (1999) Some determinants of student corporate social responsibility orientation. Bus Soc 38:188–205. https://doi.org/10.1177/000765039903800204

25. Phillips ED (2006) Corporate social responsibility in aviation. J Air Transp 11:65–87

26. Golob U, Lah M, Jančič Z (2008) Value orientations and consumer expectations of corporate social responsibility. J Mark Commun 14:83–96. https://doi.org/10.1080/13527260701856525

27. Schwartz M, Carroll AB (2003) Corporate social responsibility: a three-domain approach. Bus Ethics Q 13:503–530

28. Parasuraman AA (1997) Reflections on gaining competitive advantage through customer value. J Acad Mark Sci 25:154–161. https://doi.org/10.1007/BF02894351

29. Petrick JF (2002) An examination of the relationship between golf travelers' satisfaction, perceived value and loyalty and their intentions to revisit. Dissertation, Clemson University, Clemson

30. Woodruff RB (1997) Customer value: the next source for competitive advantage. J Acad Mark Sci 25:139–153. https://doi.org/10.1007/BF02894350

31. Jayant RK, Ghosh AK (1996) Service value determination: an integrative perspective. J Hosp Leis Market 3:5–25. https://doi.org/10.1300/J150v03n04_02

32. Sheth JN, Newman BI, Gross BL (1991) Why we buy what we buy: a theory of consumption values. J Bus Res 22:159–170. https://doi.org/10.1016/0148-2963(91)90050-8

33. Sweeney JC, Soutar GN (2001) Consumer perceived value: the development of a multiple item scale. J Retail 77:203–220. https://doi.org/10.1016/S0022-4359(01)00041-0

34. Dawkins J, Lewis S (2003) CSR in stakeholders expectations: and their implication for company strategy. J Bus Ethics 44:185–193. https://doi.org/10.1023/A:1023399732720

35. Klein JG, Smith NC, John A (2002) Exploring motivations for participation in a consumer boycott. In: Broniarczyk SM, Nakamoto K (eds) Advances in consumer research, vol 29. Association for Consumer Research, Valdosta, pp 363–369

36. Maignan I, Ferrell OC, Ferrell L (2005) A stakeholder model for implementing social responsibility in marketing. Eur J Mark 39:956–977. https://doi.org/10.1108/03090560510610662

37. Nebenzahl ID, Jaffe ED, Kavak B (2001) Consumers' punishment and rewarding process via purchasing behavior. Teach Bus Ethics 5:283–305. https://doi.org/10.1023/A:1011445922260

38. Murray KB, Vogel CM (1997) Using a hierarchy-of-effects approach to gauge the effectiveness of corporate social responsibility to generate goodwill toward the firm: financial versus nonfinancial impacts. J Bus Res 38:141–159

39. Folkes VS, Kamins MA (1999) Effects of information about firms' ethical and unethical actions on consumers' attitudes. J Consum Psychol 8:243–259. https://doi.org/10.1207/s15327663jcp0803_03

40. Ellen PS, Mohr LA, Webb DJ (2000) Charitable programs and the retailer: do they mix? J Retail 76:393–406. https://doi.org/10.1016/S0022-4359(00)00032-4

41. Brown T, Dacin P (1997) The company and the product: corporate associations and consumer product responses. J Mark 61:68–84. https://doi.org/10.2307/1252190

42. Becker-Olsen K, Cudmore B, Hill R (2006) The impact of perceived corporate social responsibility on consumer behavior. J Bus Res 59:46–53. https://doi.org/10.1016/j.jbusres.2005.01.001

43. Kolodinsky RW, Madden TM, Zisk DS, Henkel ET (2010) Attitudes about corporate social responsibility: business student predictors. J Bus Ethics 91:167–181. https://doi.org/10.1007/s10551-009-0075-3

44. Lee D, Trail GT, Kwon HH, Anderson DF (2011) Consumer values versus perceived product attributes: relationships among items from the MVS, PRS, and PERVAL scales. Sport Manag Rev 14:89–101. https://doi.org/10.1016/j.smr.2010.05.001
45. David P, Kline S, Dai Y (2005) Corporate social responsibility practices, corporate identity, and purchase intention: a dual-process model. J Public Relat Res 17:291–313. https://doi.org/10.1207/s1532754xjprr1703_4
46. Spector PE (1992) Summated rating scale construction: an introduction. Sage, Newbury Park
47. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50:179–211. https://doi.org/10.1016/0749-5978(91)90020-T
48. Alwitt L, Pitts R (1996) Predicting purchase intentions for an environmentally sensitive product. J Consum Psychol 5:49–64. https://doi.org/10.1207/s15327663jcp0501_03
49. Coleman L, Bahnan N, Kelkar M, Curry N (2011) Walking the walk: how the theory of reasoned action explains adult and student intentions to go green. J Appl Bus Res 27:107–116. https://doi.org/10.19030/jabr.v27i3.4217
50. Kavoura A, Kefallonitis E (2018) The effect of social media networking in the travel industry: the connected passenger. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 4052–4063

Effects of the Blockchain Technology on Human Resources and Marketing: An Exploratory Study

Dorin C. Coita, Maria Madela Abrudan, and Mirabela Constanta Matei

Abstract The paper aims to highlight some effects of the Blockchain Technology on Human Resources and Marketing of the organizations in the twenty first century. Blockchain is considered to be a disruptive technology that will dramatically transform the way companies are organized, managed, and how they perform their businesses. Most authors expect that blockchain will have profound effects on the nature of companies: how are they funded and managed, how they create value, and how they perform basic functions such as marketing, accounting, and incentivizing people. In this article, we analyzed the existing literature, the experts' expectations regarding the blockchain and we conceptualized some implications for businesses, human resources management, and marketing.

Keywords Blockchain · Management · Marketing

1 The Blockchain Technology: An Overview

1.1 Understanding Blockchain

The blockchain technology—BT, is the technology behind bitcoin and cryptocurrencies. It stands in line with other revolutionary technologies like printing, steam, Internet, 3D printing, augmented reality, artificial intelligence promising radical transformations of the economies, businesses, and society. The review of the literature reveals words and expressions associated to the blockchain technology like "radically transforming", "revolutionary", "disruptive innovation", "changing the future of business" "new paradigm and new economy" [1–5].

The blockchain is a distributed and highly secure platform, ledger or database of values—everything from money, assets, stocks, bonds, intellectual property, and deeds, to music, art and even votes [1, 2, 6]. At the core of blockchain is distributed

D. C. Coita (✉) · M. M. Abrudan · M. C. Matei
University of Oradea, Oradea, Romania

ledger technology that offers the potential to support digital trust at scale by providing one version of the truth (secure information), transfer of value (secure ownership records), faster settlements, and smart contracts [7].

Technologies associated with the blockchain deal with data storage and distribution, digital signatures, incentives management, cryptographic hashing, public key cryptography, peer-to-peer networks, even zero-knowledge proofs [8].

Business actors connected on blockchain would no longer require the need for third parties. Blockchain is suitable for transactions, currency, contract, and hard or soft asset. The blockchain is the ledger of all assets; it is "like a giant spreadsheet for registering all assets" [4]. Some authors noted that understanding BT requires knowledge of mathematical cryptography, network technologies, software versioning, financial accounting, identity specification, economics, management and governance, and user-based information security. To ease understanding conceptual metaphors "this is like" might be the solution [6]. The blockchain is "like PayPal", "like Napster for money" or a "fintech", e.g. a financial technology capable of re-engineering the financial services sector and enabling reconciliation between the players in the field. Another comprehensive metaphor is "a network for exchanging value". Blockchain exchanges value, while the Internet only exchanges data and information. In the blockchain case values became digital assets, they pass from one party to another and there are guarantees that the assets are authentic and have not been copied or counterfeited.

1.2 A Promising Technology

Don Tapscott, the Chairman of the Blockchain Research Institute, considered that blockchain is a chance for a more prosperous, more secure, more inclusive and more open world [2].

Blockchain will make possible a new funding model and a supporting ecosystem for independent journalists and other content producers, in a directly and transparently manner, while allowing them to engage more with their supporters [9]. Blockchain technology will help nonprofit organizations to re-establish trust with their donors [10, 11]. Blockchain technology will boost entrepreneurship by offering entrepreneurs easier access to money. It will provide access to funding to small and unbanked producers, farmers, entrepreneurs, and businesses. It will also influence the energy sector by offering full transparency of transactions, speeding up transactions and cutting costs by facilitating a trusted transfer of value without the involvement of traditional intermediaries [12].

1.3   Blockchain Technology in the European Union

EU recognizes the potential of the on blockchain as key emerging trends [13]. The European Commission has already started to work on blockchain related actions. For supporting the blockchain projects the EU allocated 340 million euros to be committed from 2018 to 2020. The next step for The European Commission will be to explore the blockchain to improve cross-border European services like VAT reporting, taxation, customs, title and business registries, environmental, financial and company reporting, health records management, clinical trials reporting, medicines registration, identity management [13].

1.4   Concerns Regarding the Blockchain Technology

There have been many concerns, fears and critics questions about the blockchain. People tend to consider too early a technology to be "revolutionary" during the early stages of technology implementation and adoption [3]. Some might consider blockchain as a "cure-all panacea for the world's problems" and the fact that the technology itself has limitations and is inappropriate for many digital interactions because of its complexity, the network size and speed, the transactions costs, the human errors, the unavoidable security flaws and also because politics [14].

From the perspective of the promise theory, the blockchain technology solves the problems of tamper-proofing, improving the transparency and serialization of data in an open system while other important problems, as trust and democratic access, remain unsolved [15].

Other critics consider blockchain-based trustworthiness falls apart in practice because people will have to trust more in software (for example, a smart contract) than in other people and they simply not have the skills to audit that software [16].

There are also concerns about scalability issues and the difficulty of integrating blockchain in the new devices connected to the Internet of Things [17]. Other problems of the blockchain technology regard the environmental costs of the blockchain due to the consumption of electrical energy, the lack of regulation, its complexity for the users, the slowness and cumbersomeness, and lack of support from "the establishment", e.g. the political and business leaders and regulators [18]. Even the most enthusiastic supporters of the blockchain admit that powerful institutions can use it in a bad way, like a platform for a new surveillance society [2].

Particularly in the EU, have been concerns related to the compliance of the blockchain technology with the provisions of GDPR—General Data Protection Regulation, and to the "right to be forgotten" which is contradictory to the blockchain property of immutable information.

2   Blockchain, Management and Marketing

In our endeavor of conceptualizing the blockchain, we found some implications for businesses. Blockchain enables important transformations. The money becomes digital. Business will become collaborative. Agreements between parties will be immutable. The rules of the business operations become smart contracts, self-executing applications. The companies become network distributed. The consumers become co-producers or peer producers. The employers become shareholders. The assets and the products will become businesses.

Blockchain will eliminate the need for some conditions or even institutions of the current businesses. Firstly, the need for intermediaries, then the need for central banks. More broadly, there will be no need for Trusted Third Parties—those entities managing the changes or updating the state of a system. Finally, yet importantly, the blockchain will create organizations (possible) without people. DAO—Distributed Autonomous Organizations are the new types of organizations in the blockchain economy that will no longer require people, only shareholders, energy and software. DAOs are systems of hard-coded rules that define which actions an organization will take [19]. Organizations will look more and more like applications working on the Internet, having associated some resources and sets of smart contracts.

Blockchain forces rethinking concepts. Firstly, the concept of trust. As trust is inherently built in the blockchain technology, there will be no longer the need for any broker of trust—so called the third party. Identity: Blockchain technology allows individuals to use their self-sovereign identity—an individual identity fully controlled and maintained personally by the individual. People will be in charge of their data [20]. This will may solve some problems currently associated with the data if the customers: the need for a centralized authority to certify the identity, the identity theft; customer's data shared with other parties. Then blockchain will enable identifying the customer when making financial transactions—facilitating the KYC—Know Your Customer processes. Digital identity will allow people to make online transactions, to buy properties, to vote and to benefit from government services, no matter where is the location for services and their physical presence [21, 22].

Reputation: The participants of the future economy of blockchain will have associated a reputation of everything they have done correctly in the past (or they have not). Businesses, products, customers, processes, networks, sensors, and things will have their own reputation.

Immutability and traceability: Blockchain is an immutable ledger; it records data for good. Transactions, payments, operations, identities, decisions, and agreements are immutable and irrevocable, and they have an immutable time stamp. Immutability is a permanent invitation to honesty and truth. On the other side is the traceability. Transactions, money, operations, and products could be tracked not only in real time but also in the past.

With all these, the blockchain may radically transform the money, the business, and the economy.

2.1   The Effects of the Blockchain Technology on Human Resources

Considering the new dimensions of the above concepts, we identified some noteworthy effects of the blockchain technology on human resources:

Trustworthy verification of identity and increasing efficiency in operations: A recent study of PWC pointed out that the companies will facilitate processes, especially those involving significant data collection or third-party verification [23]. Indeed, some experts have confirmed that blockchain bridges the trust gap in recruitment [24]. HR will bring benefits through trustworthy verification of counterparties identity and increasing efficiency in the existing operations. The study identified five possible usages of blockchain regarding human resources. Blockchain will ease verifying and evaluating the education and the skills of the recruits. Secondly, blockchain will record people's pieces of evidence from education, skills, training and workplace performances. Thirdly, blockchain will make more effective the payment system, including cross-border payments, international expenses, and tax liabilities. Then blockchain will boost productivity through automatization. Finally, yet importantly, blockchain will prevent fraud and will enhance cybersecurity [23].

Candidates to monetize data about their qualifications: So far, we have based on the assumption that candidates are more interested to get a job than companies are to hire the candidates. In the future employers may pay the candidates to disclose the information associated with their qualifications or, at least the candidates to monetize data about their qualifications. The reason is that candidates will hide their identity on the blockchain in black boxes (or identity systems). Therefore, the personnel staff will have to query the blockchain with yes/no questions about the qualifications of the candidate, they will use the professional reputation of the candidates while ignoring information about age, gender, race, country of origin or anything irrelevant to the job. Some companies already develop identity systems for job prospects or prospective contractors allowing them to build their own avatars and to disclose pertinent information to employers. By doing this, they own and control their privacy, and they can monetize their own data.

Companies to search for talents outside their boundaries: As blockchain will reduce contracting costs, it will enable firms to open up and develop new relationships outside their boundaries. The development of the blockchain and the smart contracts will reduce the transaction costs and will create new business models rapidly and dynamically. Actors like individual creators and workers will be able to be part of these contracts with large companies [25]. Blockchain creates the opportunity for entrepreneurs to work as individuals and to coordinate economic exchanges of work and currency with one another in large-scale projects rather than needing the boundary of a 'firm' at all.

The rewarding system: The blockchain technology can reward all the members for any type of value they create. The incentives may be financial and non-monetary—e.g. reputation systems. As financial, incentives can be salaries,

payments for performance, bounties attached to task/course completion and shares of a business, of a project of the company.

Organizations could develop a rewarding system within the company based on smart contracts, by issuing decentralized crypto-tokens. The employees might spend tokens freely, exchanging them into anything-like presents, reimbursement of personal expenses, days off, supplies, and tickets to performances, or holidays paid by the company. Such a system will encourage the behavior of the employees consistent with corporate values, the cooperation and the honest behavior inside and outside the company. Smart contracts will automatically reward employees attending corporate functions, participating in charitable organizations, or even promoting the company's mission on social media [26].

2.2   The Effects of the Blockchain Technology on Marketing

Some authors say that blockchain will not change the fundamentals of marketing, but it will change business execution and strategies [27].

Customers are hidden in the black box: As privacy is the basic principle of blockchain technology, customers will decide what, when, how, and how much about their identities are willing to disclose to the companies, depending on the environment and the benefit they will require. In order to build solid relationships with their customers, companies will need to redesign their marketing strategy and even their business models.

Tell your customer the truth, the whole truth and nothing but the truth: Thanks to immutability, the truth will be the main norm of the businesses. We can imagine a network that every encounter with a customer could be tracked, every agreement will be immutable and everything will be transparent. Because of the transparency of the business and its entire blockchain system, the reputation costs associated with a dishonest behavior will force companies to maintain honesty in relation to their business partners.

Companies to pay their customers: There will be a system of micropayments allowing companies to pay all those they add supplementary value to their business. Through this rewarding system, companies could urge customers to disclose the effects write the review of the products they experienced, to watch a new advertising spot or to promote further their products to other customers. Some companies may have to pay just to see whether that customer meets their target audience.

Open platforms where consumers can turn into prosumers: Prosumers add value to the business, like producers. Blockchain technology supercharges presumption [2]. We expect companies to create platforms when they open up their products and technology infrastructures to consumers that can add value, co-create value or develop new businesses.

Brands based on transparency: The brands will cease to be something that customers believe in because it is familiar, turning into a relationship with the

customers based on transparency. For example, companies can make use of unique identifiers and link the product's unique ID with Blockchain [28].

3   Conclusions and Further Directions

Blockchain technologies can profoundly change the economy, the society, the political institutions, and scientific activities.

Approaching the blockchain technology and analyzing literature on this subject is a real opportunity to rethink the entire system of understanding the foundations of the economy and business world. We found that the blockchain technology has the potential to reconfigure the values, rules, and models underlying the enterprises and their operations. In addition, it forces rethinking the basic concepts of the economy and gives new horizons of understanding the functions and the roles of institutions and markets.

Blockchain technology itself it is in its infancy [29–31]. We expect its further developments and studies about entrepreneurship initiatives and adoption of the blockchain in more and more sectors of businesses, organizations and governmental institutions. In the same time, we pay attention to its limits and to its compliance with the existing rules [32, 33] or with the provisions of a new regulation system.

References

1. The Blockchain Revolution. https://www.blockchainresearchinstitute.org/about-1/
2. Tapscott D, Tapscott A (2016) Blockchain revolution: how the technology behind Bitcoin is changing money, business, and the world. Penguin, New York
3. White GR (2017) Future applications of blockchain in business and management: a Delphi study. Strateg Chang 26(5):439–445. https://doi.org/10.1002/jsc.2144
4. Swan M (2015) Blockchain: blueprint for a new economy. O'Reilly Media, Sebastopol
5. Most Cited Blockchain Privacy Publications, Blockchain Library. https://blockchainlibrary.org/2017/11/most-cited-blockchain-privacy-publications/
6. Swan M, De Filippi P (2017) Toward a philosophy of blockchain: a symposium: introduction. Metaphilosophy 48:603–619. https://doi.org/10.1111/meta.12270
7. Murray S, Shirer M (2017) IDC predictions provide a blueprint and key building blocks for becoming a digital native enterprise. International Data Corporation (IDC). https://www.idc.com/getdoc.jsp?containerId=prUS43185317
8. Lewis A (2015) A gentle introduction to blockchain technology. https://bitsonblocks.net/2015/09/09/gentle-introduction-blockchain-technology/. Accessed 7 Sept 2018
9. Ghanchi J (2018) Questioning blockchain: tracing the future promises and possibilities. https://hackernoon.com/questioning-blockchain-tracing-the-future-promises-and-possibilities-f6bad6fefe5f
10. Frankfurt T (2018) Blockchain is reestablishing trust in nonprofits. Forbes. https://www.forbes.com/sites/forbestechcouncil/2018/04/25/blockchain-is-reestablishing-trust-in-nonprofits/#d7a9e5b79166. Accessed 7 Sept 2018

11. Zoni P (2018) Top 10 promises of the blockchain technology – can this technology save us? https://blockgeeks.com/top-10-promises-of-the-blockchain-technology-can-this-technology-save-us/#comments
12. Laclau B (2018) Why the energy sector must embrace blockchain now. Ernst & Young. https://www.ey.com/en_gl/digital/blockchain-s-potential-win-for-the-energy-sector
13. The European Commission (2018) Blockchain technology. https://ec.europa.eu/digital-single-market/en/blockchain-technologies
14. Bauerle N. What are blockchain's issues and limitations? https://www.coindesk.com/information/blockchains-issues-limitations/
15. Bergstra JA, Burgess M (2018) Blockchain technology and its applications, A promise theory. http://markburgess.org/BlockchPromises.pdf
16. Stinchcombe K (2018) Blockchain is not only crappy technology but a bad vision for the future. https://medium.com/@kaistinchcombe/decentralized-and-trustless-crypto-paradise-is-actually-a-medieval-hellhole-c1ca122efdec. Accessed 17 Sept 2018
17. Posadas D (2018) The internet of things: the GDRP and the blockchain may be incompatible. J Internet Law 21:20–29
18. Marr B (2018) The 5 big problems with blockchain everyone should be aware of. https://www.forbes.com/sites/bernardmarr/2018/02/19/the-5-big-problems-with-blockchain-everyone-should-be-aware-of/#586ef2e21670
19. Universa (2017) Decentralized autonomous organization—what is a DAO company? https://medium.com/universablockchain/decentralized-autonomous-organization-what-is-a-dao-company-eb99e472f23e
20. Khatwani S (2018) Understanding how blockchain is changing identity management and why it is better than traditional methods. https://coinsutra.com/blockchain-changing-identity-management-effectiveness/
21. Coinmonks on Medium.com. How blockchain will disrupt digital identity. https://medium.com/coinmonks/how-blockchain-will-disrupt-digital-identity-7857e69ebcf5
22. Pinto R (2018) How blockchain can solve identity management problems. https://www.forbes.com/Forbes
23. Price Waterhouse Coopers (2017) How will blockchain technology impact HR and the world of work? https://www.pwc.co.uk/issues/futuretax/assets/blockchain-can%20impact-hr.pdf
24. Stewart A (2018) Blockchain bridges the trust gap in recruitment – opinion. https://blocktribune.com/blockchain-bridges-the-trust-gap-in-recruitment-opinion/
25. Mulligan C (2017) Blockchain will kill the traditional firm. Imperial Business College. https://www.imperial.ac.uk/business-school/knowledge/finance/blockchain-will-kill-the-traditional-firm/
26. Torvekar G (2018) Blockchain and HR: why it can improve reward and recognition. HRZone. https://www.hrzone.com/lead/future/blockchain-and-hr-why-it-can-improve-reward-and-recognition
27. Conick H (2017) What marketers need to know about blockchain. Am Mark Assoc News. https://www.ama.org/
28. Sharma TK (2018) How blockchain can help you increase your brand value? Blockchain Council. https://www.blockchain-council.org/blockchain/how-blockchain-can-help-you-increase-your-brand-value/. Accessed 17 Sept 2018
29. Tziogas C, Tsolakis N (2019) The dawn of GDPR: implications for the digital business landscape. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham
30. Ferrag MA, Leandros Maglaras L, Helge Janicke H (2019) Blockchain and its role in the internet of things. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham
31. Varelas S, Georgitseas P, Nechita F, Sahinidis A (2019) Strategic innovations in tourism enterprises through blockchain technology. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham

32. Bennett B, Bertin S, Cooper D, Hill C, Kostka C, Nash G, Nonaka M, Van Quathem K (2018) The GDPR and blockchain, inside privacy. https://www.insideprivacy.com/international/european-union/the-gdpr-and-blockchain/
33. Kaufman B (2018) The blockchain democracy—DAOs. A new organizational structure cryptonomy. https://cryptocurrencyhub.io/the-blockchain-democracy-daos-a-new-organizational-structure-f734ddb0f44

Indian Cultural Institutions on Instagram

Vasiliki Vrana, Faizan Khan, George Karavasilis, Evangelos Kehris, and Dimitrios Kydros

Abstract Nowadays, museums, galleries and other cultural institutions use social media to reach millions of people, to build communities of interest, to perform marketing, engagement-focused and educational activities. Use of mobile devices in India is widespread, in contrast to Internet use which is low and it is, therefore, interesting to study the adoption and use of mobile applications like Instagram. The paper aims at investigating the use of Instagram by cultural institutions in India and takes into consideration four main performance indexes namely, the total number of followers, total number of accounts following, total number of posts and number of likes attracted by the last ten posts of the accounts in order to construct a weighed performance index. The proposed index shows that some of the Instagram accounts attempt to exploit the possibilities offered by Instagram to connect and effectively engage with their fans and boost their presence on the platform. Cultural institutions are important heritage destinations and generators of income. The creation of Instagram content that engages fans and followers and hopefully turn a proportion of followers to visitors may have positive impact for the institute and largely for the country.

Keywords Instagram · India · Cultural institutions · Weighed performance index

1 Introduction

Cultural institutions are playing a pivotal role in the "maintenance, conservation, revitalisation, interpretation, and documentation of heritage, and in facilitating citizens' interaction and engagement with heritage" [1]. The use of internet and social media and the global diffusion of information facilitate cultural institutions to widen the distribution of their cultural offer in ways that was unthinkable before

V. Vrana (✉) · F. Khan · G. Karavasilis · E. Kehris · D. Kydros
Technological Education Institute of Central Macedonia, Serres, Greece
e-mail: vrana@teicm.gr

(as they were accessible only in person [2]) to communicate their activities and exhibitions and to increase public engagement [3].

Nowadays online presence has become almost a necessity and cultural institutions are gradually making more use of social media platforms such as Facebook, Twitter, YouTube and Instagram [3]. However, it is often unclear what they are trying to achieve through their social media accounts and who their desired target audience is [3, 4], possibly due to the fact that their social media strategies are still at an early development stage [3].

India is one of the countries with the lowest Internet usage in the world with only 25% of adults using Internet, way below the global median of 75% [5]. Facebook is the most popular social media platform in India, with around 241 million users in 2017, while Instagram is much less popular in India as it has 43 million users [6]. On the other hand, use of mobile phones is widespread in India [7] as 79% of the population had mobile subscriptions in 2017. As a result, organizations, institutes and companies targeting Indian consumers need to adopt a mobile-first approach in their campaigns' social media profiles, to be effective [8].

Instagram, an online social networking mobile application owned by Facebook. Inc., provides its users an instantaneous way to capture and share with their followers their life moments through the series of pictures, videos and stories which can be edited using various filters, organized with tags and location information and accompany them by a textual caption [9]. Taking into consideration the extensive use of mobile devices in India there is a need for the cultural organizations and institutes to create, maintain and manage profiles on Instagram so that users can effectively interact with them. However, to our knowledge, no research on how museums and other cultural organization in India are using Instagram capabilities and features has been reported. The paper aims at investigating the use of Instagram by cultural institutions in India. It describes the activity and the performance of the Indian cultural institutions Instagram accounts and records differentiations among them regarding Instagram performance.

2   Social Media Use by Cultural Institutions

Interaction and distribution are two important features of the social media applications that have been made available for the general public. Social media simple interface generates daily massive streams of digital cultural information and distributes them immediately, encouraging cultural participation and creating environments which culturally enrich people [10]. By using social media applications cultural institutes have to accomplish three main goals: to provide wide access to cultural heritage by connecting cultural institution to society; to promote culture in society by connecting culture/educational information to society; and to use social media and the other information technologies for preserving cultural heritage by connecting technology to the cultural institute [11].

Cultural institutions have to reconsider their mission and position in society and face challenges with the help of new social media applications. More specifically the cultural institutions may attempt to increase accessibility for their audiences; extend the learning experience to the online community; introduce new ways of experiencing their collection; create and share stories whereby users can interact with the institution and with each other; exchange knowledge and participate in cultural dialogues in real time [12]; enhance loyalty by creating and retaining regular readers; provide information about the structure, products, features and schedule; and encourage audience research [11]. Tan [13, p. 384] wrote characteristically "For existing arts and cultural institutions wishing to keep pace with the growing significance of networks in cultural life, developing digital galleries, archives and social media profiles is becoming not only important but imperative".

From 2004 the photo sharing platform Flickr has been adopted by many cultural institutions [14]. It offers the interactive platform Flickr Commons for digital exhibitions of archival material. According to itself: "The key goal of The Commons is to share hidden treasures from the world's public photography archives" [15]. While Flickr and Instagram both specialize in photo sharing, Instagram has been growing faster due to its unique approach to social sharing. It lets users share their photos on all the major social media application websites, even Flickr. Thus, Instagram engages users when they are both on and off the application [16]. Jensen [14] studying Instagram as cultural heritage mentioned that it "can generate new forms of interaction with the users and develop new participatory cultural consumption habits and practices".

3   Methodology

Internet was searched in order to identify as many museum and art galleries' Instagram accounts in India as possible as described next: two researchers independently performed Instagram search, from 1/8/2016 to 5/8/2016, using the hashtags #Museum, #Art #gallery #Culture #Adaab (in Urdu) #Tehzeeb, #hindustan and #riwaj (in Hindi) and then compiled their findings in a joint report. Finally, 20 Instagram museums, galleries and cultural institutes' accounts were recorded.

Next, the identified Instagram accounts were visited on 11/8/2016 and the total number of followers, total number of accounts following, number of total posts, and date of the first post were recorded. The date of the first post was used as an indication of the age of Instagram account as the date of the creation of the Instagram account is not provided at the profile of an account. Finally, the number of likes attracted by the last ten posts of the accounts was recorded. The total number of followers, total number of accounts following, total number of total posts have been used by Lazaridou et al. [17] as indicators of Instagram account's performance and had been previously used by many researchers for measuring Twitter accounts' performance [18–23]. The same procedure was repeated two years later on 11/8/2018, in order to investigate the evolution of the account. The first time period starts

on the day of the first post of the account and ends on 11/8/2016 and the second time period starts the day of the first post of the account and ends 11/8/2018. Given that the first time period is not equal for all the accounts, the data are not directly comparable. However, they give some evidence for the performance of the accounts.

The next step was the creation of a performance index. In this study, a jury of 12 experts [24] was interviewed and rated the significance of: total number of followers, total number of following, total number of posts and likes at last ten posts. The means of the ratings are used as weights in the creation of a performance index. Then, the index was calculated for the two time periods together with the percentage of change of the index. The weighted performance index constructed is shown next:

$$
\begin{aligned}
\text{Weighted Performance Index} = {} & 0.3 \times \text{total number of posts} + 0.4 \\
& \times \text{total number of followers} + 0.1 \\
& \times \text{total number of following} + 0.2 \\
& \times \text{likes at last ten posts}
\end{aligned}
$$

4 Findings and Discussion

Table 1 presents the cultural institutes along with the data collected on 11/8/2016 and on 11/8/2018 (i.e. the date of the first post of the account, total number of followers, total number of following, total number of posts and number of likes attracted by the last ten posts of the accounts).

The number of followers describes how many other Instagram accounts have subscribed to see the photos/videos/stories posted by the account and it is an indicator of success of the account. De Veirman et al. [25], studying Instagram influencers, referred to them as "people who have built a sizeable social network of people following them" (p. 798) while Jin and Phua [26] mentioned that accounts that have a larger network of followers are perceived to be more credible and popular. The number of following accounts describes how many Instagram accounts each museum and cultural institute has subscribed to follow. In previous studies it was found that museums are following a relatively small number of Instagram accounts, a fact that indicates museums do not engage extensively with the museum visitors [17]. However, the number of followers and following provide an indication of the network expansion of an Instagram account. Table 2 presents the descriptive statistics for the indexes under investigation for the two time periods.

The number of followers range from 138 to 342,000. The account *Indian Subcontinent* has the maximum number of followers. Its network is continually expanded. The number of followers increased from 251,000 in 2016 to 342,000 in 2018. *American Indian Museum* is at the second position with 139,000 followers. A significant raise in followers from 5771 in 2016 to 139,000 in 2018 has been

Table 1 Recording of performance indexes

Cultural institute	First post	Followers 11/8/16	Following 11/8/16	Posts 11/8/16	Likes 11/8/16	Posts 11/8/18	Followers 11/8/18	Following 11/8/18	Likes 11/8/18
Chhatrapati Shivaji Maharaj Vastu Sangrahalaya	25/5/15	456	285	81	324	794	3104	517	660
National Museum New Delhi	5/3/16	510	45	165	453	249	1382	45	954
Apparao Galleries	2/6/16	124	235	33	394	141	653	453	496
Dr. Bhau Daji Lad Museum	19/1/15	1000	150	235	737	1073	5594	636	612
Vadehra Art Gallery	20/11/14	1100	85	49	415	153	2897	169	1098
American Indian Museum	5/1/11	5771	462	533	376	966	139,000	262	2659
Chumash Indian Museum	8/6/14	877	255	125	658	183	773	56	630
Indian Art	5/7/13	367	2059	302	145	987	672	3592	204
Monuments of India	4/1/15	82	122	159	493	328	178	196	178
India Art Fair	15/2/10	6496	250	111	579	439	20,900	363	1955
Exhibit 320	16/5/14	1457	1022	145	498	290	2219	1062	501
Gallery OED Cochin	1/1/16	35	74	24	108	81	457	728	470
Indian Subcontinent	17/2/11	251,000	24	3012	25,700	4785	342,000	108	56,207
Incredible India	7/11/12	52,500	9	297	34,790	1229	94,800	13	19,602
Kerala	6/8/10	73,900	21	904	13,186	1809	115,000	53	30,308
Kochi Muziris Biennale	21/5/15	11,800	48	250	11,222	339	17,800	63	7295
Idia.gallery	11/4/15	4570	5443	27	4045	32	3810	4243	942
Mojarto	12/11/15	2449	1775	496	3466	1273	3551	61	474
Art_Alive	1/1/16	119	350	91	494	129	138	96	256
High School South Art	8/4/15	188	2	99	313	134	385	70	541

Table 2 Descriptive statistics for the Instagram performance indexes

		Median	Mean	StD	Skewness	Min	Max
Period 1	Followers	1050	20,740.05	57,520.18	3.77	35	251,000
	Following	192.5	635.8	1269.71	3.23	2	5443
	Posts	152	356.9	660.93	3.77	24	3012
	Like 10	496	4919.80	9508.67	2.39	108	34,790
Period 2	Followers	3000.5	37,765.65	82,974.62	2.98	138	342,000
	Following	182.5	639.3	1160.20	2.64	13	4243
	Posts	333.5	770.7	1070.89	3.03	32	4785
	Like 10	645	6302.1	14,025.17	2.91	178	56,207

recorded for the account. The mean is 37,765.65 and the Std. Deviation is 82,974.62, showing a great dispersion of followers among the museum accounts. Regarding the number of following it ranges from 13 to 4243, while the mean is 639.3. This finding is in accordance with previous research of Lazaridou et al. [17] who investigate museum accounts and mention that "museums follow less than 1000 Instagram accounts" (p. 80). It seems that their social media marketing strategy includes following a small number of other Instagram accounts. The follower/following ratio is a metric to judge the quality of an account. A ratio greater than ten shows an "influencer" account [27]. In this vein 7 out 20 accounts under investigation are influential. The accounts *Incredible India* and *Indian Subcontinent* are the most influential ones having a ratio of 7292.3 and 3166.7 respectively.

The number of posts indicates the activity of the account. Skewness is recorded at the number of posts implying that there is a tendency for some cultural institutions to have high values of the index and post frequently while most museums cultural institutions have low values. More specifically, for period 1, most cultural institutions have a relatively small number of posts (up to 400) and very few have more than 500, while for period 2 much more institutions have more than 500 posts. *Indian Subcontinent* and *Mojarto Art Gallery* and *Dr. Bhau Daji Lad Museum* are the accounts that post most frequently, having a post rate 1.77, 1.28 and 1.09 per day.

The number of followers shows the maximum potential reach of an account, as the Instagram algorithmic selection of posts may lead to a significantly smaller audience [28]. Lazaridou et al. [17, p. 80] also claimed that "not all the followers really "follow" the account by means that they need not see and read labels of every post." Thus a large number of interactions may indicate engaging and interesting content [29].

The number of likes an account receives can be a strong measure of persuasion. Therefore, the number of likes of the ten last posts of each account was recorded as an indication of engagement. *Indian Subcontinent* is the account that engages Instagram users and attracts a larger number of likes.

Table 3 presents the computed indexes. Negative (or zero) weighted performance index change indicates a lower posting activity during period 2 compared to period 1, while positive weighted performance index change shows a higher posting activity during period 2.

Table 3 Weighed performance index

Cultural institute	Performance index 11/8/2016	Performance index 11/8/2018	Percentage change
Chhatrapati Shivaji Maharaj Vastu Sangrahalaya	300.00	1663.50	454.50
National Museum New Delhi	348.60	822.80	136.03
Apparao Galleries	161.80	448.00	176.89
Dr. Bhau Daji Lad Museum	632.90	2745.50	333.80
Vadehra Art Gallery	546.20	1441.20	163.86
American Indian Museum	2589.70	56,447.80	2079.70
Chumash Indian Museum	545.40	495.70	−9.11
Indian Art	472.30	964.90	104.30
Monuments of India	191.30	224.80	17.51
India Art Fair	2772.50	8919.00	221.70
Exhibit 320	828.10	1181.00	42.62
Gallery OED Cochin	50.20	373.90	644.82
Indian Subcontinent	106,446.00	149,487.70	40.44
Incredible India	28,048.00	42,210.40	50.49
Kerala	32,470.50	52,609.60	62.02
Kochi Muziris Biennale	7044.20	8687.00	23.32
Idia.gallery	3189.40	2146.30	−32.71
Mojarto	1999.10	1903.20	−4.80
Art_Alive	208.70	154.70	−25.87
High School South Art	167.70	309.40	84.50

The highest percentage change was recorded for *American Indian Museum*, *Gallery OED Cochin* and *Chhatrapati Shivaji Maharaj Vastu Sangrahalaya Museum* accounts. May be these accounts have anticipated the possibilities the Instagram offers to connect with their fans and effectively engage with them and invest on their Instagram marketing strategy and boost their presence on the platform.

5 Conclusions

Mobile devices use in India is widespread. Such devices are used by users not just to keep in touch with families, relatives, colleagues and friends but also for social networking and expression of thoughts [30]. In this context, museums galleries and cultural institutes have to create, maintain and manage profiles on Instagram so that users can effectively interact with them. This paper aims at investigating the use of Instagram by cultural institutions in India. It studies twenty Instagram accounts of museums, galleries and cultural institutes. The work presented here takes into consideration four main performance indexes: the total number of followers, total number of accounts following, total number of total posts and likes of the last ten posts of the accounts and proposes a weighed performance index.

Positive values of skewness were recorded for all the indexes and imply that there is a tendency for some institutes to have high values of the indexes while most institutes have low values. Their main strategy is to follow only a few accounts. However, they may use micro influencers in their network to reach their base of followers and to promote the institute and their products, if any. The proposed weighed performance index shows that some of the accounts perform better than others and understood the possibilities the Instagram offers to connect with their fans and effectively engage with them and invest on their Instagram marketing strategy to boost their presence on the platform. Lazaridou et al. [17] found a positive relation between the number of visitors and the number of followers of an Instagram account. If cultural institutions manage to fully exploit the possibilities of the Instagram they may achieve a positive impact for the institute and largely for the country as they can become important heritage destinations and income generators.

References

1. Riches Resources (2014) Cultural institutions. http://resources.richesproject.eu/glossary/cultural-institutions/
2. Ciasullo MV, Gaeta M, Monetta G, Rarità L (2015) E-cultural value co-creation. A proposed model for the heritage management. In: 18th Toulon-Verona international conference excellence in services Palermo (Italy), 31 Aug–1 Sept 2015
3. Spiliopoulou AY, Mahony S, Routsis V, Kamposiori C (2014) Cultural institutions in the digital age: British Museum's use of Facebook insights. Participations J Audien Recep Stud 11(1): 286–303
4. Finnis J, Chan S, Clements R (2011) How to evaluate success online. WeAreCulture24. http://weareculture24.org.uk/projects/action-research/how-to-evaluate-success-online
5. Business Today (2018) Only 25% of Indian adults use Internet. 80% don't use social media: Pew research. https://www.businesstoday.in/current/economy-politics/only-25-percent-indian-adults-use-internet-80-percent-dont-use-social-media-pew-research/story/279358.html
6. Napoleoncat (2017) Facebook and Instagram user demographics in India, August 2017. https://napoleoncat.com/blog/en/facebook-and-instagram-user-demographics-in-india-august-2017/
7. Muralidharan S, La Ferle C, Sung Y (2015) How culture influences the "social" in social media: socializing and advertising on smartphones in India and the United States. Cyberpsychol Behav Soc Netw 18(6):356–360. https://doi.org/10.1089/cyber.2015.0008
8. Translatemedia (2017) India social media. https://www.translatemedia.com/translation-services/social-media/india-social-media/
9. Hu Y, Manikonda L, Kambhampati S (2014) What we Instagram: a first analysis of Instagram photo content and user types. In: Proceedings of ICWSM, AAAI
10. Valtysson B (2010) Access culture: Web 2.0 and cultural participation. Int J Cult Policy 16(2): 200–214. https://doi.org/10.1080/10286630902902954
11. Dziuba D (2017) Social networks in museum practice. J Cult Herit Tour Territ 1:20–27
12. Pett D (2012) Uses of social media within the British Museum and museum sector. Archaeologists and Digital Communication, London
13. Tan L (2012) Museums and cultural memory in an age of networks. Int J Cult Stud 16(4): 383–399. https://doi.org/10.1177/1367877912460615
14. Jensen B (2013) Instagram as cultural heritage: user participation. Historical documentation and curating in museums and archives through social media. Digital Heritage International Congress, Marseille, pp 311–314. https://doi.org/10.1109/DigitalHeritage.2013.6744769

15. Flickr (n.d.) The commons. Help us catalog the world's public photo archives. https://www.flickr.com/commons
16. Tarver E (2018) This is why Instagram is winning over Flickr (FB. YAHOO). https://www.investopedia.com/articles/markets/082015/why-instagram-winning-over-flickr.asp
17. Lazaridou K, Vrana V, Paschaloudis D (2015) Museums + Instagram. In: Katsoni V, Upadhya A, Stratigea A (eds) Tourism. Culture and heritage in a smart economy, Springer proceedings in business and economics. Springer, Cham, pp 73–84. https://doi.org/10.1007/978-3-319-47732-9_5
18. Theocharidis AI, Vrana V, Michailidis EN, Zafiropoulos K, Paschaloudis D, Pantelidis P (2015) Social influence in online social networks. In: International conference on internet studies (NETs2015), 18–19 July, Tokyo
19. Sevin E (2013) Places going viral: Twitter usage patterns in destination marketing and place branding. J Place Manag Dev 6(3):227–239. https://doi.org/10.1108/JPMD-10-2012-0037
20. Drezner D, Farrell H (2008) The power and politics of blogs. Public Choice 134:15–30. https://doi.org/10.1007/s11127-007-9198-1
21. Bakshy E, Hofman J, Mason W, Watts D (2011) Identifying 'influencers' on Twitter. WSDM 2011, Hong Kong
22. Antoniadis K, Zafiropoulos K, Vrana V (2016) Community characteristics of Twitter followers in EU-countries governmental accounts. Int J Electron Gov 8(3):283–302. https://doi.org/10.1504/IJEG.2016.081383
23. Antoniadis K, Vrana V, Zafiropoulos K (2016) Promoting European countries destination image through Twitter. Eur J Tour Hosp Recreation 5(1):83–113
24. Dimitriadis S, Vrana V, Dimitriou S, Kalaitzis V, Drogalas G (2013) Investigating customer satisfaction and service quality in academic libraries: the case of Technological Educational Institute of Central Macedonia. Int J Decis Sci Risk Manag 5(1):48–66. https://doi.org/10.1504/IJDSRM.2013.058900
25. De Veirman M, Cauberghe V, Hudders L (2017) Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude. Int J Advert 36(5):798–828. https://doi.org/10.1080/02650487.2017.1348035
26. Jin S, Phua J (2014) Following celebrities' tweets about brands: the impact of Twitter-based electronic word-of-mouth on consumers' source credibility perception. Buying intention and social identification with celebrities. J Advert 43(2):181–195. https://doi.org/10.1080/00913367.2013.827606
27. Workmakro (2018) What your follower/following ratio say about your Instagram account. https://workmacro.com/instagram/follower-following-ratio-say-instagram-account/
28. Isaac M (2016) Instagram may change your feed. Personalizing it with an algorithm. https://www.nytimes.com/2016/03/16/technology/instagram-feed.html
29. Gräve JF, Greff A (2018) A good KPI. Good influencer? Evaluating success metrics for social media influencer SM society, 18 July 18–20, Copenhagen. https://doi.org/10.1145/3217804.3217931
30. Varma S (2011) Mobile phones market in India. Master thesis, School of Economics, Delhi University

Island Tourism: Keep It Smart and Sustainable—An Exploratory Approach

Sónia Avelar

Abstract Islands have proven to be very attractive to tourists. Regardless of their dimension, these territories should pay particular attention to the phenomenon of tourism development. The concepts of smart and sustainable tourism encompass a range of values and practices that combine technology, human capital, data sharing and co-creation of value, along with economic, social, and environmental principles. The Azores archipelago presents itself as a sustainable tourism destination still in an early stage of development, allowing an analysis on the awareness and practical implementation of smart and sustainable tourism in the insular context. The research results showed that the sustainable approach is much more consistent than the smart one. This paper intends to highlight that it is of paramount importance to implement a balanced approach of tourism destination development based on smartness and sustainability.

Keywords Island tourism · Smart tourism · Smart tourism destination · Sustainable tourism · The Azores

1   Introduction

There are more than 180,000 islands in the world, attracting tourists with their unique beauties and mode-changing experiences. Thus, islands are special places that, although are natural attractions for tourists, face special challenges in terms of sustainability. The study on island tourism has been closely associated with the center-periphery idea, which sees small islands as geographically and economically marginal entities based on a monoculture of homogeneous tourism in a context of external dependence. However, a paradox to this view proposes that small islands

S. Avelar (✉)
University of the Azores, Açores, Portugal
e-mail: sonia.avelar@sapo.pt

are sustainable places of resilience and innovation, capable of offering a unique experience that can potentiate them as centers of tourism [1, 2].

Finding the balance between sustainable tourism and attracting tourists to the islands has led to growing interest in studying island tourism, especially in the islands where tourism is considered a strategic industry for development [3]. This is the case of the Azores, a Portuguese archipelago and a prominent tourism destination, that in terms of its life cycle is only at the beginning of its development, when it is still possible to shape the offer (supply) and guarantee a connectivity between what is sustainable and smart (smartness helps to assure sustainability).

Many destinations, regardless of their volume, resources and tourism goals, are moving towards the smart concept, applying innovative technologies to achieve more personalized and satisfactory tourist services and becoming more attractive and competitive [4].

Based on a comprehensive review of sustainable tourism combined with the smart tourism evaluation items presented by Wang et al. [5], a matrix was composed and the Azores was selected as the study area. Despite being an ultra-peripheral region, this archipelago has become internationally prominent as a tourist destination of excellence. Several sustainable development policies have been implemented there, and the recognition for their natural resources and appropriate practices have resulted in distinctions and awards, as well as an effective growth in tourism. In the first stage of this work, in-depth interviews with local stakeholders were conducted to portrait the Azores in terms of sustainability and smart tourism. This paper draws attention to the importance of maintaining a combined approach to sustainable and smart tourism from the earliest phases of tourism development.

2   Background

Insular territories have always been described as vulnerable and dependent on metropolitan centers; in addition, they have been promoted by their resilience because, despite their obvious vulnerabilities, they have managed to survive and, in many cases, to maintain the social and ecological integrity of their landscapes and strengthen their economies. The duality between vulnerability and resilience has been evident in terms of literature and the tourism phenomenon itself [1].

Islands are even considered ideal places for the implementation of innovative sustainability strategies [6–8]. There are three types of innovation to be applied in islands as local responses to global issues: entrepreneurship and business innovation in private and public enterprises; innovation in public, private, and public-private governance and regulation (new regulatory regimes and standards); and innovation in culture, as formal and informal education processes to initiate campaigns and programs that stimulate concerns, awareness, reorientation of values, and development of new practices [9].

Innovation networks are proliferating as the most appropriate models for tourist destinations to achieve a great innovation performance and presuppose interactive

communication and knowledge sharing between companies, the scientific community and the market; at the regional level, they are important mechanisms for the growth of both small and medium enterprises and regions as a whole. The innovation potential of a region will be as great as the diversity of its network [10].

The term "smart" implies specific technological characteristics, such as connectivity and intelligence [11]. The ultimate goal of a smart destination is to increase competitiveness and improve the quality of life of all stakeholders, including residents and tourists [12, 13].

A smart destination should be seen as part of a broader smart tourism ecosystem, in which there is an integration between different tourism businesses and actors, objectives sharing and interconnected technologies used to overcome the division between the physical and digital spheres [14].

It is a smart destination's premise to enhance the tourist experience through the personalization of services. In this context, there is an instant exchange of information between the different stakeholders through a big data platform and this information is essential to offer services that fit the desires and needs of the visitors (service personalization) and to meet standards and trends in tourism consumption. The development of the smart tourism destination (STD) concept contributes to the destination's competitiveness [15, 16].

The STD concept has received much attention from academics and tourism professionals due to two trends: development and diffusion of information and communication technologies (ICTs) as allies of tourism [17, 18]; and opportunities that come from adopting the smart city paradigm to optimize the use of tourism resources, improving tourist experiences, increasing the competitiveness of the destination, and contributing to the improvement of the residents' quality of life [13, 19].

A more holistic approach considers complementary dimensions to technology, such as human and social capital, leadership, innovation, and sustainable development [20, 21].

3 Research Methodology

The study focused on island tourism, smart tourism destination, and sustainable tourism, three concepts that have proved to be interconnected and vital for the development of an island as a smart and sustainable tourism destination. The Azores archipelago was chosen as the case study after being identified as an emergent tourism destination (in an early phase of development) and associated with sustainable practices (including sustainable tourism awards).

The Delphi method was chosen to unveil the stakeholders' involvement and knowledge about sustainability and smart tourism approach. Data was gathered through interviews with local stakeholders. The questionnaires included a smart tourism evaluation matrix using the evaluation items of a smart tourist attraction from Wang et al. [5] and a sustainability matrix to evaluate the significance of

sustainable practices in the different areas of a tourism business. A qualitative analysis was applied as data treatment in order to obtain some relevant clarifications on how some of the main actors in the tourism scene view and interpret tourism destination identity and future potential based on smartness and sustainability.

4   Results

The first question was whether the Azores could be considered a sustainable tourism destination, and the answers were consensual: *"The Azores offer the best balanced proposal regarding social, economic and environmental sustainability."; "Nature and Sightseeing are two of the several tourist products in the Azores destination."; "The Azores have all the conditions to be an eminently sustainable destination.".*

The advantages identified in the adoption of a sustainable tourism paradigm were: auto-sufficiency; promotion of local products; employment; competitive advantage of the destination; nature tourism; and differentiation. In terms of barriers, the following items were mentioned: monoculture of tourism; fragile economy; mass tourism; lack of sources of renewable energy; carrying capacity; destination identity; and alignment and cooperation among all the stakeholders.

As to whether the Azores could be considered a smart tourism destination, it was possible to identify different opinions: *"The high concern is about what should be the Azores in the future and to have a wide scope upon it."; "Maybe in the future. Not at the moment."; "Various steps are being achieved, but it's still not possible to say that the Azores are a smart destination.".*

In terms of advantages, the following were enumerated: complementary to sustainability; competitive advantage in the context of island tourism; and promotion and marketing of the destination. In what concerns the barriers: development gaps regarding technologic, economic, and social dimensions in comparison with other destinations; hard to recognize; political decision; and local structures and associations.

In order to understand how local stakeholders perceive smart and sustainable concepts, a matrix was structured based on the works of Wang et al. [5] and Tiago et al. [22]. The way in which the different adjuvant elements of each of these areas were classified (on an importance scale) is presented below (see Fig. 1):

The main conclusions are: (i) first, there is a greater agreement among all participants regarding the elements associated with sustainability than on those associated with the smart concept; and (ii) there is a greater appreciation of sustainability as an element of development of the region's tourism offer, evidenced by the inexistence of lower valuations of the dimensions.

Analyzing each of the dimensions per se, it is observed that opinions diverge in relation to dimensions A and B. This fact may not be unrelated to the maturity of sustainability practices of the business units represented here.

Regarding the adoption of technology (hardware and software), in order to optimize and maximize tourism supply, the answers point to the appreciation of

Fig. 1 How local stakeholders perceive smart and sustainable concepts
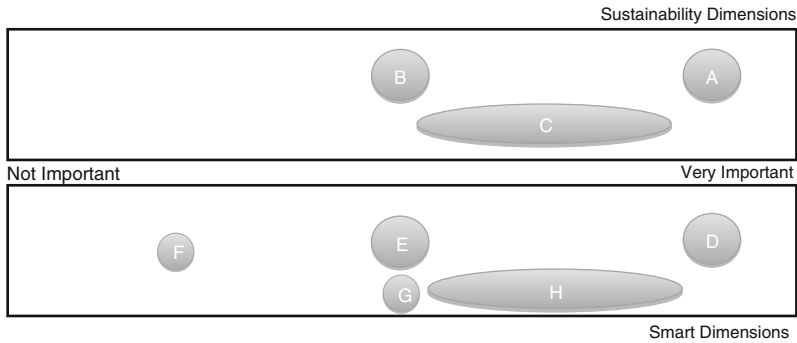
A	Employee participation; Management culture; Improved reputation
B	Response to competitor; Requirement of stakeholders
C	Streamline applications; Transparency stakeholders; Risk management; Legislative compliance; Greener product; Resource/ production efficiency; Requirement of customer/ supply chain
D	Intelligent-guide system; E-tourism recommendation system; Mobile payment; Smart emergency-response system
E	Quick-response code; Electronic touch scree; Smart card (band); Electronic-entrance guard system; Crowd handling
F	Online coupons; Queuing-time forecast; Weather forecast
G	Free Wi-Fi; Smart vehicle-scheduling; Virtual tourism experience; Virtual travel community
H	Tourist attraction homepage; Online information access; Mobile application; Tourist-flow monitoring; Smart education; Personal-itinerary design; E-tour map; Online booking; Intelligent-environment monitoring; Travel-safety protection; Real-time traffic broadcast; Tourist-flow forecast

the most visible and impacting elements of the tourist experience, such as the intelligent-guide, recommendation and mobile payment systems. There is less appreciation of the elements associated with online coupons, queues, and weather forecast.

5 Final Considerations

Remote places like islands should be associated with more sustainable forms of tourism. The implementation of sustainability practices is challenging and complex, but it is critical given the limited development opportunities of these sites [23]. Tourism can be an efficient instrument for the sustainability of the local economy and for the benefit of residents [24].

A smart tourism destination (STD) consists of a tourism system that benefits from smart technology to create, manage, and provide intelligent tourism services and

experiences, being characterized by intense information sharing and co-creation of value [14]. STD ecosystems include soft components, namely, innovation, social capital, human capital, and leadership, as well as the hard component, technology [21].

The research developed in the context of this paper has shown that the sustainable approach is much more consistent than the smart (technological) approach within local stakeholders. These findings draw attention to the need to educate stakeholders on the smart and sustainable tourism approaches, from governance and business managers to residents and tourists. On the one hand, sustainability should be seen as more than environmental awareness and practices; on the other hand, the smart concept must be acknowledged besides the technological components, that is, to be perceived as the combination of hardware and software dimensions with the "humanware" dimension [25].

Institutional policies and initiatives have gradually evolved from an initial acceptance of sustainability in tourism context, associated almost exclusively to environmental conservation, to a more global concept evoking the balance between society, environment, and economy [26]. Smartness in hospitality organizations facilitates the development of competitiveness through the interoperability and interconnectivity of all network partners. It allows a better understanding of customers and market conditions, and the development of decision-making processes [16]. A combined approach can be the key to success in island tourism.

References

1. Cheer J, Cole S, Reeves K, Kato K (2017) Tourism and islandscapes – cultural realignment, social-ecological resilience and change. Shima 11:40–54. https://doi.org/10.21463/shima.11.1. 07
2. Weaver DB (2017) Core–periphery relationships and the sustainability paradox of small island tourism. Tour Recreat Res 42:11–21. https://doi.org/10.1080/02508281.2016.1228559
3. Parra-López E, Martínez-González JA (2018) Tourism research on island destinations: a review. Tour Rev 73:133–155. https://doi.org/10.1108/TR-03-2017-0039
4. Tran HM, Huertas A, Moreno A (2017) A new framework for the analysis of smart tourism destinations. A comparative case study of two Spanish destinations. https://doi.org/10.14198/ Destinos-Turisticos-Inteligentes
5. Wang X, Li XR, Zhen F, Zhang J (2016) How smart is your tourist attraction?: measuring tourist preferences of smart tourism attractions via a FCEM-AHP and IPA approach. Tour Manag 54(C):309–320. https://doi.org/10.1016/j.tourman.2015.12.003
6. Depraetere C (2008) The challenge of nissology: a global outlook on the world archipelago. Part II: the global and scientific vocation of Nissology. Island Stud J 3:17–36

7. Kerr SA (2005) What is small island sustainable development about? Ocean Coast Manag 48:503–524. https://doi.org/10.1016/j.ocecoaman.2005.03.010
8. Gagliardi P (2009) Organizations as designed Islands. Island Stud J 4:43–52
9. Kelman I, Burns TR, des Johansson NM (2015) Islander innovation: a research and action agenda on local responses to global issues. J Mar Island Cult 4:34–41. https://doi.org/10.1016/j.imic.2015.04.001
10. Brandão F, Costa C, Buhalis D (2018) Tourism innovation networks: a regional approach. Eur J Tour Res 18:33–56
11. Gretzel U, Sigala M, Xiang Z, Koo C (2015) Smart tourism: foundations and developments. Electron Mark 25(3):179–188. https://doi.org/10.1007/s12525-015-0196-8
12. Caragliu A, Del Bo C, Nijkamp P (2011) Smart cities in Europe. J Urban Technol 18(2):65–82. https://doi.org/10.1080/10630732.2011.601117
13. Buhalis D, Amaranggana A (2014) Smart tourism destinations. In: Xiang Z, Tussyadiah I (eds) Information and communication technologies in tourism 2014. Springer, Cham, pp 553–564. https://doi.org/10.1007/978-3-319-03973-2_40
14. Gretzel U, Werthner H, Koo C, Lamsfus C (2015) Conceptual foundations for understanding smart tourism ecosystems. Comput Hum Behav 50:558–563. https://doi.org/10.1016/j.chb.2015.03.043
15. Buhalis D, Amaranggana A (2015) Smart tourism destinations enhancing tourism experience through personalisation of services. In: Xiang Z, Tussyadiah I (eds) Information and communication technologies in tourism 2015. Springer, Cham, pp 377–389. https://doi.org/10.1007/978-3-319-14343-9_28
16. Buhalis D, Leung R (2018) Smart hospitality—interconnectivity and interoperability towards an ecosystem. Int J Hosp Manag 71:41–50. https://doi.org/10.1016/j.ijhm.2017.11.011
17. Cooper C, Fletcher J, Fyall A, Gilbert D, Wanhill S (2008) Tourism principles and practice. Pearson Education, Harlow
18. Koo C, Gretzel U, Hunter WC, Chung N (2015) The role of IT in tourism. Asia Pac J Inf Syst 25:99–104. https://doi.org/10.14329/apjis.2015.25.1.099
19. Lopez de Avila A (2015) Smart destinations: XXI century tourism. In: ENTER2015 conference on information and communication technologies in tourism, Lugano
20. Lamsfus C, Alzua-Sorzabal A (2013) Theoretical framework for a tourism internet of things: smart destinations. tourGUNE. J Tour Hum Mobil 2:15–21
21. Boes K, Buhalis D, Inversini A (2015) Conceptualising smart tourism destination dimensions. In: Tussyadiah I, Inversini A (eds) Information and communication technologies in tourism 2015. Springer, Cham, pp 391–403. https://doi.org/10.1007/978-3-319-14343-9_29
22. Tiago T, Faria SD, Cogumbreiro JL, Couto JP, Tiago F (2016) Different shades of green on small islands. Island Stud J 11(2):601–618
23. Gough KV, Bayliss-Smith T, Connell J, Mertz O (2010) Small island sustainability in the Pacific: introduction to the special issue. Singap J Trop Geogr 31:1–9. https://doi.org/10.1111/j.1467-9493.2010.00382.x
24. d'Hauteserre AM (2016) Ecotourism an option in small island destinations? Tour Hosp Res 16:72–87. https://doi.org/10.1177/1467358415600209
25. Sigala M (2017) Adelaide must be smart in developing its tourism industry. In News A (ed). www.adelaidenow.com.au
26. Baum T, Cheung C, Kong H, Kralj A, Mooney S, Ramachandran S, Siow ML (2016) Sustainability and the tourism and hospitality workforce: a thematic analysis. Sustainability 8:809. https://doi.org/10.3390/su8080809

Senior Tourism in Europe: When There Are "No Boundaries"

Sónia Avelar, Flávio Tiago, and Teresa Borges-Tiago

Abstract Tourism has great economic, social, and cultural relevance. Over the past two decades its importance has expanded worldwide, impelling destinations, hospitality and tourism firms, and researchers to seek out new trends and patterns. As previously acknowledged in several studies, the global demographic of aging tourists has led to the growth of senior tourism. This demographic is known for its specific needs and preferences with regard to what tourism offers. Following the work of Tiago et al. (Tour Manag 54:13–22, 2016), our main objective is to analyze the dynamics of the senior market in the European context in order to better quantify and describe it. By applying a clustering process to a database of seniors from 35 countries in the old continent, we identified the sub-groups within this niche market based on their vacation destinations and how they plan their travel. Our results reveal the existence of four distinct sub-segments that need to be considered by Destination Marketing Organizations and hospitality and tourism firms, because there are significant differences with regard to the information sources they use to plan and decide destinations, as well as their preferred features and facilities' dimensions. One of the sub-groups we identified has not been covered in any previous study, reinforcing the need to continue analyzing this niche market.

Keywords Niche tourism · Senior tourism · Senior segmentation · Active seniors · Europe

S. Avelar
University of the Azores, Açores, Portugal
e-mail: sonia.avelar@sapo.com

F. Tiago · T. Borges-Tiago (✉)
University of the Azores, Ponta Delgada, Portugal
e-mail: maria.tp.tiago@uac.pt

1   Introduction

Tourism is one of the pillars of economic development worldwide, presenting itself as a challenging and competitive new landscape that is always changing. Aware of this reality, which is of a global nature, the aging of the population is already an identified demographic trend. Thus, it is of great interest to know and understand the demographic dynamics, economic conditions, mobility, and values and behaviors of the growing senior tourism market.

Although researchers and practitioners acknowledge the relevance of this segment, most studies focus on and present evidence relevant to the North American context, leaving markets such as Europe less well understood. However, in Europe, the trend towards an aging population and an increasing life expectancy is clear.

Chen and Shoemaker [1] questioned if today's seniors want exactly what seniors did 10 years ago. Given the scarce information available to answer this question for this sub-group in Europe, this work seeks to contribute to a better understanding of senior tourist behavior and this demographic use of leisure time in Europe, analyzing their involvement in the travelling decision process. For that purpose, this study used a database on the travel preferences of European tourists. The data processing applied cluster analysis to identify market niches, and chi-square and ANOVA tests were used to detect statistically significant differences among the sub-groups found. The results of the data analysis not only showed the heterogeneity of the senior market segment, but also identified four market sub-groups, not equally formed in all European countries, and with peculiar behaviors and preferences that can be targeted differently.

2   Background

2.1   Seniority and Tourism

The aging population is a declared demographic in which people who are 55 or older will represent a high percentage of the total population. These seniors will live longer, be healthier and more active, and have more money and time available than previous generations, and therefore will expect a better quality of life [2]. However, this is not a homogeneous market because it covers different patterns of behavior based on gender, culture, and professional status.

As a niche tourist market these seniors are a changing group, leaving behind an image of dependence and little involvement in the choice of vacation and assuming a new attitude regarding leisure; they are becoming a new social category and a dynamic, attractive, and promising tourism market.

2.2 Senior Tourism Behavior

However, as noticed by Huber et al. [3], the growing interest in the senior market is the result of a set of factors in which consumer behavior is determinant, combined with certain demographic changes and a worldwide trend towards an aging population [4]. More, senior travelers appear to be more difficult to satisfy, considering their past experience and travelling constrains, showing complex preference structures and decision patterns. Nevertheless, the buyer decision process is similar to the one applied in other marketing fields. For instance, Korneliussen and Greenacre [5] noticed that the sources of information adopted by tourists in Europe vary in accordance to their country of origin and main culture. However, they analyzed the entire population, not pointing the differences that may occur between different age cohorts, as noticed by other researchers [6, 7].

Hung and Lu [8] noticed that regardless the increasing research done covering this topic, there is still the "need to be spent to entice the elderly to purchase travel products and services that cater to their specific needs". Therefore, the question raised by Chen and Shoemaker [1] regarding the behavior changes in this segment remains relevant and leads to a search why seniors place great importance on travelling. In certain cases, they will prefer to reduce their travel budget or the length of stay rather than not to travel at all [9]. Therefore, they are important in terms of market size and growth potential [10]. Some of these speculations can be found in the literature, but some still lack an answer.

The work of Tiago et al. [11] shows evidences of four sub segments within the senior segment in Europe; these authors it named "explorers," "livewires," "vacationers," and "homebodies," to reflect different preferences and behaviors. However, this wasn't the first approach to senior market segmentation (Table 1):

Factors Impelling Senior Tourism The senior niche is one of the largest and most prosperous market segments for the tourism industry [12], not only because of the general aging of the population and improvement of health conditions, but also

Table 1 Segments found in senior tourism studies

Authors (year)	Subsegment designations identified in previous researches
Horneman et al. (2002)	Enthusiasts, big spenders, pioneers, conservatives, indulgers and Aussies
Huang and Tsai (2003)	Family travelers, active resters, and older set
Kim et al. (2003)	Active learner, relaxed family body, careful participant and elementary vacationer
Sellick (2004)	Discovery and self-enhancement, enthusiastic connectors, reluctant travelers, nostalgic travelers
Jang and Wu (2006)	Ego-enhancement, self-esteem, knowledge-seeking, relaxation, and socialization
Boksberger and Laesser (2009)	Time honored bon vivants, grizzled explorers and retro travelers

Source: Adapted from Tiago et al. [11]

because generations of people who have grown up more used to travelling are now aging [13, 14]. As a real engine of the tourism growth [15], the "silver market phenomenon" represents an opportunity for organizations and for innovation, creativity, and social responsibility [16] and is an appropriate market to avoid seasonality [11]. Because many of them are already retired and can travel at different times of the year, this population has the flexibility to take advantage of this time and resources [17] and can spend more money on holidays due to their high purchasing power [18].

For most seniors, travelling is a concrete life priority that they are willing to pay for on a regular basis, although they are also attentive to the quality of the product or service and want to get "value for money" [17]. Seniors are looking for experiences, and these should guide the purpose of services [19]. The baby boomer generation is a special niche within the senior market that exemplifies the increasing importance of the "experience economy." This generation wants to take part in new forms of leisure, with a lot of adventure and adrenaline and requiring greater physical fitness [20, 21].

There are varied business opportunities for creating innovative products and services targeted to seniors, both in the sphere of tourism and leisure in general [22], with some emphasis on wellness and health tourism [23]. Seniors are realizing that there are countless possibilities for improving their health through preventive therapies, and these are seen as travel motivators to health and wellness centers, health resorts, and spas [24, 25]. Although health conditions are considered important before traveling, many seniors are "live each day" people and feel well overall despite some health problems; goods and services' suppliers should exploit this optimistic attitude [25].

Factors Constraining Senior Tourism There are numerous aspects that may be considered barriers to senior travel. McGuire [26] identified external sources; time factors; approval; social ability; and physical well-being as constraints. Fleischer and Pizam [27] speculated that from 55 years old on there are constraints on time, income, and health that affect the participation of seniors in tourist activities.

Huang and Tsai [12] referred to the following as barriers: the dimensions of travelers' capacity (physical agility, fear of leaving the house alone, financial considerations, no company); the dimensions of direct travel suppliers (diet, lack of information about where to go, fear of being disappointed and wasting money); and the dimensions of the motivation to take a journey with several stops (fear of hassles, the length of time needed, age). Hunter-Jones and Blackburn [25] mentioned the concerns related to vaccination, humidity, airport stress, jet lag, high insurance premiums, and risks associated with less developed countries.

Therefore, senior tourist consumer behavior is not a simple matter. It reflects a constant leverage between impelling and constraining factors, a dynamic that keeps changing over the years. Considering these challenges, this research addresses the following questions about tourist behavior: (i) How does the country of origin (in Europe) influence tourist travelling destination preferences? and (ii) To what extent can sub-groups identified in Europe remain the same year after year, considering past experiences, information source preferences, future tourism decision guidelines, destination evaluation criteria, and preferences?

3 Research Methodology

Following the work of Tiago et al. [11], our main objective is to analyze the dynamics of the senior market in the European context in order to better describe it and understand it. The methodology adopted in this study seeks to achieve the main objectives proposed. To help answer the questions: (i) How does the country of origin (in Europe) influence tourist travelling destination preferences? and (ii) To what extent can sub-groups identified in Europe remain the same year after year?—the data gathered by the Flash Eurobarometer 392 on Preferences of European towards tourism, examining citizens' decision process, was used as data source.

Firstly, descriptive statistics analysis and multivariate data analysis (cluster analysis) were used, which made it possible to combine the subjects of the sample in sub-segments. Cluster analysis was used to perform market segmentation, which is an accepted tool in strategic marketing.

The database used in this study focuses on the preferences of European tourists from the 28-member states of the European Union as well as Turkey, Macedonia, Iceland, Norway, Serbia, Montenegro, and Israel (Preferences of Europeans towards tourism, 2014). For the Flash Eurobarometer 392 a total of 31,122 people from different social and demographic groups were surveyed by telephone, by different entities coordinated by the European Commission. To meet the purposes of this paper, a criterion of sample division to analyze only senior tourists was applied. The age to be considered a senior person is not consensual, with different references in the studies available. Because of the fact that retirement age in most countries is generally around 65, this was the age reference adopted, which led to a sample of 3458 people.

A cluster analysis was performed on the senior market considering the expressed objectives. Traveling preferences were treated as dependent variables, measured by the following indicators: quality of accommodation, security, natural features, general level of prices, how tourists are welcomed, quality of activities/services available, and accessibility. The ANOVA results confirmed the significance of all variables used to group the senior tourists into four clusters. Due to their characteristics, the clusters were named as follows: Vacationers, No Boundaries, Explorers, and Homebodies, following a similar approach from Tiago et al. [11].

4 Results

For Cluster 1, all the dimensions analyzed are valued, being named as "Vacationers". This designation is comparable to that used in the work of Tiago et al. [11], as the group demonstrated the same characteristics—demanding at all levels with regard to the characteristics of the supply. Cluster 2 enhances the relevance of accessibility for people with special needs and was assigned the designation "No Boundaries"; although these tourists highlight accessibility (which induces mobility constraints), they maintain a strong willingness to travel. Those who fall into Cluster 3 did not show

great appreciation of the variables studied here, which indicates little interest in tourism products, a tendency also observed by Tiago et al. [11]. These individuals were described as "Explorers." In Cluster 4, the most valued variables were the way tourists are received and accessibility, and a preference for vacations in one's country of origin, having thus obtained the designation of "Homebodies" (as in [11]).

The main characteristics of the four clusters found can be summarized as follows: known as "Vacationers," people who fall into this cluster took vacations mainly to visit family and friends and planned to spend their 2014 holidays in their country of origin. This group included the highest number of people aged 65 and 70 years old; they were also mostly women, retirees, and had a Bachelor's degree or higher. "No Boundaries" seniors enjoy more sun and beach vacations, nature, and visiting family and friends; in 2014 many of them intended to spend the holidays in their home country, but others reported plans to go to Spain, Italy, or outside the European Union. The dominant age groups in this cluster were between 65 and 67 and 70 years old; a greater number of this group were women, retired, and had a Bachelor's degree or higher. Those who fell into the cluster "Explorers" appreciated sun and beach vacations, as well as visiting relatives and friends. In 2014 they planned to take vacations in their home country, as well as in Spain and in other countries outside the European Union. They were aged between 65 and 70 years old, were mostly women, and were retired. In terms of education, there was an even mixture of those who had secondary education and those with a Bachelor's degree or higher. The "Homebodies" chose to visit family and friends and planned to spend the holidays of 2014 in their country of origin. This cluster was composed of more people who were 65 years old, especially women, retirees, and a mix of those who had secondary education and those with a Bachelor's degrees or higher.

As in the work of Tiago et al. [11], the explanatory variables used included some factors related to personal background, such as gender, community type, household size, education, and three variables associated with decision-making—all-inclusive vacations, mode of acquisition of tourist services, and accessibility for people with special needs.

5   Final Considerations

The aging population is a critical element of the demographic change occurring worldwide, one that is giving rise to a distinct reality of specific consumption and demand patterns on the part of senior tourists. The emphasis put on seniority is natural, because this population effectively represents a growing group of valid and active people who are participating in tourist activities. Senior tourism is, therefore, a pertinent subject and motivated this research, due to the academic relevance of the study, the existence of a small number of European studies on it, and, in practical terms, the great economic potential of this tourism niche.

At present, tourism is a quality of life enhancer for everyone who enjoys tourist activities or products. Seniors must be recognized as valid and physically capable

individuals, which will result in a set of positive approaches that meet their needs and expectations, such as vacation styles suitable to their lifestyle and interests. It is critical to adapt marketing strategies and promote this growing and promising senior market, because doing so will lead to new opportunities for the design and creation of holiday packages and specific activities for them. This study supports the strengthening of the European senior tourism market and can be considered a direct contribution to destination or activity management, so that offerings may be adjusted according to the countries of origin of tourists, their characteristics, their behavior on vacation, and their interests. It is necessary to restructure business models to improve the offerings available.

The present paper reinforces the conclusions of other studies regarding the existence of sub-groups within the senior tourism segment. Considering that there are few studies that analyze this reality at a European level, the results obtained have been compared with the work of Tiago et al. [11] to show that similarities were found in terms of three of the four senior sub-groups. However, the results of this study demonstrate on the one hand that the tastes and practices of senior tourists are continuously evolving, once it was verified that the sub-segment "No Boundaries" was not identified previously; on the other hand, it reinforces the relevance of a continuous approach to this segment and their needs and expectations, providing an interesting contribution to the field of inclusive tourism, a type of tourism that is worth developing in future studies, following up the wellness-driven sub-segment evolution. This group's particular needs result in specific requirements in terms of mobility and guidance, but, above all, reveal a change in the values of seniors, who do not wish to give up vacations even when dealing with mobility constraints.

Tourism is an activity of remarkable social, cultural, and economic importance, and the phenomenon of the aging population constitutes a composite reality—people with more willingness to pay for social and cultural activities, and less time constrained—resulting in a particular tourist market segment: the senior tourism niche. It is of interest to study the senior market in the tourist context to recognize and meet the challenges posed by its effective relevance, and develop strategies that will enhance a business already identified as prosperous and promising.

References

1. Chen S, Shoemaker S (2014) Age and cohort effects: the American senior tourism market. Ann Tour Res 48:58–75. https://doi.org/10.1016/j.annals.2014.05.007

2. Buhalis D, Costa C (2006) Tourism business frontiers, consumers, products and industry. Elsevier Butterworth-Heinemann, Oxford
3. Huber D, Milne S, Hyde K (2017) Biographical research methods and their use in the study of senior tourism. Int J Tour Res 19:27–37. https://doi.org/10.1002/jtr.2081
4. Patterson I, Balderas-Cejudo A, Rivera-Hernaez O (2017) Changing trends in the baby boomer travel market: importance of memorable experiences. J Hosp Market Manag:1–14. https://doi.org/10.1080/19368623.2017.1255162
5. Korneliussen T, Greenacre M (2017) Information sources used by European tourists: a cross-national study. J Travel Res. https://doi.org/10.1177/0047287516686426
6. Wang W, Wu W, Luo J, Lu J (2017) Information technology usage, motivation, and intention: a case of Chinese urban senior outbound travelers in the Yangtze River Delta region. Asia Pac J Tour Res 22:99–115. https://doi.org/10.1080/10941665.2016.1182037
7. Alén E, Losada N, de Carlos P (2017) Understanding tourist behaviour of senior citizens: lifecycle theory, continuity theory and a generational approach. Ageing Soc 37:1338–1361. https://doi.org/10.1017/S0144686X16000325
8. Hung K, Lu J (2016) Active living in later life: an overview of aging studies in hospitality and tourism journals. Int J Hosp Manag 53:133–144. https://doi.org/10.1016/j.ijhm.2015.10.008
9. Kim J, Wei S, Ruys H (2003) Segmenting the market of West Australian senior tourists using an artificial neural network. Tour Manag 24:25–34
10. Horneman L, Carter R, Wei S, Ruys H (2002) Profiling the senior traveler: an Australian perspective. J Travel Res 41:23–37. https://doi.org/10.1177/004728750204100104
11. Tiago MT, Couto J, Tiago F, Faria S (2016) Baby boomers turning grey: European profiles. Tour Manag 54:13–22. https://doi.org/10.1016/j.tourman.2015.10.017
12. Huang L, Tsai H (2003) The study of senior traveler behavior in Taiwan. Tour Manag 24:561–574. https://doi.org/10.1108/jmpams.1999.15505fab.001
13. Urhausen J (2008) Tourism in Europe: does age matter. Eurostat: statistics in focus. Industry, trade and services, pp 1–7
14. Wang K-C, Chen J, Chou S-H (2007) Senior tourists' purchasing decisions in group package tour. Anatolia 18(1):23–42. https://doi.org/10.1080/13032917.2007.9687034
15. Alén E, Nicolau J, Losada N, Domínguez T (2014) Determinant factors of senior tourists' length of stay. Ann Tour Res 49:19–32. https://doi.org/10.1016/j.annals.2014.08.002
16. Kohlbacher F, Herstatt C (2008) The silver market phenomenon: business opportunities in an era of demographic change. Springer Science & Business Media, Berlin
17. Ruys H, Wei S (2001) Senior tourism. In: Douglas N, Derrett E (eds) Special interest tourism. Wiley, Brisbane
18. Hunke G, Gerstner R (2006) 55plus marketing: Zukunftsmarkt Senioren. Gabler, Wiesbaden
19. Wolf N (2014) The airport and the older holidaymaker: does anyone care? In: Proceedings of tourism and ageing conference, Estoril, Portugal
20. Patterson I, Pegg S (2009) Marketing the leisure experience to baby boomers and older tourists. J Hosp Market Manag 18:254–272. https://doi.org/10.1080/19368620802594136
21. Liutikas D, Sharpley R, Stone P (2012) Experiences of valuistic journeys: motivation and behaviour. In: Contemporary tourist experience: concepts and consequences. Routledge, New York, NY, pp 38–56
22. Szmigin I, Carrigan M (2001) Learning to love the older consumer. J Consum Behav 1:22–34. https://doi.org/10.1002/cb.51
23. Le Serre D (2008) Who is the senior consumer for the tourism industry. Amfiteatru Econ 10 (special 2):195–206
24. Erfurt-Cooper P, Cooper M (2009) Health and wellness tourism: spas and hot springs. Channel View Publications, Bristol
25. Hunter-Jones P, Blackburn A (2007) Understanding the relationship between holiday taking and self-assessed health: an exploratory study of senior tourism. Int J Consum Stud 31:509–516. https://doi.org/10.1111/j.1470-6431.2007.00607.x

26. McGuire F (1984) A factor analytic study of leisure constraints in advanced adulthood. J Leis Sci 6:313–326. https://doi.org/10.1080/01490408409513038
27. Fleischer A, Pizam A (2002) Tourism constraints among Israeli seniors. Ann Tour Res 29:106–123

Follow the Trail of Culture Through Time: The Use of Archeological Sites as Performance Space

Katerina Nikolopoulou and Stratis Panourios

Abstract Theatre since ancient times, has been associated with the Greek identity. Athens, a political and military power, was using theater as an indication of its cultural power. Culture and cultural tourism development is associated today with sustainable economies and societies. Cultural events are designed in order to expand tourism. This paper proposes the use of archeological sites in Greece as performance spaces, primarily to promote culture, attract cultural tourism and shape its new identity. Combining the old (archeological space) with the new (contemporary artistic expression) provides tourists with a new experience, one that integrates the history and 'aura' of the past with artistic trends and practices of today. The State need to collaborate with local authorities, archeologists and artists in order to provide archeological sites with the opportunity of a new life and Greece with a great opportunity of cultural tourism development.

Keywords Culture · Cultural tourism · Archeological sites as performance space

1 Introduction

Greeks honored their gods through annual festivals [1]. Many such festivals included competitions in music, song and dance, as well as the 'usual' athletics (as the Olympic Games) [2]. In the area of Attica alone where Athens was the main city, four festivals were dedicated to Dionysus, god of wine cultivation, fertility and with "...symbolic characteristics—as the Other, the outsider, sexually ambivalent, transformative, elusive..." [3]. Dionysus, was originally the protector of Eleutherai, a city located on the southwest borders between Boeotia and Attika. According to the

K. Nikolopoulou (✉)
DEREE – The American College of Greece, Aghia Paraskevi, Greece
e-mail: katnikolopoulou@acg.edu

S. Panourios
National Theatre of Greece, Athens, Greece

myth, the Eleuthereans, tired by the continuous fights with the Thebans, offered the Athenians the statue of Dionysus in exchange for Athenian citizenship. The Athenians rejected that proposal and in return were punished by Dionysus with a plague from which they were cured only after they apologized and accepted the Eleuthereans' offer, thus accepting to celebrate and worship Dionysus [3]. The City Dionysia (Dionysia ta en Astei), also known as the Great Dionysia, were held at the end of March and took place above the temple of Dionysus on the south west slope below the Acropolis, in the area known as theatre of Dionysus [2]. The theatre competition was the main event of the celebration and involved the whole city. Celebrations would begin with a huge procession ending in the theatre and the sacrifice of an animal. The following morning, citizens would line up before dawn to buy their ticket and secure a good seat. Each of the next 3 days was dedicated to one poet and his plays: three tragedies and a satyr play were performed. Reserved seats were for state officials, visiting ambassadors, and persons the state wished to honor along with the "priests of Dionysus, other priests and perhaps priestesses" [1, 2]. Athenians had carefully chosen the particular festival to coincide with the presence of the representatives from the colonies who had to visit Athens in order to pay their annual taxes. Through the theatrical performances and competition Athens was showing off; telling the visitors that, besides everything else, Athens had culture.

2 Methodological Approach

The methodology that is used is based on secondary research. The first step is to gather existing information on the two topics mentioned above: The way theater and culture has shaped the Greek identity in the past, the role of cultural tourism within the tourist industry. Then these findings would be analyzed in order to draw conclusions on whether Greece can create and promote a new identity, one that combines its historical, cultural, and natural heritage with contemporary performance trends. Greece is known for its archeological sites and history, however, its identity is not cultural and neither its primary tourism. Therefore, it is important to examine if the development of cultural tourism is a possibility for the country. Secondary research process involves different stages: (a) To identify the subject area and to obtain the necessary information, (b) Gather and organize existing information/data, (c) Compare data if possible, (d) Analyze data [4].

3 Literature Review

This paper examines whether the use of archeological sites as performance space will provide Greece with an opportunity for cultural tourism development and a new identity, one that uses the past in order to experience the present. We first examine

the significant role theatre played in the Athenian identity. Next we examine the role of cultural tourism and whether Greece has the potential to develop such type of tourism.

In Ancient times festivals ". . .served further as a device for defining Athenian civic identity, which meant exploring and confirming but also questioning what it was to be a citizen of a democracy, this brand-new form of popular self-government." [3]. It was through those festival celebrations that ". . .the communal solidarity was emphasized and the abstract notion of "Athens" and "the Athenians" was clearly specified to the citizenry" [5]. Citizenry that was interrelated with a political identity and the established democracy of the fifth century B.C.E. It is this identity, the one that relates with democracy and culture that should be promoted and used in tourism.

Culture today appears to be a valuable tourist attraction. Melina Merkouri, while being the Greek Minister of Culture, envisioned and proposed the ECOC European Capitals of Culture program which was materialized in 1985 [6]. This program allowed Europe to present its integrated and culturally united aspect. Major artists and artistic events organized became accessible to wide audiences [6]. As stated in the European Cultural Capital Report "The European Cultural Capital event (ECOC) is arguably one of the most successful EU cultural programs, attracting increasing interest from policy makers, academics and the media every year" [7]. Besides however the ECOC program, many cities have been linked to culture. Some examples are Kassel, in Germany, which is widely known as the city that every 5 years hosts Documenta, one of the most important Art events. According to the report of the last Documenta co-hosted by Athens in 2017, it attracted 1,230,500 visitors: 339,000 in Athens, 891,000 in Kassel [8]. Another example is the Edinburgh Festival which according to BBC news hosted last summer of 2017, 450,000 visitors [9]. Last, the Biennale in Venice, both the Architecture and the Arts one, attracts approximately half a million to 700,000 visitors each year; The 2017 Arts Biennale had over 615,000 visitors [10].

3.1 The Greek Example

It is evident that culture and artistic events attract large audiences. This July of 2018, at Delphi a tribute to the Greek theater artist Theodoros Terzopoulos was organized titled *The return of Dionysus.* The tribute involved a 3-day intense program of lectures workshops, discussions, exhibitions and a performance directed by Terzopoulos [11]. 200 artists, academics, and students participated in this program and more than 2000 people visited Delphi to take part in the various events organized around it [12]. According to the Director of the Artistic Programmes department of the European Cultural Centre of *Delphi*, Ms. Maro Nikolopoulou, the number of visitors was greater than the one Delphi could accommodate. Therefore, people used all accommodations found in the wider area between Itea (20 km from Delphi) and Arahova (10 km from Delphi) [12].

Greece has a long history, plenty of archeological sites and a unique theatrical tradition. The combination of those elements should be used to attract national and international tourism. So far archaeological sites are used at times as performance spaces. For example, Stratis Panourios used a number of different archeological sites in the islands of Chios, Limnos and Lesvos for his performance 'The Earth song' in order to promote the use of those sites [13]. In the summer of 2015 the director Katerina Evangelatos, sponsored by the Athens and Epidaurus Festival, used the archaeological site of Aristotle's Lyceum for her performance of Euripides's *Rhesus*; and this summer the performance of Euripides's *Trojan Women*, directed by Theodoros Terzopoulos was performed at the ancient theatre of Delphi with the cooperation of the Ephorate of Antiquities of Phokis. Problems occurred however, when almost 2000 visitors arrived in Delphi to watch the performance, while archeologists have set a limit of 400 spectators per performance. After long negotiations 1400 visitors managed to get in the theatre [12].

All three performances mentioned, were very successful and their audiences exceeded expectations. All performances were sold out. Nevertheless, individuals have to go through a long bureaucratic process in order to obtain permission to use archeological spaces besides the requirements and restrictions that are imposed. Often permission is not given or restrictions are so many that the performance is not allowed to happen. According to Ms. Dora Evaggelou, an archeologist working at the Archeological Museum of Piraeus, "archeological sites come to life when used for artistic expression as exhibition or performance spaces because this way they become part of the present, they are used differently and consequently visited by many more people."

Recent studies show that there is a great increase of tourists visiting popular islands of Greece and Spain [14]. Mediterranean countries share an advantage over the rest European countries. They offer natural and cultural heritage. Their warm climate, the sun, the easily accessible mountains and coastal areas combined with the cultural experiences they provide, attract a great number of tourists [14]. Last, cultural tourists is assumed are "educated people with high status occupations and high incomes, who spend large amounts of money to satisfy their highly refined tourist needs" [15]. According to the ATLAS 2017 research, cultural tourists spend an average of 10% higher than the average leisure tourists [7].

4 Conclusion

Archeological sites are found within exceptional landscapes which adds to the experience of the visitors. At the same time, theatre has always been about *psyhagogia* (ψυχαγωγία) a Greek word that refers to the pleasing of one's spirit and intellect, and thus taking one beyond being passively entertained. So, this blend allows visitors to feel members of a community sharing an artistic experience. At the same time, developing cultural tourism will result in economic growth since cultural tourists spend more money at the places they visit. Therefore, priority should be

given to the preservation of the archeological sites and to the creation of a simpler process for making these spaces available for contemporary artistic expression and cultural tourism development. What is necessary is a collaborative spirit. The ministry of Culture, local authorities, archeologists, artists and local societies should collectively work towards the materialization of both. It is crucial for all parties to understand the necessity of bridging the past with the present and thus create opportunities for everybody: the archeological spaces which are given a chance to become alive again; the artists, who are offered spaces of expression; the local communities which would greatly benefit from the visitors; the tourists who will get a memorable experience one that cannot be compared with any other type of touristic experience, entertainment or mass entertainment; and finally the country which will develop its cultural tourism. Tourism for Greece is a valuable economic source. One we can expand and enhance further. As Petros Themelis, archeologist, says: ". . .archeology is creation, especially when you revive a city. You try to bring the city back, give it new life, live the present. I wish this place would become a place where people are gathering to be entertained. A place where exhibitions, performances and other events take place. . ." [16]. If a collaborative spirit prevails then maybe Greece will become known for providing space to its visitors to become members of a community and give them a chance to experience its present along with its past. Only then will acquire a new, even more engaging identity, one that will attract and sustain cultural tourism.

References

1. Brockett O, Hildy F (2013) History of theatre. Pearson, New York
2. Brown J (2001) The Oxford illustrated history of theatre. Oxford University Press, New York
3. Easterling PE (ed) (1997) The Cambridge companion to Greek tragedy. Cambridge University Press, Cambridge. https://doi.org/10.1017/CCOL0521412455
4. Kothari CR (2004) Research methodology: methods and techniques. New Age International, New Delhi
5. Krikona E (2016) From the "national" to the political consciousness in Athens of the 6th century BCE, and the emergence of democracy. J Ancient Hist Archaeol 3. https://www.academia.edu/36920607/From_the_National_to_the_Political_Consciousness_in_Athens_of_the_6th_century_BCE_and_the_Emergence_of_Democracy
6. Liu YD (2012) Cultural events and cultural tourism development: les-sons from the European capitals of culture. Eur Plan Stud 22(3):498–514
7. Palmer R, Richards G (2007) European cultural capital report. ATLAS, Arnhem
8. Russeth A (2017) Documenta 14 Reports Record Attendance [Updated]. ART News. http://www.artnews.com/2017/09/19/documenta-14-reports-record-attendance/
9. Record numbers at Edinburgh's festivals (2017) BBC News 16. https://www.bbc.com/news/uk-scotland-edinburgh-east-fife-41075286
10. https://www.labiennale.org/en/news/biennale-arte-2017-over-615000-visitors
11. The return of Dionysos Tribute to Theodoros Terzopoulos (2018). https://www.eccd.gr/en/news/the-return-of-dionysos-tribute-to-theodoros-terzopoulos-5-8-july-2018/
12. Nikolopoulou M (2018) Information about an event which took place at Delphi
13. http://stratispanourios.gr/to-tragoudi-tis-gis/

14. Rontos K, Salvati L, Syrmali M, Vavouras I, Karagkouni E (2017) Exploring tourism activity in countries and regions of Europe in the recent period of crisis. Curr Polit Econ Eur 28:55–82
15. Jovicic D (2016) Cultural tourism in the context of relations between mass and alternative tourism. Curr Issue Tour 19:605–612. https://doi.org/10.1080/13683500.2014.932759
16. Zaharatou S (2017) Petros Themelis: Messini is my passion, a crazy love of mine. Even without getting paid for it. News-Vima Online https://www.tovima.gr/2016/02/08/vimagazino/petros-themelis-messini-einai-ena-pathosmia-agapi-treli-kai-as-min-me-plirwnei-kaneis/

Tourism as a Process of Promoting and Developing Traditional Settlements

Dionysia Fragkou and Dimitris Marnellos

Abstract The impact of tourism development is varied and contradictory. But nobody can deny that tourism contributes to economic development and culture. Arid and remoted areas at risk of abandonment and desolation are developing and continuing their course in time. However, this is not always the right way of this development. The unregulated and unlimited building, the wasting of natural resources, the lack of aims and planning, usually lead to undesired results. New trends and prospects for tourism product development want tourism to turn from mass to quality or alternative tourism. Part of the alternative tourism is the cultural tourism, which is the search for a different holiday mode, focusing on cultural destinations and authentic experiences. Staying in an active traditional settlement can be part of such an experience. Participation in daily habits and lifestyle of residents, in local events, customs and traditions of the region as a whole living experience, can be the basis of alternative tourism but also can become a development and promotion tool of this place. In this process, the interior space has active participation. The study, the depiction and interpretation of it, as well as the usable objects and the furniture that make it up; constitute an important parameter in this experience. This presentation is completed with the analysis and evaluation of the example of the reuse abandoned buildings, in the "Kostos" settlement of Paros, in the context of a diploma thesis.

Keywords Tourism · Traditional settlements · Architecture · Interior space

D. Fragkou (✉) · D. Marnellos
University of West Attika, Athens, Greece
e-mail: dfrangou@teiath.gr

727

1 Traditional Settlements

Greece has a significant stock of traditional settlements [1] whose preservation and sustainability is necessary for the tourist profile of the country. Traditional settlements are considered as the settlements that have retained the image they had in the past as well as their local character [2] or else "the residential complexes that preserve, more or less, their traditional urban fabric and traditional buildings and elements" [3]. They are part of our cultural heritage and an important factor in the tourist future of our country. There are over 800 traditional characterized settlements in Greece. Apart from these, throughout the country, numerous residential complexes reflect our cultural history and are living organisms through which the tradition of the place continues. But financial problems and the inability to resolve them in previous years, led to gradual abandonment. A Consequence of this was the devastation and lack of any interest in the maintenance of existing buildings and structures. At the same time the uncontrolled construction altered their morphological character. The Greek National Tourism Organization realized their importance early and took the maintenance and exploitation of modern life as dynamic segment, which would play an important role in tourism and develop the site [4]. Unfortunately, this effort did not have the expected results, although it was widely accepted by both Greeks and foreign visitors.

The aim of this study is to investigate the possibility of exploiting abandoned buildings within the residential settlement. These settlements do not need to be designated by the competent authorities. But they must have the same characteristics and they are active, so that the new users-visitors can have the possibility of including into the place and local events. Through the process of reuse and participation, the presence of active visitors widens, with beneficial consequences both for the economy of the local community and for the development and promotion of the settlement itself, ensuring the human measure.

2 Tourism: Alternative Tourism

The modern tourist is nothing like the tourist of the 1960s. He is generally an experienced traveler and has seen various tourist destinations. As a result, the visitor is more demanding in terms of quality of service and convenience that is expected of a destination [5]. International studies [6] predict that the prospective visitor should be able to personalize every aspect of the stay experience and services to be offered. In this context, new trends and pre-optic tourism development want to turn from mass to quality or alternative tourism and the tourist product in tourist experience.

Alternative tourism in addition to personalization of service, actively participate in the development through the expansion of the tourist season. This expansion is based on the participation of visitors to the local events throughout the year, whether they concern culture, the customs and traditions of the place, or the daily routine of

the residents of the place of visit. Through this process, tourists seek a different relationship to the place where the local is interpreted as an honest approach and the issue of relationship with nature becomes an important element of planning. Education and culture are activities that inspire the visitor to local and cultural events and have an important role in the final destination selecting. Thus, more and more destinations focus on active development of various leisure time activities. They also seek to offer a different lifestyle, the experience of stay [5].

A large number of potential tourists around the world seem to prefer to differentiate by choosing to escape from everyday life and enjoy authentic experiences in a slow rhythm and away from the hordes of tourists. "Slow travel" holiday and the sharp rise in rural tourism are two such examples. This kind of vacation facilitates the development of small units which enable travelers to taste daily life and/or nature in the places they visit. This can be achieved by hotels characterized by their small number of rooms, unique architecture and decor, provision of personal services and food of high quality, as well as the benefits of new technologies [7]. This prefers re-use of the existing building stock with a different logic. The stereotypes of tourist inhabitation are questioned, such as the importance of the view, the coast and the diptych "sun and sea". The proposals are simpler, the materials are more basic and the tourists are invited to live in a more direct relationship with nature and place. There is no debate in the 2000s and perhaps the need for a lasting connection to technology, networks and information may be revoked [8]. The aim is to incorporate new trends in existing shells and achieve the integration of tourists—visitors to existing structures so as to be able to experience the authentic accommodation [9].

At the heart of this design experience prominently, emphasizing both the originality of the expected facilities and in the hosting space benefits through the development of the building shell itself. The study of local traditional architecture and the use of natural local materials is an important factor. But the search for the forms of the past, concerning the outside, concerns the shell which seems to be attributed to tradition or history. The interior is cut off from the outside from the shell and follows its own path. So is the search field of the new, of architectural experimentation and international style. This growth of the interior occasionally acquires particular dimensions, incorporates elements of lifestyle, body and wellness care, technological gadgets, lighting. . . . The interior gets a much more important dimension using impressive elements and the exterior seems to disappear [10]. The design globalization of the interior space, removes the feeling of integration at the local and the dimension between the inside and the outside causes confusion and disorientation. But the authentic approach and diversity can promote a new architecture with new features in traditional shells. As the interior space plays a key role in the visitor's experience, it is important to study the elements that make it so that the main concept of design can be directly understood. The identity of the space is appropriate to reflect the uniqueness of the place of origin and the internal space to be actively involved in the embodiment of the shell-building at the location [11].

3   The Interior Space

By detecting the interior space in settlements, whether traditional or not, we find their inseparable relationship both with the place and its tradition, as well as with the building itself and the shell [12]. We distinguish fabrics such as wood, stone, especially coatings, ceramics, woven, knitted (wicker and non-woven), materials with a strong locality and familiar to the residents-users, usually treated locally and with particular "economy" in their use. This does not mean, of course, that we must strictly limit them, but care must be taken to comply with the architecture and tradition of the place, building and settlement. Besides, the international style and its continuity up to now, adopt the minimum of things in the design that has a very important role.

The "surprise" in the interior design than the shell or the settlement may be interesting, but it is not certain that ensures the overall success. The continuity between shells and interior, however, completes the experience of living and the understanding of the place-settlement by offering a real experience associated with the other elements of hospitality. Furniture and objects are of course valuable at all levels, and in this way we must treat them today as "precious" elements both culturally and utilitarian-functional in order to participate and complete the space and, consequently, the building [13]. Structures of the shell "penetrate" the interior, differently in each place, the mainland or the stone, the islands, the cement mortar and the lime, organizing and furnishing in many cases.

Other furnishings and useful items meet other functional needs with the convertibility or different use of the same objects, nothing is merely "decorative" or demonstration or enrichment. Even when this happens, an element is not "useless" in the furnishings and equipment of the interior. An example may be the placement of dishes on the wall, in some parts of Greece, which essentially used them and secondly decorated the space, or even shelf-like surfaces for the placement of objects, for the temporary or permanent storage of food products. Numerous other usable elements of the interior such as looms, jars, dips, etc. characterized the space and connected it with the place and at the same time composed the decoration. Then, as a rule, the interior space, in the context of tourism, is more confronted with a "scenographic" intention, drawing on elements from tradition but not necessarily from the specific place where the intervention takes place.

In order for the experience of accommodation to be comprehensive, substantial and real in traditional settlements, it must also include the interior. In this venture, all the elements that make it up include furniture, objects and of course the local materials and the way they are used. All above has their importance in enhancing this experience in hospitality. Resting, eating, sleeping and transferring these activities to the modern lifestyle without the disposing of the authentic features that characterize them, transform the stay into a complete experience while saving the cultural elements of the interior and while at the same time highlighting the locality and the tradition [14].

4 Case Study

This paper discusses the relationship between tourism and the personal experience of staying in a traditional settlement and particularly a mountain village located on the island of Paros [15]. Paros is the third largest island in the Cyclades is located west of Naxos, from which it is separated by a narrow channel of about 3 miles; while from Piraeus is 90 nautical miles. The geographical position of Paros in the central Aegean Sea, the crossroads of the sea routes linking mainland Greece to the islands of the Archipelagos, the Asia Minor coasts and, more generally, the Mediterranean Sea, has become the long-term basis for the island's development.

The necessity of integrating the settlement into tourism networks and its development through alternative tourism led to the elaboration of this study [16]. In this context, actions for participation in both the rural and the cultural habits of the place are created. The exploitation of abandoned buildings in order to create a complex of houses and communal spaces between the dwellings of the permanent residents and their use as tourist accommodation scattered in the village can give a new form to the concept of habitation in this area by mixing visitors with the inhabitants and assimilating them in the traditional settlement. Based on this idea, a small hotel unit of individual buildings is being developed on an imaginary line crossing the main bulk of the settlement. On this imaginary line-path the buildings that are selected to participate are varied. From single rooms for two people, to three-room houses for four or five people. Buildings with expansion space both private and public. Spaces with their simple design and the use of traditional elements can satisfy all options/preferences. Buildings located on the main path-course in the settlement, which are connected by the principles of abandonment and the possibility to renovate and participate in the creation of the quality tourism of the area. Routes are being developed both inside and outside the settlement, which lead the visitor to the reading of the traditional forms of the alley and the everyday activities of the island. Leading tasks:

- From the harvesting of the fields, to the kneading of bread in traditional ovens
- From the nets, the creation of oil and of edible olives
- From the cultivation of the vineyards, the bottling of wine
- From being familiarized with bees, producing honey and other bee products
- From the simple walk to the Byzantine paths, the collection of caper, edible grasses and aromatic plants
- From simple information about traditional arts to their application

The main idea of design uses as a source of inspiration the whitewashed joints that dominate the alleys of the settlement [17]. These and their sequel create light paths within the space, which sometimes signal the basic paths and participate in the overall design of the buildings of the action. The purpose and objective is to create the conditions for the integration of the visitors into the living space of the settlement, the exploitation of the abandoned buildings and through them the emergence

of the settlement as well as the transmission and the utilization of the knowledge and the experiences of the residents with the alternative tourism.

5 Conclusion

The exploitation of the reserve of traditional villages in our country combined with tourism is a field that can provide an opportunity for these settlements to revive by actively joining the tourist process. Their promotion through cultural and alternative tourism can contribute to their preservation and development. Abandoned buildings, monuments of the past that were destroyed due to maintenance failure, can actively participate in the emergence of the place where they are located. This selective process with the creation of hospitality structures scattered in the residential complex prevents the alteration of the place with one great tourist accommodation. The measure and the human scale dominate the contact with the locality's features and the permanent residents are the priority. Guests experience the authentic touch with where they live and interact with residents. The revival of traditional settlements in this way and the proper use of them can prove to be an excellent synergy that will highlight them as tourist destinations and assist their economic development.

References

1. ΦΕΚ 594Δ 1978—tee/portal.tee.gr/portal/page/portal/tee. Accessed 05 Sept 2018
2. https://el.wikipedia.org/wiki. Accessed 02 Aug 2018
3. Papageorgiou M, Posoukidou G (2014) The traditional settlements of Greece: space and protection issues, pp 108, Article, ResearchGate, January. https://www.researchgate.net/publi cation/317290962/Downloads/2018
4. Bozineki-Didonis P (2008) Traditional settlements and tourism development of the program of the Greek Tourism Organization 1975–1995, The example of Oia of Santorini. GTO, Athens
5. Petrakos K (2011) Landscapes of mass tourism. Migration flows-to find a job. Two different worlds in the same place: you migrated to Hersonissos and Malia. Postgraduate Diploma Thesis, NTUA
6. Hotels 2020: Beyond segmentation. Fast Future Research
7. Fragkou D, Georgiadou Z, Marnellos D (2014) Architectural design as an effective aspect for the improvement of the tourist product. J Tour Res 8:12
8. Aesopos G (2015) Tourism landscapes. Reconstructing Greece. Domes, Athens
9. Fragkou D, Georgiadou Z, Marnellos D (2015) The habitation experience as a means of promoting the local cultural heritage. 1st international conference on experiential tourism, Santorini, 9–11 October 2015. http://IMIC2015.conferences.gr/themata/parousiaseis
10. Fragkou D (2017) The impact of mass tourism to traditional settlements. 6th international conference on tourism and hospitality management, Athens. J Tour Res 17:560
11. Georgiadou Z, Marnellos D (2016) Modern cultural heritage. When Greece sought economic reconstruction in tourism: the indoor space in the hospitality facilities. Lecture for workshop: «ΞΕΝΙΑ-ΦΙΛΟΞΕΝΙΑ»
12. Konstantinidis A (1975) Self-knowledge elements for a true architecture. Ford Foundation

13. Marnellos D, Georgiadou Z, Frangou D (2015) Hotel furniture in Greek modernity: "Xenia" and "Amalia" hotels cases. 5th International Conference on Tourism and Hospitality Management, Athens, June 2015. J Tour Res 10. Published by: Activities for the Development of Tourism and Tourism Education and Tourism Research Institute
14. Koudouni A (2014) Protection of traditional settlements & modern architectural design. Title of recommendation: The institutional framework for the protection of traditional settlements. Overlaps of competencies, weaknesses in the systemization of protection criteria and implementation problems [pdf]. http://www.ellet.gr/sites/default/files/a.koudouni_presentation.pdf. Accessed 25 Jun 2018
15. Filippides D (1984) New Hellenic architecture. Melissa, Athens
16. Consola N (2012) Strategic plan for cultural tourism for the South Aegean region [pdf]. http://grsa.prd.uth.gr/conf2013/51_konsola_ersagr13.pdf. Accessed 15 Jan 2018
17. Georgiadou Z, Frangou DP, Chatzopoulos P (2015) The pattern of mass tourism and the relationship with local resources. The pattern of endogenous development. J Tour Res 11:102

Brand as a Strategic Asset for Cultural Organisations: A Proposal for the Forthcoming Cultural Institution of Pafos

Harry Ph. Sophocleous, Andreas Masouras, and Christos Papademetriou

Abstract Cultural organizations nowadays open up to be more outgoing, a fact that forces them to adopt marketing and consequently to brand themselves in order to gain ground and be capable of accomplishing their mission to the society. In this manner the paper outlines how, branding acts as a benefit to the function and the mission of a cultural organization. Accordingly, the paper examines the notion of branding as a strategic asset for a forthcoming cultural organization in Pafos, Cyprus, by inspecting the given situation and by proposes research and further steps. More specifically, the paper evaluates the assets and the branding inheritance of the forthcoming body, as they derive from the merge of the local cultural infrastructure of the town and suggests ways on how to establish a brand that will add the value of the organization. In this manner, the paper stresses the synergies may emerge, and discusses the managerial implications and the limitations rise mainly by the unspecified instructional framework and the lack specific order and authority.

Keywords Culture · Cultural organisation · Branding · Strategic asset

1 Introduction

After the benchmark/target of Pafos 2017 and the considerably successful term of Pafos as a Cultural Capital of Europe, Municipality of Pafos is intending to coordinate and merge the city's entire cultural infrastructure into a newly established cultural institution. This paper presents the importance of branding in the whole project of founding and introducing a new cultural body. More specifically, by considering the cultural settings of the city and Pafos 2017 success story, together

H. P. Sophocleous (✉)
Strategico Consulting Group, Pafos, Cyprus
e-mail: c.sophocleous@nup.ac.cy

A. Masouras · C. Papademetriou
Neapolis University Pafos, Pafos, Cyprus

with its interrelated branding inheritance as a strategic asset and by discussing relevant issues, the paper suggests the projection of a suitable strategy. The vital managerial implication of the proposed project derives from the fact the projected organisation does not have yet a clarified institutional framework in order to facilitate any suggested strategy. Currently, we have the defunct organisation of Pafos 2017, which however carries an effective brand, the "Pafos Aphrodite Festival Organisation", which has expertise in organising large scaled concerts and Operas and finally we have all the facilities and the venues, which are currently under the administration of the municipality and are going to be transferred to the new organisation. The new/projected organisation is going to take under its umbrella all the above assets. In this manner, the paper suggests a unique and comprehensive strategy and a solid brand that could act as facilitator of the projected unification. The challenge derives from the fact that "Paphos 2017" an institution that made its circle, carries a branding heritage that mast be transferred and reflected by the new brand.

1.1 Aims and Objectives

The paper examines the notion of branding as a Strategic Asset for a forthcoming cultural organisation in Pafos, Cyprus, it has been considered as essential to clarify a set of more transparent aims and objectives that supports the accomplishment of the proposed aim.

- To examine the given situation and outline the nature and the implications of the brand that is required.
- To measure the Branding Inherence that is likely to be transferred to the organisation.
- To propose research further steps in order to facilitate and implement the accomplishment of the proposed Brand.

2 Literature Review

The success of a certain organisation of every nature is not simply the result of the correct strategy. Instead, the success of an organisation is the result of applying a strategy that is flexible enough to respond to changing situations [1–4], as well as adapting to the changing environment [5–8]. Consequently, a successful strategy is the one, which could be competitive even under a changing 'competitive structure' [9–11]. Therefore, the 'competitive structure' of a certain industry, in our case the public provision of culture, along with the 'strategic assets' of an organisation, formulates 'the competitive advantage' of the specific organisation.

Consequently, the section evaluates 'brand' as a 'marketing asset' and as a 'value' creator, by clarifying the meaning of the term 'brand', by investigating the

'structure of branding' and by analysing its attribute as a creator of consuming preference (". . .branding is the 'DNA' of 'competitive strategy'") [12, 13]. Accordingly, a successful brand can operate as a powerful marketing asset and as a source of barriers to new market entries. In this respect, an organisation with an individual and distinctive 'branding image' should be capable of sustaining its 'competitive advantage', even after the entry of powerful competitors [14]. The particular statement may imply the significance of the role of 'branding' within the overall strategic approach of a company. This may suggest that 'brand' is one of the major facilitators of a company's corporate strategy. However, at the same time the competitive strategy of an organisation, even if we are talking about nonprofit organizations, as is the specific case, is one of the first things that is reflected by the brand of the specific organisation.

Product is something that is made in a factory and can be quickly outdated; a brand is something that is bought by a customer [1]. Moreover, somebody could argue that a successful brand is timeless. The existence of a successful 'brand' goes beyond the 'life cycles' of the products under the specific 'brand' and gives a permanent sense of 'value' to the organisation, which exploits it.

In the case of a changing 'operational environment', as it happens with the given case, if the forthcoming organisation aims to build and to successfully exploit a brand, it should be capable of building a basic understanding of this brand. Accordingly, the organisation might need to thoroughly clarify the meaning of 'effective brand management'. 'Effective brand management' is the device that gains the preference of the consumer. Moreover, as it has already been argued, "branding is the 'DNA' of 'competitive strategy'" [15]. Consequently, 'brand' is something that reflects the mission and the purpose of an organisation and it gives a sense of identity and distinctiveness to the particular organisation. Furthermore, it can be said that brands work by facilitating and making more effective the consumer process in the sense that the existence of well-defined and well-structured brands enable the customer to recognize the set of attributes that are offered by the products and the services of an organisation. Moreover, it might be easy for someone to understand that brand is not simply a matter of communication, but instead is something that gives a sense of identity to the organisation. Accordingly, 'Brand' is something that must be considered in the very early stages of the planning process, and is related to several organisational dimensions, activities and functions (see Fig. 1). Therefore, in the specific case of the new organisation, the effective and efficient application the specific illustration, it is likely to obtain the establishment of a solid identity and thus of a strategic asset.

Fig. 1 The dimensions and the associated functions of brand strategy

2.1 The Value of Branding Assets in Changing Operational Environments

It might be useful to consider defying 'strategic change' and examining the ways in which a 'branding inheritance', i.e. an existing brand could assist in that direction. In this respect we will try to give a definition by bearing in mind the individualities and the distinctiveness of such an organisation. In a similar manner, Mintzberg [3, 4] tried to define 'strategic change' by focusing his research in identifying various definitions of the term 'change in strategy', which are classified along two fundamental dimensions. The first dimension [5] through which strategic change is defined makes a distinction between conceptualizing strategies. Firstly, conceptualizing strategy in terms of a position that is reflected in the choice of product/market domains or competitive advantages through which firms define their relationship to the environment. Secondly in terms of a perspective that is reflected in the integrated sets of ideas through which problems are marked and understood and from which decisions are taken [6]. On the one hand, those who defined 'strategy' as a 'position' look outward to situate the organisation in its 'external environment'. On the other hand, those who defined 'strategy' as 'perspective' look inwards in an effort to understand the collective mind, or in other words the culture of an organisation, which formulates the organisations continuing relationship with its environment [2–4, 16].

2.2 Cultural Organisations, Branding and Urban Living

The previous sections made an attempt of analysing and emphasizing the essence of branding as a facilitator of strategy and as a strategic asset, by viewing literature relevant to the general notions of branding, however in order to connect the concept of branding with the notion of culture and in relation with cultural activities, it might be necessary to make an insight view upon the application of branding for cultural purposes, as this has been reported by relevant literature [17–19]. Accordingly, another issue that derives from the scope of the paper is the discussion of challenges, potential and problems of urban living [20]. Moreover, the notion of "City Imaging" refers to the ways that certain cities are branded and marketed. It assumes that urban illustrations could be altered to support tourism and attract businesses and in-demand workers to one city in preference to another (See Fig. 1). In this sense a successful and thorough brand of the local principal cultural organisation, might establish an effective branding appeal for the wider Urban Living of the Town.

Synergies Synergy derives from the Greek word synergos which means working together [21]. Juga [22] identifies synergism as the co-operative action of discrete agencies in such a way that the total effect is greater than the sum of the effects taken independently. Synergy results from the process of making better use of resources, including physical assets such as manufacturing facilities, and invisible property such as brand name, customer knowledge, technological expertise and corporate culture. When the organisation exploits its unique resources, it achieves synergy [22].

3 The Current Situation and the Targeted Project

Currently, especially after the defunct of the Cultural Organisation "Pafos 2017", the landscape within the wider spectrum of cultural facilities and cultural functions in Pafos is complicated and the various facilities are remaining under a moderate use, in contrast with the year 2017, where all the facilities were included under the umbrella of "Pafos 2017" and they accommodated its various actions and activities. Moreover, "Pafos 2017" managed to establish a solid and recognizable brand image which could be inherited by the new organisation, and with a suitable strategy it could stay alive and it could be reflected in the brand of the new organization. Another organisation that is about to be a part of the new merge is "Pafos Aphrodite Festival Organisation" which is currently active and operates since 1998 as an independent organisation with major stakeholder the municipality of Pafos and minor stakeholders the rest of the local municipalities. "Pafos Aphrodite Festival Organisation" is the organizing body of the annual Opera festival that it takes place every. The specific organisation will inherit the asset of a well-established and prestigious cultural event to the new organisation (see Fig. 1). As it has already been mentioned, the challenge derives from the fact that "Paphos 2017" an

institution that made its circle, carries a branding heritage that mast be transferred and reflected by the new brand.

3.1   The New Organisation and the New Strategy

Finally, the new organisation is about to inherit the authority, the management and the operation of all the major venues of the municipality, including few new projects that have been built as a result of Pafos 2017 insistent, as the new landmarked "Markidion Municipal theater", The Unified Cultural halls of "Palia Electriki" and "Attikon", and the Space of "Chani tou Iimpraim", spaces that where renewed and converted to cultural venues of high standards and cult status. Accordingly, it is clarified that the planned organisation could be benefited by the synergies that might arise as a result of the merge of its inherited assets. As it has already been mentioned in an earlier section, synergies occur with the connection of different assets and in the specific case the potential synergy might come though the unification of "Pafos Aphrodite Festival Organisation" ability in organising events, with the positive image of "Pafos 2017" and the Economies of Scale of the Municipality as administrator of a wide range of cultural facilities, in an effective way, following the example of previous cases, such as the case of Montreal 1976, and avoiding examples such as that of Athens 2004 and Rio 2016 [23, 24]. In this manner the new strategy should facilitate the unification of the assets and manage to communicate the existence of a solid and unique organisation, with joined aims and objectives and thus a unique branding and a unique marketing mix and promotional tools (Website, Social Media etc.)

The Recommended Brand   Accordingly, the new organisation, as it is suggested and by the vital scope of the paper, needs a strong and suitable branding entity to act as the communicator and the facilitator of those synergies and thus to operate as a strategic asset that will facilitate the integration of the values of all the participating elements. Currently we have the heritage of the sold brand of "Pafos 2017", the brand of "Pafos Aphrodite Festival Organisation", together with the cultural heritage of the town. Therefore, and as it is recommended and by the central aim of the project, the new brand must reflect all those elements and should reflect a unique image and a solid Strategic asset for the new organisation. Accordingly, some research is recommended, in order enforce the thorough and the comprehensive facilitating of the recommended strategy and the suggested brand.

4   Suggested Methodology

The current section refers to the research methods of the project and establishes some researchable objectives that reflect the basic scope of the thesis. In this respect, it uses the researchable objectives derived from the paper as a basis for the research design of the project [20]. Defines research design as: ". . .a master plan specifying the methods and procedures for collecting and analysing needed information." In order to facilitate and accomplish the aims of the paper as they have been stressed in the previous sections, it has been considered as essential to deploy some methodology and certain research tools, which could create some evidence for the essence of Branding as a strategic asset for the forthcoming organisation. In a similar manner the application of methodology will assist to the evaluation of the existing strategic asset, for example the value of "Pafos 2017", as a component of the suggested brand.

4.1   Research Tools

Before proceeding to the selection of the appropriate research methods, it might be necessary to clarify the type of research conducted. Accordingly, there are four different perspectives (purpose, process, logic and outcome) under which one could classify the type of a given research [25]. Firstly, specific research could be classified according to its purpose. Furthermore, research could be classified as 'exploratory', 'descriptive', 'analytical' or 'predictive'. Secondly, specific research could be classified according to its process. Research could be classified either as 'quantitative' or 'qualitative'. However, in order to enforce the scope of the specific section, within this particular section we will try to clarify the type of research [20, 25, 26]. Consequently, if we consider the proposed objectives, we may conclude that the objectives might need to be approached with a mixture of 'descriptive', 'analytical' and 'predictive' research. Predictive research goes further than explanatory research. The latter establishes an explanation for what is happening in a particular situation, whereas the former forecasts the likelihood of a similar situation occurring elsewhere [25]. Therefore, the nature of the project, suggests the deployment of some qualitative research, which could lead to some outcomes concerning the appreciation and the perceptions of people that are related and are interested in the potential outcome and the potential entity of the suggested organisation.

Focus Groups   Given that the scope of the proposed project suggests the use of qualitative research, we could consider the use of Focus Group. ". . .focus groups provide insight into how people think and provide a deeper understanding of the phenomena being studied. . ." [27]. The specific method suits to the scope of the project since it supports the gaining of more thorough and comprehensive qualitative data. Focus groups involve group interaction between members of the target population during focus groups may encourage participants to make connections to

various concepts through the discussions that may not occur during individual interviews.

4.2 Research Measures

After formulating the researchable objectives of the project, it might be necessary to clarify the constructs of the major research variables [20]. In this sense the current section makes detailed reference to the researchable measures of the project. Accordingly, in order to accurately assess the two tested objectives, it was necessary to make a careful selection of the researchable measures (variables). In other words, as it is reflected by the proposed objectives, the proposed research involved the measurement of the following major variables: 'The existing Branding Assets', 'The desired Projected Brand' and 'The Brand Essence in the spectrum of Cultural functions'.

5 Recommendations and Limitations

The nature of the project as a proposal involves several limitations and managerial complications, mainly derived from the fact that we do not have the order and the authority to proceed to a more thorough analysis of the given situation in relation to the suggest aims and objectives, as well as the proposed methodology. Another limitation that arises is the fact that the institutional framework of the new organisation remains unspecified, thus is not secure to make assumptions or any time. However, as a further step, will follow a formal presentation of the proposal against the think tank which is dedicated by the municipality, in order to discuss and develop the idea of the new organisation. In this manner, we could proceed to a more comprehensive methodology, which may lead to a desirable and effective research. Moreover, it is suggested that any future step should follow the clarification of the institutional framework of the projected entity. In addition, it is recommended to proceed to a Swot analysis in relation to the projected organisation, as well as to consider the economic dimension and the economic figures that the new organisation is likely to inherit.

References

1. Dutton J, Jackson S (1987) Categorising strategic issues: links to organisational action. Acad Manag Rev 12:76–90
2. Mintzberg H (1979) An emerging strategy of business research. Adm Sci Q 24:582–589
3. Mintzberg H (1979) The structuring of organisations. Prentice Hall, Englewood Cliffs, NJ

4. Mintzberg H (1987) Opening up the definition of strategy. In: Quinn JB, Mintzberg H, James R et al (eds) The strategy process: concepts, contexts and cases. Prentice Hall, London
5. Ginsberg A (1988) Measuring and modelling changes in strategy: theoretical foundations and empirical directions. Strateg Manag J 9:559–576
6. Hedberg B, Johnson S (1977) Strategy formulation as a discontinuous process. Int Stud Bus Organ 7:88–109
7. Staw B, Sandelands L, Dutton J (1981) Threat rigidity effects in organisational behaviour: a multilevel analysis. Adm Sci Q 26:501–524
8. Thomas J, Clark S, Gioia D (1993) Strategic sense-making and organizational performance: linkages among scanning, interpretation, action, and outcomes. Acad Manag J 36:239–270
9. Cook K, Shortell S, Conrad B, Morrisey M (1983) A theory of organisational response to regulation: the case of hospitals. Acad Manag Rev 8:193–205
10. D'Aveni R, MacMillan I (1990) Crisis and the content of managerial communications: a study of the focus of attention of top managers in surviving and failing firms. Adm Sci Q 35:634–657
11. Tushman M, Romanelli E (1985) Organisational evolution: a metamorphosis model of convergence and reorientation. In: Cummings LL, Staw BM (eds) Research in organisational behavior, vol 7. JAI Press, Greenwich, CT, pp 171–222
12. Rubinstein H (1996) Brand first management. J Market 12(4):269–280
13. Macrae C (1991) World class brands. Addison-Wesley, Wokingham
14. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for Southeastern Rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66
15. Kavoura A, Bitsani E (2014) E-branding of rural tourism in Carinthia, Austria, Turizam 61(3): 289–312. UDC: 338.48-44(1-22) (436)
16. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector—the case of a Greek tourism destination. J Tour Res Rev Tour Sci 18:121–131
17. Pasquinelli C (2017) The cultural branding matrix: framing the relation between cultural institutions and city branding in book. Handbook on place branding and marketing. Edward Elgar, Cheltenham
18. Jenkins BL (2005) Can J Commun 30(2)
19. Caldwell N, Coshall J (2002) Measuring brand associations for museums and galleries using repertory grid analysis. Manag Decis 40:383–392
20. Zikmund WG (1997) Business research methods. Dryden, London
21. Harwood CJ (2000) Review of "Synergy matters: working with systems in the twenty-first century". In: Castell AM, Gregory AJ, Hindle GA, James ME, Ragsdall G (eds) Kybernetes 29 (4):523–529
22. Juga J (1996) Organising for network synergy in logistics. Int J Phys Distrib Logist Manag 26 (2):51–67
23. Kasimati E (2015) Post-Olympic use of the Olympic venues: the case of Greece. Athens J Sports 2(3):167
24. Papanikolaou P (2014) Athens 2004. Ten years later the Olympic infrastructure, the cultural Olympiad and the 'white elephant' syndrome. J Power Polit Gov 1(1):1–9
25. Hussey J, Hussey R (1997) Business research: a practical guide for undergraduate and post-graduate students. Palgrave, London
26. Saunders M, Lewis P, Thornhill A (1997) Research methods for business studies. Pitman, London
27. Gill J, Johnson P (1997) Research methods for managers, 2nd edn. Paul Chapman, London

The Concept of Analysis and Reconstruction of the Work Time System in a Tourism Enterprise

Leszek Koziol and Janusz Zabek

Abstract The aim of the article is to present the concept of the analysis of the work time system in the company and the presentation of the results of empirical research. The basic problem of the research is the identification of the organizational gap, which is the difference between the applied work methods and the applied working time systems, as well as an indication of the method of elimination of this gap. A thesis assuming suitability between the working time system and the working method has been stated. The concept of working method included in the article: elements of the production system, elements of the work system and working conditions. These systems (subsystems of the working method) should take into account the principle of economy of operation. The proposed course of analytical procedure (research methodology) includes following stages: identification of organizational units and the applied method of work, analysis and evaluation of the work time system, determination of ways to improve the work time system. The empirical part of the article presents, the results of research in the form of case studies (case study protocols). It describes and assesses work time systems and identifies work methods of the tourist industry (gastronomy) and creative industry companies (freelancing). The interview and the questionnaire were used as a research tools. Paper is to present the working time system: tools for analysis, practice, and competitive advantage.

Keywords Work time system · Work method · Work analysis · Gastronomy · Freelancing

1 Introduction

In recent years, there has been a growing discrepancy between the size and pace of implementation of technical innovations and organizational changes on the one hand, and the pace of changes in the working time system on the other hand.

L. Koziol (✉) · J. Zabek
Malopolska School of Economics, Tarnow, Poland

745

Moreover, changes in the working time system in enterprises also fail to keep pace with the requirements resulting from the pressure of competitors in the area of costs, globalization of the economy, hypertrophy of the consumer market or the arrhythmia of social life. This discrepancy creates a particular organizational gap which is highly costly for the company and the economy.

The growing organizational gap in working time is becoming a growing problem for many enterprises and institutions, and its elimination is an important research issue. Identification of the problem scale together with the analysis of limiting conditions and examination of working time determinants, as well as indication of directions of possible actions aimed at minimization or elimination of the organizational gap in working time is an important objective as well as subject of research [1]. The tool proposed to adapt the system of working time to the current and future objectives of the organization, is to make working time more flexible, i.e. by extending and shortening the working time according to the employer's needs with limited provisions of the labour law. This is not the only or the most appropriate solution to the discussed problem. For example, it can be stated that it is not enough in a situation when a small demand for work is connected with its periodic arrhythmia, and even long periods of complete lack of it—often occurring in tourism.

The aim of this article is to present the concept of the analysis of working time organization in the company and to present the results of empirical research. The basic problem of the research is to identify the organizational gap, which is the difference between the applied working methods and the used working time systems, as well as to indicate the way to bridge this gap. The thesis assuming adequacy between the working time system and the working method was adopted. Achieving the maximum production potential is possible only thanks to the integration of elements of the working method and elements of the working time system. Although work is a form of effort, each unit of work requires time and includes the time of its implementation [2]. In this case, the definition of time standards is essential for the analysis, planning and control of operations together with coordination and scheduling, as well as for work motivation, human resources analysis and labour cost surveys.

In other words, these issues require new solutions and time standards when considering new technologies and management methods, e.g. changes in sales markets shorten the life cycle of products. That makes it necessary to shorten the cycle of preparation of new products, meet the agreed deadlines or to meet short delivery dates. The proposed framework course of analytical procedure (research methodology) includes six stages, the most important are identification of units and organizational units of the enterprise and the applied working method, analysis and evaluation of the working time system, determination of ways to improve the working time system. The empirical part of the article presents the results of the analysis and evaluation of the working time system in the tourism industry and in the creative industry companies (freelancing) (case study). In order to achieve such a

goal, research methods such as analysis of research results, economic analysis, elements of ergonomic analysis and interview questionnaire were used. This goes to the research methodology section [3].

2 Working Method and Its Elements

The working method is understood as a deliberate and repeatable course of action leading to the result. Among the numerous determinants of the production environment, those which significantly and permanently shape the features of the working method and working time system, namely the elements of the technical and technological system, elements of the working system and working conditions, were selected. These elements can be considered as a subsystem of working methods. These subsystems should take into account the principle of cost-effectiveness. The technical and technological system includes the rational arrangement of equipment and tools, which is the equipment of each organizational unit including, above all, units grouped deliberately to perform specific production tasks. Enterprises using continuous production processes have limited possibilities of shaping their working time. Due to technical and technological reasons, less often economic reasons, the manufacturing process cannot be interrupted, thus separating the company's working time from the employee's working time. The smaller is the continuity of manufacturing processes, the greater is the freedom to regulate working time and adjust it to the employee's preferences.

On the other hand, the system of work is understood as an integrated set of principles, tools and actions aimed at achieving the objectives of the organization. An important determinant of the working method is the perception of the working time system by employees in a broader sense of working conditions. Working conditions consist of all physical and psychosocial factors originating in the working environment and influencing those doing the work. Physical factors include elements of the organization's physical resources and microclimate, vibrations, lighting, noise, radiation, chemicals, gases, lubricants, oils. Psychosocial factors include interpersonal relationships, social and living conditions and employee participation in the life of the organization. The development of the post-industrial economy (in the social area referred to as the information society) brings about significant changes in each of the distinguished dimensions of the working method. The man-matter relation is replaced by the man-information relation or man-human in the service sector. Information and knowledge become an essential production factor and a product at the same time. This kind of work requires creativity, innovation, commitment and devoting more and more time. Dematerialization of work makes it possible to do it in different places and at different times. It is, inter alia, precisely these elements of the method that determine the construction of the working time system of organizational units and the post-industrial era workplaces [4].

3 Results of Empirical Research

3.1 Case Study: Enterprise in the Tourism Sector

The research was carried out in the *Wierzynek* Restaurant, which is located in three historic tenement houses in the Main Market Square in Krakow. *Wierzynek* is a luxury restaurant. Its history dates back to the fourteenth century. The current activity of the restaurant is connected with servicing individual customers, mainly tourists (65% of the total number of guests) but also organizing events such as banquets, weddings, family celebrations, corporate meetings and others. The restaurant is open officially from 12:00 to 24:00 every day. The process of production and services lasts longer, i.e. until the guests (customers) leave the restaurant—the last ones leave between 1:00 and 2:00 at night. The work system is therefore determined by the guests, and the production process and services lasts continuously from 12:00 to 2:00, even at 4:00 in case of fulfilling the final function of the production process. The restaurant employs from 100 people, outside the tourist season, to 150 people in the summer season, they work in eight organizational units (see Table 1). The basic one-shift system employs 23 people, the continuous two-shift working time system employs the reception desk (8 people), and the equivalent working time system employs 86 production departments. In an equivalent working time system, it is possible to apply an extended working time contract of up to 12 h, and in strictly defined cases up to 16 h.

After a detailed analysis of the production system and elements of the work system, three working methods were distinguished and the working time systems used in a given working method were characterized (see Table 2).

Each of the three methods of work has a system of working time adjusted to the type of production which is obligatory for the employees.

The practice of a sustainable system of working time raises considerable doubts. The assumed work time schedule does not take into account the variable working hours of waiters, cooks and managers, caused by a longer stay of guests, exceeding the working time of the premises. 12-h working day is extended from 2 to 4 h—in total, part of the crew works 14–16 h a day. Additional working hours are treated as overtime and overtime paid accordingly, but this results in an increase in work fatigue and inconvenience on the one hand and makes it difficult for the employee to rest after work on the other hand. Summarizing this thread of the analysis, it should be emphasized that the system of working time does not fully correspond to the

Table 1 Classification of organizational units according to the method used

Production	Administration	Services
Kitchen Café Restaurant room service Café service	Accounting Department Marketing Department Human Resources	Reception

Source: Own elaboration

Table 2 Use of working time in a given working method

1. Method of work: production—uses the equivalent system of working time 2/2, i.e. 2 working days of 12 h and 2 days off work (See Table 3)
2. Method of work: administration—uses a basic, one-shift system of working time, i.e. 5 days a week, 8 h a day, work is done on working days
3. Method of work: service (reception)—uses the system of working time in a continuous motion, two-shift 12/24, i.e. 12-h working day and 24 h off work

Source: Own elaboration

Table 3 Schedule of working time

1	2	3	4	5	6	7	8	9
Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
12	16			12	12			12

10	11	12	13	14	15	16	17	18	19
Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
12			12	12		12	16		

20	21	22	23	24	25	26	27	28	29	30	31	Monthly standard
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	–
12	12			12	12			12	16			176 h

Source: Own elaboration

method of work and, in particular, to the adopted system of work which assumes the functioning of the restaurant longer than the established official opening hours. It can be assumed that the working time system and the number of employees meet the requirements of the working method at the minimum level. However, the official working time schedule does not include additional work after closing hours, i.e. after midnight. The method of work—administration, the method of work—the service and the corresponding working time systems are appropriate and do not raise objections among both managers and employees.

3.2 Perception of the Working Time System by Employees and Managers

Employees' and management's opinions on the working time system were collected by means of a questionnaire. The questionnaire consisted of ten closed questions, including questions about age, gender, length of service, education and the position held which were the so-called questionnaire metric. The survey was carried on waiters, cooks and managers. For more than 50 questionnaires sent in paper form, 26 completed forms were collected, i.e. 52%. The survey was provided by 16 waiters, 14 cooks and 2 managers. About 70% of the respondents are people aged 31–50. Employees up to the age of 30 constituted 12% of the total number of respondents.

Table 4 Evaluation of the working time system used

Questionnaire questions	Answers
Evaluation of the working time system used	Positive 85% of respondents
Does the system require improvement	Definitely yes—93% of respondents
What needs to be improved	1. The majority, i.e. 60% of respondents propose to increase employment in production units 2. About 40% of respondents propose to increase employment by introducing a weekend work system—work takes place on Friday, Saturday and Sunday
Should a two-shift system of work of 8 h a day be introduced	Most respondents (about 80%, i.e. 22 persons) believe that this system should not be introduced due to the increase in labour costs
How do you rate the working time system in *Wierzynek* Restaurant in comparison with working time in other restaurants in Cracow	Almost half of the respondents rate the working time system quite well, about 30% (eight persons) positively and 20% (five persons) negatively

Source: Own elaboration

The rest 18% were people aged over 50. When analyzing the length of service of employees, it was stated that the largest share among the respondents was held by employees with work experience of more than 5 years (65%), while the remaining ones were less than 5 years. On the other hand, the analysis of employees' education showed that over half of the respondents had secondary education, about 20% had basic vocational education and about 30% had higher education. The analysis shows that the Restaurant has a stable, experienced staff which guarantees the continuity of work in its age structure. Among the next five questions of the questionnaire, the most important ones concerned the evaluation of the used working time systems (Table 4).

Summarizing the results of the research it should be stated that psychological and sociological effects of work in the equivalent system of working time are unfavourable for the employees. On the other hand, important technological and economic reasons (method of work) decided that the use of this working time system is necessary for *Wierzynek* Restaurant and improvement of management efficiency. Therefore, one can only postulate the improvement of this system of working time organisation by employing additional employees in the weekend work system, especially in the period of increased number of tourists visiting Cracow.

3.3 Case Study: Enterprise in the Creative Industry (Freelancing)

Freelancing means a specific form of self-employment and work organization, and its distinguishing feature is independence in taking up and providing work. The most

frequently chosen form of employment is economic activity or individually negotiated civil law contracts. On the other hand, for an enterprise it is a way of using external sources of knowledge—important for the development of innovation and entrepreneurship. The increasingly extensive research on this subject points to numerous benefits resulting from the work of external experts for both parties, i.e. the enterprise (the principal) and the contractor (the contract-holder). Freelancing, like any organizational solution, also has drawbacks which include the tendency to extend working time, working alone, small opportunities to establish ties with employees, the problem of separating work from non-professional life—especially family life, instability of a work station. This form of employment is constantly developing and the number of freelancers is growing. Until recently, this category of workers was identified with the liberal professions such as lawyers, journalists, writers or translators. Nowadays, their distinguishing feature is their belonging to the creative industry and apart from the ones mentioned above, they are, for example: an IT software developer, computer graphic designer, photographer, coach, proofreader, trainer, namely persons specializing in a narrow area who have extensive knowledge and practical skills in a given field. In the study this group will be called external experts who work at home, in their own office or in the client's premises. They work on a computer workstation and use other ICT tools [5]. An important issue is the specific way of providing work in this form, going beyond the traditional combination of time and space, and requiring other organizational and network structures instead of functional ones which do not limit the initiative, independence and creativity of performers with personal knowledge.

Research into the working methods and motivation of external experts was carried out by means of an electronic survey. It covered 63 persons (32 men and 31 women), mostly young people aged 21–40 (92% of the total number of respondents) with higher education (73%) and secondary education (27%). In the majority of the respondents, the length of service in the freelancer profession did not exceed 10 years (89%), while the remaining (21%) worked longer.

The most popular occupation (specialisation) of the respondents is computer graphics (52%), creation of IT programs (11%), marketing (6%). A large group are those who indicated "other" answers, which included: visual advertising, preparation of texts for printing, finances, photography, translations, EU funds, or digital product. About a quarter of the respondents indicated the 2–3 specialisations mentioned above.

Freelancing involves replacing the matter with information. "Free shooters" perform virtual tasks. IT processes play a superior and integrating function in relation to material and financial flows together with physical parameters of objects. With the use of ICT tools, these tasks can be carried out at the workplace or outside the workplace and the work can be carried out for one or more clients. The method of work of experts is determined by work organization system, task system, working conditions and, to a lesser extent, technical considerations or ICT tools. The number of orders, and more precisely the workload of orders accepted and the deadlines set in the contract, determine the scope of tasks and the rhythm and of the "freelancer's" pace of work. Excessive work, i.e. too tight work standard, determines the

organization of the expert's working time which is characterized by an increased number of working days per week, longer daily working time, limited length of breaks as well as increased intensity of work. Therefore, it can be said that in the case of experts we are dealing with the optimum working time of an employee determined individually by each of them.

Surveys show that half of the respondents set themselves 1 day off during the week, almost 40% set 2–3 days off during the month, the remaining 13% do not have a day off. The working time of the surveyed experts is also diversified. Over 44% work more than 8 h a day, about 22% 6–8 h, the remaining 32% less than 6 h. Moreover, working time varies from 3–4 h to 16–17 h a day, depending on the scale of orders. There are also discrepancies in terms of remuneration, which ranges from 700 to 2500 euros, with an average monthly salary of about 3200 euros. The more attractive the price offer of the expert, the greater the chance of obtaining an expert, and vice versa.

Approximately 95% of the surveyed experts like their work, think that it gives independence, quite a large income, is interesting, creative, assumes the need for training and provides opportunities for professional development. A prerequisite for satisfaction with the work of a "freelancer" is the ability to control orders (tasks) in particular and, as a result, to determine the working time system. According to the respondents, the best solution is task time, more and more often used in the creative industry.

4 Summary and Conclusions

The presented methodology of analysis and improvement of the working time system in the company is based on the concept of the working method and the appropriateness between the working method and the system of working time. It is worth adding that the increase in the variability of the environment and competitiveness on the market in which the company operates, requires the creation and improvement of working methods together with consequently, appropriate working time systems, e.g. the method and working time of external experts (freelancers). In its strategy, the company should define the subject and scope of the analysis of working time organization, paying particular attention to the selected element (subsystem) of the method of work, e.g. technical and technological subsystem or working conditions, precisely the perception of the working time system by its employees. These subsystems should take into account the principle of cost-effectiveness of operation. The collected information enables modeling of the working time system and recognition of managerial pragmatics of the company in this respect. In the case of external experts work, the working method consists of work organization, task system and working conditions. It is these elements of the method that determine the system of working time of this category of employees, i.e. the appropriate form of task time. Modeling (optimization) of the task time system should take into account ergonomic principles, individual preferences of the expert and time management techniques, e.g. Time Boxing.

References

1. Sanetra W (2011) Uwarunkowania instytucji czasu pracy. In: Florek L (ed) Czas pracy. Wolters Kluwer Business, Warszawa, pp 20–24
2. Koziol L (2000) Zarzadzanie czasem pracy, 32. Antykwa, Kraków, p 152
3. Jones P (2007) Managing performance. Delivering results through others. Pearson Prentice Hall Business, Harlow, pp 150–151
4. Kavoura A, Kozioł L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsounis N (eds) Factors affecting firm competitiveness and performance in the modern business world. ICI Global, Hershey, pp 192–193
5. https://minicrm.pl/blog/dlaczego-warto-korzystać-z-metody-time-boxing

A Proposed Online Platform for Ranking Place Brands Identity Characteristics of Official Tourism Websites

Victor-Alexandru Briciu, Robert Demeter, Florin Nechita, Androniki Kavoura, and Arabela Briciu

Abstract This study aims to clarify the ways in which the authorities involved in place brand management choose to use new technologies to communicate their online identity. A descriptive-explanatory research was employed focusing on a methodology repository, applying an instrument for analysis and addressing the online identity of place brands issue. As a quantitative-qualitative alternative, content analysis was chosen for the communication content, while the work technique consisted of frequency analysis applied to a coding grid for the analysis of the data collected. The ICT component involved in this research, a proposed online platform generates an automatic score calculation algorithm for place brands obtained by applying the analysis grid to web sites. This score involved building composite indexes of the analyzed dimensions and placing the brands in a ranking of all the analyzed sites. As more sites are being added, the user can interpret the charts generated by the application. By analyzing ten official websites based on specific criteria which promote brands, we were able to capture various ways in which the authorities involved in the websites' management understand the use of the Internet in communicating the online identity of brands.

Keywords Place brands · Identity characteristics · Tourism websites

1 Background of Research and Literature Review

Brand is a complex phenomenon; as a result there is a wide range of definitions explaining it [1–3]. A brand is a product or service that adds dimensions in order to differentiate it from other products or services that are created to satisfy the same

V.-A. Briciu (✉) · R. Demeter · F. Nechita · A. Briciu
Transilvania University of Brasov, Brasov, Romania
e-mail: victor.briciu@unitbv.ro

A. Kavoura
University of West Attica, Athens, Greece

need. These differences can be either related to the product performance of brand: functional, rational or tangible, or related to what the brand represents: symbolic, emotional and intangible [3, p. 274]. On the other hand, the process of "branding can be applied virtually anywhere a consumer has a choice. It is possible to brand a physical good, a service, a store, a person, an organization, or an idea" [3, p. 276]. Branding matters more and more nowadays on the Internet because all the activities that represent the brand promise are more transparent and much faster online. The website should be easy and quick to navigate; it should not take much time for registration and definitely not ask for unnecessary information; assure the customer that the financial transaction it is safe and private and that the goods bought will be delivered on time. In case of any problems encountered the sales service should be exemplary [4, p. 397].

Therefore, from this perspective, a website can have the following functions: communicate about the company only, communicate about the brand only, sales only, communicate about the company and brand, communicate about the company and sales or communicate about the company, brand and sales [5, p. 15]. The best websites are characterized by consistency, interesting content and easy technical features. "A website should be dynamic, up to date and continuously enriched with new content. It should embody an organization's personality and display consistency in term of both visual cues and content. It should orient visitors and provide easy-to-use navigation to help people from one area to another" [6, p. 12].

As the globalization process led up to a cultural homogenization, nowadays places compete with each other in order to obtain differentiation so that they can acquire competitive advantages. The competition between them is extremely hard, so original and creative ideas in place branding are crucial [7, p. 315; 8–10]. Relatively new to the filed, the concept of place branding has gained prominence only since 1998. Despite occurring only in the recent years, it has soon become a "powerful tool to gain competitive advantage, as it improves the development of a region or country not only in terms of leisure and tourism, but also in term of attracting investment, new residents, jobs and skilled migrants" [7, p. 311]. The concept of place branding refers to "branding and building brand equity in relation to national, regional and/or local (or city) identity".

Nowadays the foremost important influence in decision making in the most markets for customers is represented by the information found online. Because the Internet is an interactive medium, it enables "social communication such as forums, blogs, social networks and so on" [7, p. 316]. As a result, the visibility of place brands has increased noticeably. "Websites are fundamental tools for communication for place brands. They persuade, convince, help in decision making and finally allow making reservations and purchases" [7, p. 315].

This research aims to clarify the ways in which the authorities involved in place brand management choose to use new technologies to communicate their online identity.

2 Methodology

2.1 Research Objectives

The aim of this research is to identify how the authorities (i.e., governmental entities, central or local administration institutions or stakeholders) involved in place branding management use the internet's potential in order to communicate their online identity. Its purpose is to identify and analyze the characteristics of place brand online identity. In order to explore how the authorities involved in place brand management use the internet's potential as means to communicate their identity, a descriptive-explanatory research was conducted. The research's purpose was to answer the following questions: (1) Are there all the characteristics of a place brand's identity communicated through official websites by authorities? (2) Which are the most common characteristics of a place brand's identity used by authorities online? (3) Are the official websites of places passive channels of communication (informative) or active channels of communication (interactive)?

2.2 Method

For this research the method of content analysis was chosen. Content analysis is an observational research method which aims to systematically evaluate the symbolic content of all communications forms [11]. Gibson and Ward [12, p. 303] claim that "although content analysis in general, and of media sources in particular, has a long and established pedigree, analysis of Web sites is a recent area of study".

2.3 Defining the Universe of Study

The universe of study is finite, as the websites of places are subjected to the research. The websites are considered communication sources because "each activity on the website contributes to place branding which results as a certain imagine of a place" [13, p. 281]. The sampling technique chosen for this study is the non-probability sampling, following the model offered by Jose Fernanez-Cavia et al. [14]. The sampling of ten national and international destination websites is the result of a combination of several criteria: "firstly, taking into account national and international destinations; secondly, incorporating different kinds of destinations (cities, regions, countries and nations); and lastly, seeking variability in terms of geographical location, and the tourist-based potential, the maturity of the destination and the resources at hand to promote it" [14, p. 11]. According to the World Tourism Organization [15] the top ten countries visited in the world were: France, USA, Spain, China, Italy, United Kingdom, Germany, Mexico, Thailand and Turkey

Table 1 The ten official websites based on research's criteria and the names of the authorities involved in place branding management

No.	Name	URL
1.	Atout France—France	http://in.france.fr/
2.	The Paris Convention and Visitors Bureau—Paris	https://en.parisinfo.com/
3.	Normandy Tourist Board—Normandy	http://en.normandie-tourisme.fr/
4.	Brand USA—USA	https://www.visittheusa.com/
5.	Visit California—California	http://www.visitcalifornia.com/
6.	A Tourism & Convention Board—Los Angeles	https://www.discoverlosangeles.com/
7.	NYC & Company, Inc.—New York City	https://www.nycgo.com/
8.	Japan National Tourism Organization—Japan	https://www.jnto.go.jp/
9.	Tourism Authority of Thailand—Thailand	https://www.tourismthailand.org/
10.	Asia Web Direct Co., Ltd.—Bangkok	http://www.bangkok.com/

[15]. For this study the top two countries reported above (France and USA) and several regions/ cities corresponding to those countries (Paris, Normandy, California, Los Angeles, New York City) were selected in order to answer the research questions. Alongside, three brands from Asia and the Pacific region which show major potential for tourism growth: Japan, Thailand and Bangkok [16] were selected for analysis.

The following table (Table 1) presents generic information about the selection of cases, the ten public authorities that own and manage the place brands and their website's names.

2.4 The Coding Scheme

In order to create viable categories and coding scheme on place brand's identity online characteristics it is necessary to compare concepts and methodologies from other scientific fields because a calibrated, well-rounded methodology from one scientific field regarding place brand's identity online characteristics does not exist. The closest available conceptual structure is the one provided by Florek et al. [13]. From the political communication field, the methodologies provided [12, 17, 18] were employed that discussed about the operationalization of the brand communication and information dimension with different categories: downward, upward, lateral (inward and outward) and interactive flows and about the interactive model of communication that can be either asynchronous (sequential) or synchronous (in real time). From the corporate marketing field, the structure provided by Okazaki and Skapa [19] was also taken into consideration for assigning the values on the coding scheme, coding an item 1 means the item is present, coding an item 0 means the item is absent [19, p. 206]. Lastly, from the place branding field the approached used by Florek et al. [13] was adopted. According to Rachel Gibson and Stephen Ward "the key utility of the scheme lies in the fact that it offers a

standardized tool for entering information about Web sites" therefore any innovation and new features developed on the Web can easily be slotted on this scheme [12].

2.5   The Use of the Online Platform for Ranking Place Brands Identity Characteristics

For the websites' content analysis, a software platform has been developed using modern programming languages. Thus, for the creation of the database, the MySQL relational database management system was used together with the phpMyAdmin tool, with xampp included; to design the application, the PHP language was used and CSS, jQuery and JavaScript were used for stylization. The database has a visual interface. Each table in the database has an auto increment ID. The data of the application was divided into three subdivisions as follows: Admin, User and Site.

This application was not designed for general use or to be publicly available, as it was constructed to perform content analysis of user-rated sites and has solely research purposes. The application is divided into two parts: the front-end (user-side) and the back-end (administrator side). On the back-end side, the sites added by the predefined users are managed and also the users are managed. The administrator has access to all site information, user data, etc. It is able to use all the functions: Create, Read, Update, Delete. For each table in the database, there is a set of CRUD (create-read-update-delete) functions that are activated through forms with the POST method (in the case of update-delete-add it uses forms and for data retrieval, it uses the functions call). Regarding the front-end side, buttons and text fields were created for entering data, the user having to fill in the data according to the analysis grid. This grid has been implemented using aesthetic and intuitive design. The entire interface was made using the Bootstrap module, making it adaptable to any type of smart device. Generic information about the added website can be added by filling in the following fields: Name, URL, Country, Continent, Slogan. Next, one must enter the identity variables for each dimension. The user can easily enter the variables using this form, since it was created with a user-friendly interface. For example, if a brand has the "Slogan" variable in its composition, the user can determine the value by clicking the button next to the "Slogan" variable. The button initially has the value "0", meaning "No". Once accessed, the button switches to "1", i.e. "Yes".

Connecting to the PHP database was resolved using PDO (PHP Data Objects). PDO provides an abstraction level for accessing data, which means that independently of the configured database, the same functions will be used to send queries and receive data. To insert the data into a table with PDO, the query is first determined using the prepare() function. Then, this query is executed with the execute() function. This practice prevents SQL injection attacks. Once added, a site receives a score that is calculated based on its features. This score is calculated for all four dimensions that need to be analyzed and saved in the database. Depending on the score obtained, the site of the place brand is added to the diagram

of each dimension, to the position obtained. This information can be viewed on Column Bar Chart graphs in the current user Dashboard. As more sites are being added, the user can interpret the charts generated by the application, by obtaining a Top 10 hierarchy.

3 Results

The most common characteristics used by authorities online for the brand design are: the logo, the picture gallery and the maps. The following figure (Fig. 1) shows how many of these characteristics were found on the websites of the place brands analyzed.

The most common characteristics used by authorities online for the brand behavior are: the events calendar and the name of the authority under which the place
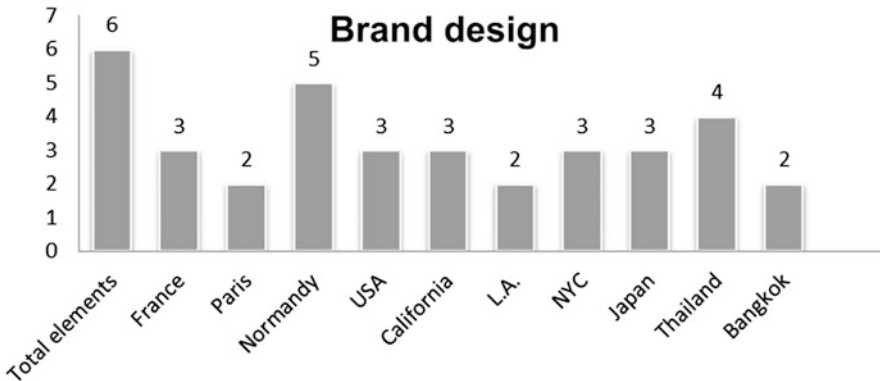
Fig. 1 Brand design characteristics used by the websites analyzed
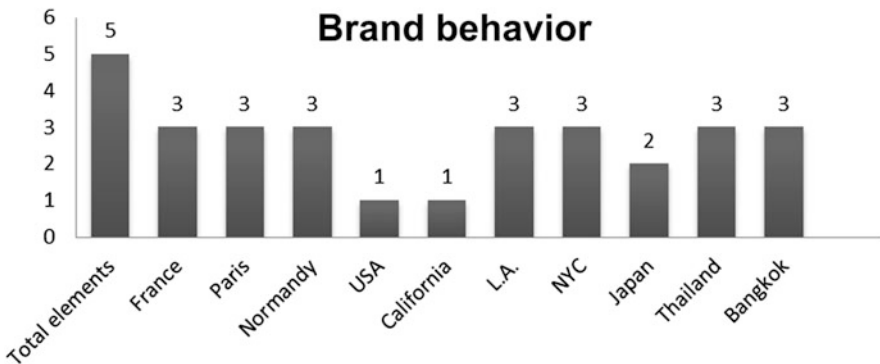
Fig. 2 Brand behavior characteristics used by the websites analyzed

brand exists. The following figure (Fig. 2) shows how many of these characteristics were found on the websites of the place brands analyzed.

The most common characteristics used by authorities online for the brand information and communication are: the general information, the customized information for target audiences such as brochures, the travel tips and FAQ, the offers, the bookmarks and share, the cookies, the useful links, the internal links, the option to download pictures/pdf, the site search, the newsletters and the social media connections.

The most common characteristics used by authorities online for the site delivery are: the presence of mobile icons/images/animate texts, the presence of video materials, the translation of the page, the home page button for each page, the main menu bar for each page and the site index.

4   Discussion

This study aimed to clarify the ways in which the authorities involved in place brand management choose to use new technologies to communicate their online identity.

Authorities involved in place branding management use the internet's potential to communicate their online identity by showcasing the brand design; the brand behavior; the brand information and communication; and the site delivery. The results show that these official websites use an average of 22 characteristics of a place brand's identity which represent 48% of the total. Moreover, these official website of place brands are used rather as passive (informative) channels of communication than active (interactive) channels of communication. This has been the case as literature has illustrated [20, 21].

The most common characteristics used by authorities are mainly limited to the logo, the picture gallery and the maps while the internet may offer more possibilities and opportunities.

5   Conclusions

In conclusion, branding is a complex phenomenon that can be applied anywhere: to a physical product, a service, a store, an organization, an idea or a place. Major changes occurred in the branding process because of the Internet. Because nowadays the foremost important influence in decision making in the most markets for customers is represented by the information found online, place brands should use the Internet in order to gain visibility which has not been fully implemented. Those involved in the websites' management may employ them more effectively.

References

1. De Chernatony L, Dall'Olme RF (1998) Defining a "brand": beyond the literature with expert's interpretations. J Mark Manag 14:417–443. https://doi.org/10.1362/026725798784867798
2. Baker M (2003) The marketing book. Butterworth-Heinemann, Oxford
3. Kotler P, Keller K (2006) Marketing management. Pearson Education, New Jersey
4. Rubinstein H, Griffiths C (2001) Branding matters more on the internet. J Brand Manag 8:394–404. https://doi.org/10.1057/palgrave.bm.2540039
5. Ind N, Riondino M (2001) Branding on the web: a real revolution? J Brand Manag 9(1):8–19. https://doi.org/10.1057/palgrave.bm.2540048
6. Hwang J-S, McMillan S, Lee G (2003) Corporate web sites as advertising: an analysis of function, audiences and message strategy. J Interact Advert 3(2):10–23
7. Alonso I, Bea E (2012) A tentative model to measure city brands on the internet. Place Brand Diplomacy J 8:311–328. https://doi.org/10.1057/pb.2012.22
8. Varelas S, Georgopoulos N (2017) Competition as a critical factor of the strategic planning of hotel businesses. Strateg Manag Q 5:16–21. https://doi.org/10.15640/smq.v5n1-2a3
9. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector—the case of a Greek tourism destination. J Tour Res 18:121–131
10. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia, Austria. Tourism 61:289–312. UDC: 338.48-44(1-22) (436)
11. Kolbe RH, Burnett MS (1991) Content-analysis research: an examination of applications with directives for improving research reliability and objectivity. J Consum Res 18(2):243–250. https://doi.org/10.1086/209256
12. Gibson R, Ward S (2000) A proposed methodology for studying the function and effectiveness of party and candidate web sites. Sci Comput Rev J 18(3):301–319. https://doi.org/10.1177/089443930001800306
13. Florek M, Insch A, Gnoth J (2006) City council websites as a means of place brand identity communication. Place Brand J 2:276–296. https://doi.org/10.1057/palgrave.pb.6000036
14. Fernandez-Cavia J, Rovira C, Diaz-Lupe P, Cavaller V (2014) Web quality index (WQI) for official tourist destination websites. Proposal for an assessment system. Tour Manag Perspect J 9:5–13
15. https://www.e-unwto.org/doi/pdf/10.18111/9789284419029
16. World Tourism Organization (2017) http://cf.cdn.unwto.org/sites/all/files/pdf/a22_04_statement_by_the_secretary_general_en.pdf
17. Schneider S, Foot K (2002) Online structure for political action: exploring presidential campaign web sites from 2000 American election. Public J 9:1–18. https://doi.org/10.1080/13183222.2002.11008799
18. Brundin P (2008) Politics on the net. Orebro University, Orebro
19. Okazaki S, Skapa R (2009) Understanding brand website positioning in the new EU member states: the case of Czech Republic. In: Bandyopadhyay S (ed) Contemporary research in e-branding. Information Science Reference, Hershey, pp 193–215
20. Constantin F, Kavoura A (2016) Multilingual online communication in romanian dental practices' websites and their application to health tourism. In: Springer Proceedings in Business and Economics, pp 185–196
21. Tiago F, Borges-Tiago T, Varelas S, Kavoura A (2019) The effect of asymmetrical image projections on online destination branding. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference of strategic innovative marketing and tourism. Springer, Cham

Cyber Security: From Regulations and Policies to Practice

Leandros Maglaras, Mohamed Amine Ferrag, Abdelouahid Derhab, Mithun Mukherjee, and Helge Janicke

Abstract The major target of cyber attacks is a country's Critical National Infrastructure (CNI) such as ports, hospitals, water, gas or electricity producers, which use and rely upon Supervisory Control and Data Acquisitions (SCADA) and Industrial Control Systems (ICS) to manage their production. Protection of CNIs becomes an essential issue to be considered. Generally, available protective measures are classified according to legal, technical, organizational, capacity building, and cooperation aspects. In this article, we discuss regulations and policies that may be used to tackle cyber attacks to CNIs along with practical measures that need to be taken in order for these regulations to be effective. Attribution of cyber attacks, especially when these originate from another nation, is questionable regarding which country or law enforcement agency has the authority to investigate and prosecute the penetrators.

Keywords Cyber security · Critical information assets

L. Maglaras (✉) · H. Janicke
De Montfort University, Leicester, UK

M. A. Ferrag
LabSTIC Laboratory, Guelma University, Guelma, Algeria

LRS Laboratory, Badji Mokhtar-Annaba University, Annaba, Algeria

A. Derhab
Center of Excellence in Information Assurance (CoEIA), King Saud University, Riyadh, Saudi Arabia

M. Mukherjee
Guangdong University of Petrochemical Technology, Maoming, China

1   Introduction

Cyber security is currently one of the main concerns for Supervisory Control and Data Acquisition (SCADA) and Industrial Control Systems (ICS) operators, as a result of a series of recent successful cyber attacks against several targets, such as electric power substations and distribution grids, sewage processing units or even nuclear power plants. These attacks affect a substantial number of persons, potentially causing significant damage and ultimately threatening human lives [1]. Post-event investigation has frequently linked these attacks to the exploitation of vulnerabilities deeply rooted in the ICS design philosophy and related technologies.

SCADA systems collect the data and monitor automation processes, which are visualized to the operators of the system via human-machine interfaces. Operators can take control of the system remotely and issue commands such as opening a valve, setting a temperature point or starting/stopping a pump [2]. Many SCADA applications are now-a-days using common operating systems like Windows, well known and vulnerable protocols like TCP. Security vulnerabilities are publicly available and famous events like Black Hat are now discussing more about industrial systems, proving that hackers are also focusing on these systems [3]. All the above show that SCADA systems are targets nowadays.

Like any other IT process, cyber security can follow a lifecycle model of prediction, protection, detection and reaction. During prediction phase the organization (or nation) needs to take all proactive measures to identify potential attackers, their intentions and the methods they are going to use. This step can be implemented by conducting risk management [4]. Defining the scope and the objectives, the external and internal environment of CNIs, conducting a risk assessment and producing appropriate risk mitigation plans are all steps that need to be taken, following a standardized methodology, e.g. ISO 31000.

During protection phase, the organization applies the hardware and software measures that are needed in order to accomplish its security goals, following the results of the risk assessment phase. During the detection phase the organization needs to have set up monitoring mechanisms along with intrusion detections systems [5] that can distinguish legitimate from abnormal behavior or normal from malicious network traffic inside the system. The last phase of cyber security lifecycle includes all these processes and methods that the organization (or nation) needs to have in place for incident notification and management, along with appropriate mitigation plans. In the core of the cyber security lifecycle lies the cyber threat intelligence, which is the process of collecting data and deriving meaningful information for user's status. In this article, we summarize the main issues in regulations for cyber security and outline several aspects of policy making to tackle cyber attacks to the CNIs.

The rest of the paper is organized as follows. Section 2 discusses the main threats to the critical infrastructures (CI). Section 3 presents several measures for the protection of the CI. Main attributes of the cyber attacks are discussed in Sect. 4. Finally, conclusions are drawn in Sect. 5.

2   Threats to Critical Infrastructures

The vulnerability assessment of cybersecurity is identified by five main phases, namely, (1) Identify the threat model, (2) Identify the possible vulnerabilities of the attack, (3) Identify intrusion scenario, (4) Compute scenario vulnerability, and (5) Decision-making as presented in Fig. 1.

To evaluate vulnerability indices on cybersecurity of critical infrastructures, Ten et al. [6] proposed two main procedures, namely, (1) cybersecurity conditions and (2) evaluation of vulnerability indices. The cybersecurity condition assessment is measured by a number X, which assumes the value of 0.33, 0.67, or 1. A low value indicates that the system condition is invulnerable, while the value 1 indicates that the system is vulnerable. For the second procedure, the authors proposed four steps to assess the security vulnerability, namely, (1) identifying the intrusion scenarios; (2) evaluating vulnerability indices for the system, intrusion scenarios, and attack leaves; (3) port auditing; and (4) password strength evaluation.

SCADA systems and substations are now interconnected with other systems thanks to the Power System Communication (PSC) systems [7]. The SCADA system is the core of smart grid decision making. This interconnection between SCADA system and smart grid creates new possibilities and threats. Therefore, the classification of threats in smart grids frequently mentioned in the literature is done using different criteria such as passive or active, internal or external, etc. In [8], the authors classified the threats in smart grids in four categories, including, (1) key-based attacks, (2) data-based attacks, (3) impersonation-based attacks, and (4) physical-based attacks, as presented in Fig. 2. To detect the attacks against the control network in critical infrastructures, Zonouz et al. [9] proposed a cyber-physical security state estimation framework, named SCPSE, in order to estimate the cyber-physical security state of a power grid. The SCPSE framework uses stochastic information fusion algorithms and merges sensor information from both

Fig. 1 Procedures of vulnerability assessment of cybersecurity for critical infrastrucures
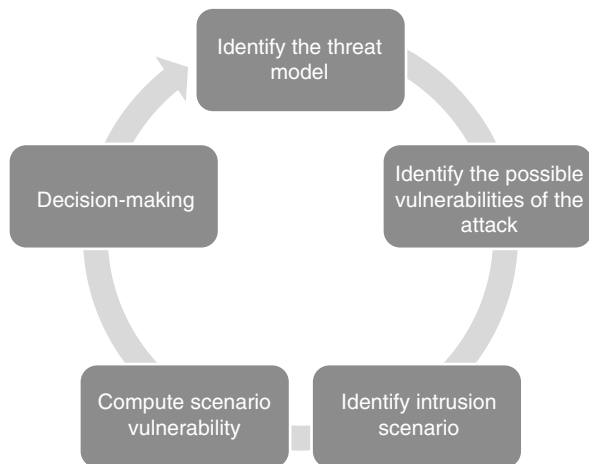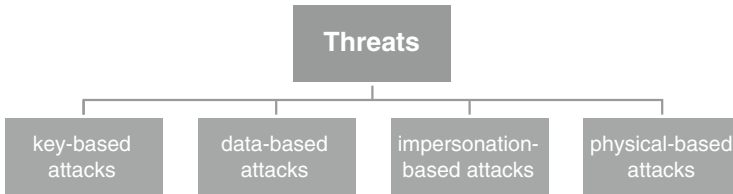
Fig. 2 Classification of threats for SCADA system in smart grids

the cyber and electrical infrastructures. By using information provided by alerts from intrusion detection systems, the SCPSE framework can identify malicious measurement corruptions.

Several techniques for attack analysis for critical infrastructures make use of attack trees as discussed by Fujita et al. [10]. Specifically, the authors proposed a systemic integration of granular computing and resilience analysis for critical infrastructures. This resilience analysis use three tools, namely, (1) Three-way decisions as a tool for cognitive analysis, (2) Granular structures based on binary relations, (3) An approach based on the hierarchical granular modeling; and (4) Dominance-based rough sets as a tool to understand what are the parts of a critical infrastructure that are not performing well.

3   Protection of Critical Information Assets

In this section, we propose some measures for the protection of Critical Infrastructure. The measures are classified with respect to: legal, technical, organizational, capacity building, and cooperation aspects, as defined by the International Telecommunication Union (ITU) [11, 12].

Legal measures aim to provide legislations and an implementable regulatory framework to protect the cyber space. As for CI, the following good practices can be recommended:

1. Ensure mandatory periodic assessment of CIs through information security audits
2. Check the compliance of software and hardware tools, which are used in the CI, with recognized security standards.

Technical measures consider the technological tools (software and hardware) to prevent, detect, and respond to cyber attacks, such as:

1. Implementation of internationally recognized security standards within organizations, especially the critical infrastructure ones.
2. Implementation of preventive and detective security tools such as: firewalls, Intrusion Detection System (IDS), Intrusion Prevention System (IPS), Antivirus/Anti-malware.

3. Implementation of measures for physical security, access control, patching and upgrading, and forensics.
4. Development of an incident response capability

Organizational measures are important for the proper implementation of any type of national initiative or policy. Under this aspect, we recommend the following:

1. Develop a national critical infrastructure protection policy
2. Develop a national framework for the implementation, evaluation, and maintenance of the cyber security policies.
3. Define information security program for organizations. Develop a national contingency plan.
4. Identify a national agency for the implementation of the critical infrastructure protection policy.
5. Conduct a national exercise to assess the cyber resilience of the CI.
6. Conduct security audits by organizations to check their cyber security preparedness.

Capacity building measures aim to enhance knowledge and know-how in order to promote cyber security. Under this aspect, we recommend the following:

1. Encourage IT specialist in CI sectors to be certified under internationally recognized cyber security programs.
2. Conduct periodic awareness and training programs for employees.

Cooperation measures aim to establish partnership between different stakeholders to increase cyber resilience of the organizations against cyber threats. Under this aspect, we recommend the following:

1. Establish trusted information sharing mechanisms on threats and vulnerabilities between private and public stakeholders
2. Establish a cooperation framework between industry and research to promote cyber security and increase resiliency against cyber attacks.
3. Build a cooperation framework between countries on different aspects related to cyber security.
4. Contribute in international efforts to protect the cyber space

4 Attribution of Cyber Attacks

When a cyber attack is launched against a CI, it is likely that some real-world physical revelation will follow [2]. In some instances this could even lead to physical damage, injury, environmental effects or even loss of life. According to international or national law [13], legal or regulatory investigation may be required, increasing the importance of attribution artefacts. According to NIS directive, each Member State shall designate one or more national competent authorities for the security of network and information systems that can take the leading role in securing CIs.

The responsible authority of the country will have to identify whether the incident was caused by an error in the operations, maybe a fault component, or whether the processes or devices were maliciously manipulated. Artefacts should be collected and kept in a way that authenticity, integrity and usability are guaranteed.

Researchers have surveyed individual technical approaches to attribution, including; traceback—where the traffic from a target device is recursively stepped-back through its routing path to its originating source, honeypots—where vulnerable software and services are hosted in order to allow activities to be monitored among others. Traceback is a class of methods that encompasses techniques by which the traffic from a target device is recursively stepped-back through its routing path to its originating source device [14]. Traceback can be supported by manual methods of traffic tracing or logging techniques supported from network devices. There is a third category of traceback that includes various methods of Probabilistic Packet Marking (PPM) [15], and ICMP traceback (iTrace) [16].

Honeypots approach the issue of attribution of attacks differently to Trace-back methods. A honeypot is a system, or set of systems, where vulnerable software and services are hosted in order to allow activities to be monitored and logged. Several researchers have proposed the use of honeypots to protect important assets of critical infrastructure [17]. However, most of these honeypots are static systems that wait for the attackers. In order to increase the efficiency of honeypots they need to be as realistic as possible. In [18] authors introduce a honeypot network traffic generator that mimics a genuine control system in operation.

Digital Forensics is a broad subject which involves the recovery, acquisition and investigation of digital evidence. One technique that could be used is live forensics where data acquisition takes place while the system is operational. In order to avoid system crash, especially for the SCADA systems that exist in the core of each CI, authors in [19] propose the use of fail over systems. In either case post incident investigator will compete with recovery e orts which will most likely destroy evidence. Network Forensics field primarily involves two stages: collecting network messages and analyzing network messages. An organization must identify points in the network where they wish to collect network data. Again special care should be given regarding SCADA operation requirements [20].

Malware analysis can be split into two areas: behavioral analysis and code analysis. Behavioral analysis examines the way that malware interacts with the environment [21] while code examines the code that makes up the malware [22]. Measuring the performance of attribution attacks is an open issue although several methods have been proposed [23]. In [24] Cook et al., have used six individual metrics to measure the effectiveness of each attribution in the context of ICS that can be applied to CIs.

Attacks may sometimes originate from another nation and attribution becomes a question of which country or law enforcement agency has the responsibility and authority to investigate, under which legal framework the perpetrators can be prosecuted, and which laws apply. This transnational issue was analyzed in the Tallinn Manual on the International Law Applicable to Cyber Warfare [25]. In the same context authors in [26] argued that as cyber warfare becomes an increasing part

of wider conflict, peacekeeping organizations such as the United Nations will probably need to perform cyber peacekeeping.

5 Conclusions

As CNIs are most vulnerable to the cyber attacks, the protection to the CNIs becomes a significant issue for any nation as well as an organization. In this article, we have summarized the primary attributes of cyber attacks to the critical infrastructures. We have further provided the protective measures that one nation can take, and which are classified according to legal, technical, organizational, capacity building, and cooperation aspects. Attribution of cyber attacks, especially when those originate from another nation, is questionable regarding which country or law enforcement agency has the authority to investigate and prosecute the penetrators and cyber peacekeeping is foreseen to become a reality.

References

1. Cook A, Smith R, Maglaras L, Janicke H (2016) Measuring the risk of cyber attack in industrial control systems. BCS eWiC
2. Maglaras L, Kim KH, Helge Janicke H, Ferrag MA, Rallis S, Fragkou P, Maglaras PMA, Cruz JT (2018) Cyber security of critical infrastructures. ICT Express 4(1):42–45
3. Knapp ED, Langill JT (2014) Industrial network security: securing critical infrastructure networks for smart grid, SCADA, and other industrial control systems. Syngress, Amsterdam
4. Ralston P, Graham JH, Hieb J (2007) Cyber security risk assessment for scada and dcs networks. ISA Trans 46(4):583–594
5. Maglaras L, Jiang J (2014) Intrusion detection in scada systems using machine learning techniques. In: Science and Information Conference (SAI). IEEE, pp 626–631
6. Ten C-W, Manimaran G, Liu C-C (2010) Cybersecurity for critical infrastructures: attack and defense modeling. IEEE Trans Syst Man Cybern Syst Hum 40(4):853–865
7. Ericsson GN (2010) Cyber security and power system communication essential parts of a smart grid infrastructure. IEEE Trans Power Delivery 25:1501–1507
8. Ferrag MA, Maglaras LA, Janicke H, Jiang J, Shu L (2018) A systematic review of data protection and privacy preservation schemes for smart grid communications. Sustain Cities Soc 38:806–835
9. Zonouz SA, Rogers KM, Berthier R, Bobba R, Sanders W, Overbye T (2012) Scpse: security-oriented cyber-physical state estimation for power grid critical infrastructures. IEEE Trans Smart Grid 3:1790–1799
10. Fujita H, Gaeta A, Loia V, Orciuoli F (2018) Resilience analysis of critical infrastructures: a cognitive approach based on granular computing. IEEE Trans Cybern:1–14. https://doi.org/10.1109/tcyb.2018.2815178
11. Brahima S (2017) Global cybersecurity index 2017. International Telecommunication Union (ITU), pp 1–77
12. Pena-Lopez I et al (2015) Global cybersecurity index & cyberwellness profiles
13. Maglaras L, Drivas G, Noou N, Rallis S (2018) Nis directive: the case of Greece. EAI Endorsed Trans Secur Saf 18:5

14. Kuznetsov V, Sandstrom H, Simkin A (2002) An evaluation of different ip traceback approaches. In: International conference on information and communications security. Springer, New York, pp 37–48
15. Song XD, Perrig A (2001) Advanced and authenticated marking schemes for ip traceback. In: Proceeding of the IEEE INFOCOM Twentieth Annual Joint Conference of the IEEE Computer and Communications Societies, vol 2, pp 878–886
16. Bellovin SM, Leech M, Tom Taylor T (2003) Icmp traceback messages
17. Simoes P, Cruz T, Gomes J, Monteiro E (2013) On the use of honeypots for detecting cyber attacks on industrial control networks. In: Proceedings of the 12th European Conference on the Information Warfare and Security. ECIW
18. Lin H, Dunlap S, Rice M, Mullins B (2017) Generating honeypot traffic for industrial control systems. In: Rice M, Shenoi S (eds) International conference on critical infrastructure protection. Springer, New York, pp 193–223
19. Ahmed I, Obermeier S, Naedele M, Richard GG III (2012) SCADA systems: challenges for forensic investigators. Computer 45(12):44–51. https://doi.org/10.1109/MC.2012.325
20. Mahmood AN, Leckie C, Hu J, Tari Z, Atiquzzaman M (2010) Network traffic analysis and scada security. In Handbook of information and communication security. Springer, New York, pp 383–405
21. Shukla J (2008) Application sandbox to detect, remove, and prevent malware, 17 January 2008. US Patent Application 11/769,297
22. Bayer U, Moser A, Kruegel C, Kirda E (2006) Dynamic analysis of malicious code. J Comput Virol 2:67–77
23. Nicholson AM, Watson T, Norris P, Du A, Isbell R (2012) A taxonomy of technical attribution techniques for cyber attacks. In: European Conference on Information Warfare and Security, p 188
24. Cook A, Nicholson A, Janicke H, Maglaras LA, Smith R (2016) Attribution of cyber attacks on industrial control systems. EAI Trans Ind Netw Intell Syst 3(7):e3, 1–15. https://doi.org/10.4108/eai.21-4-2016.151158
25. Schmitt MN (2013) Tallinn manual on the international law applicable to cyber warfare. Cambridge University Press, Cambridge
26. Robinson M, Jones K, Janicke H, Maglaras L (2018) An introduction to cyber peacekeeping. J Netw Comput Appl 114:70–87

The Migrant Every Country Wants to Have: Motion, Emotion, Imagination at the Joe Petrosino Museum in Padula, Italy

Dorothea Papathanasiou-Zuhrt and Aldo Di Russo

Abstract Celebrated by movies, press, and myths, as the one who institutionalized the fighting against the Mafia as Head of the Police in New York, Joe Petrosino is a hero both in the USA and Italy. The House-Museum *Joe Petrosino* (J.P.) is the only museum dedicated to the unrivalled pioneer in the fight against organized crime. Located in the native house of Petrosino in Padula, the J.P. exploits highly advanced multimedia formats and cultural communication concepts to produce in an artistic language the anti-mafia struggle led by Petrosino. Exploiting the powers of multivision technologies and image manipulation, the J.P. production has extensively used static documents of varied kinds to produce responsive cultural manifestations in an interactive continuum with the audience. This paper is a first attempt to fill the gap in defining the usability of multivision technologies for cultural heritage and a novel communication pattern with multigenerational and multicultural audiences. We analyze the pathway to a production solution and the methodology to ensure the communication of resource inherent values, scientific and historical fidelity together with attractiveness and empathy so as to engage the audience through new digital heritage artworks for an enriched cultural heritage experience.

Keywords Digital heritage artworks · Multivision · Haus-Museum Joe Petrosino

1 Introduction

In his seminal work *Pièces sur l'art* Paul Valéry analyzes that interacting with art created in the past, differs from our way of interacting with contemporary art in its productive context for the very reasons of its making, while the task and purpose of art is to create harmony between the audience and reveal messages that the works convey through sense and [1]. In this vein an *arti*-fact, an object that emerges from

D. Papathanasiou-Zuhrt (✉) · A. Di Russo
Artifactory, Preveza, Greece
e-mail: dorothea@artifactory.eu

the past, is a *fact* defined through its proper making. Objects and monuments that mirror past civilizations, which have broken the barrier of time, as Ferdand Braudel so eloquently formulates in his *Grammaire des Civilisations*, we call *cultural heritage* [2]. They have a great social value because they represent "outstanding universal values" generating the social glue of civilization by being the source of collective identity based on history, tradition, territory [3, p. 9]. However, to grasp their significance, history and use, depends on our ability to look at them with the eyes of those times, imagine them in their splendor and discover the hidden meanings. Along the lines Walter Benjamin indicates in his reference work *Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit* that photography is capable of spreading art and heritage among peoples and classes [4]. However, although a vast assortment of media tools is available today to those who want to create social value from the traces of past history, the fact that they are available is not enough [5–8]. The audiences that encounter a work of art or a monument should be enabled to interact with it and to perceive what they see in front of them within what they *already* know, through a cluster of links that facilitates perception (Papathanasiou-Zuhrt et al. 2018, p. 42) [9]. The J.P builds a first attempt to culturally recreate those worlds by exploiting static archives and objects images, sound, text and shooting on location, while maintaining the historical fidelity. The result ensures a cognitive, emotional and multi-sensory experience around the Italian Mafias in the twentieth century, with EUROPEANA rating the J.P. as one of ten the best museums for cultural communication in 2017.

2 From Artifacts to Digital Artworks

The enormous possibilities of manipulation that digital images offer to contextualize cultural heritage, could open the doors to the story, to a structure deriving from human language increasingly and specifically at the service of culture and articulated to influence cognitive-emotional experiences without fossilizing in the search for the suggestive effect without internal logic. That is to say that in a digital audiovisual dedicated to cultural communication, ontology and epistemology must coincide [10, p. 173]. The condition is that the AV languages used can be deciphered by the audience, and that this can be done only through the rules of meaning. Theatre and cinema have done this a long ago to communicate with its varied audiences. Already in the early nineteenth century Schopenhauer clearly formulates that "with the work of art you should not give the senses absolutely everything, but only what is required to put the imagination on the right track as it is an allegory of what it represents", or as Voltaire puts it, the secret to becoming boring is to reveal everything [11, p. 870; 12, p. 23]. Along the lines the J.P. animates an extensive variety of static documents to produce cultural manifestations in a cohesive and interactive continuum with the audience, leaving the necessary space for imagination, contemplation and reflection [13, 14].

Not much has changed in the twenty-first century: according to the EC Reports *Mapping the Creative Value Chains* and the *New Renaissance: Bringing Europe's Heritage Online* many aspects need to be reviewed, perhaps the whole value chain, but imagination: imagination will continue to play a fundamental role and becomes perhaps the most important feature which supports the choices for the construction and articulation of the sense as a function of a cognitive path [15, 16]. This is an opportunity for the development of knowledge at museums, sites and collections and those who want to welcome visitors are to know how to build everything that serves to tune the public with the work of art, with the artifact, with the historical period of reference and break the vicious circle of the superficiality of the tourist visit [17]. An unparalleled, revolutionary approach for cultural communication is formulated by Eco: he envisages placing, alongside the work, a series of narrative modules that give meaning to historical time, although aware of the present time, an ad hoc construction made of images words and sounds to carry the time, push into the orientation criteria: reconstructing a context path that takes in account those with a minimum of prior knowledge, but providing them with the emotional and sentimental education tools towards the progressive approach and the right use of context [18].

3 Background

Guiseppe Petrosino (1860–1909) was born in Padula, a small town in southern Italy, from where he leaves for New York with his family at age of 13. He enters the NYPD in 1895. He was promoted to detective in 1905. Criminals in Little Italy are now facing an enemy, who speaks their language, knows their methods, and can enter into their milieu. He organized a team of Italian policemen, the 'Italian Branch', through which he identifies criminal connections between the Black Hand and the Sicilian Mafia. Following this track, he arrives in Italy in 1909, to stay for 48 hours in Padula, before going to Palermo, where he was assassinated on March the 12th, 1909. The *House-Museum Joe Petrosino* (J.P.) is located in the house where Guiseppe Petrosino was born in 1860. The building was renovated in 2015–2016 to host the Museum. The J.P. is the only museum dedicated to an unrivalled pioneer in the fight against organized crime. Located in the native house of Joe Petrosino, in Padula in southern Italy, the Museum exploits highly advanced multimedia formats and cultural communication concepts to introduce the audience to the anti-mafia struggle led by the Italian-American Joe Petrosino. The Museum is created thanks to the agreement between the City of Padula, the Association LIBERA CONTRO LE MAFIE and RAI, Italian Public National Broadcaster.

4   Methodology

Culture and art, heritage and production are no longer objects of contemplation, but links that connect history, science, cosmology, making the imaginary true. It was precisely this frontier which developed the methodological tenets the design of a *Museum of the Legality* built inside the family house of Petrosino in his birthplace. We present below the methodological steps that led to the design and delivery of the visitor experience within the J.P. Museum:

1. *Respecting the Historic Structure*

   Within the functional restrictions a registered historic building dictates and the opportunities it offers at the same time, the J.P. explicitly demonstrates how history can become a participatory experience engaging the audience in situ by being composed from editable and manageable chronicles instead of historic lesson plans and labels.

2. *Selecting the Audiovisual Media*

   Conservation, scientific research and representation for the public aligned and oriented towards a strategy and a result, imagining a space usable both for educational use and for scientific research, which only the digital revolution allows [7, 19, 20].

3. *Arranging the Space*

   On the first floor visitors familiarize with the personal objects and furnishings that belonged to Petrosino and his family. A space is dedicated to the materials related to the cult of the character (photos, prints, comic books, and works of art). In the next two floors a sophisticated interactive space is offering a unique multi-sensory experience to the audience: significant audiovisual documents from the RAI archives have been digitized and reorganized with a dual purpose: (a) the popular dissemination of a significant shift of the Modernity through a new digital heritage artwork, and (b) scientific research available to researchers, journalists, teachers and schoolers in situ.

4. *The Conceptual Map: Fear; Courage; Connivance; Freedom*

   Four embedded in four multivisions display the evolution of the mafias in four rooms: (1) The American Cosa Nostra (fear); (2) Mafia and Anti-Mafia (courage); (3) Camorra and Anti-camorra (connivance); Venti Liberi (freedom), dedicated to the history of the first 20 years of the Anti-mafia movement). Each room has a series of short videos reconstructed from chronicles of those times that now area analyzed as history. The route is marked by four scenes in a composite technology film, where Petrosino meets four characters, which are archetypes of the Mafia mentality or of the Anti-mafia spirit. In every room visitors see and reconstruct, assisted by 100 audiovisual narratives, the history of the Mafias, but also the distinguished examples of men and women who fought organized crime. In the last two floors a sophisticated interactive space is offering a unique multi-sensory experience to the audience.

   Significant audiovisual documents from the RAI archives have been digitized and reorganized with a dual purpose: (a) the popular dissemination of a

significant shift of the Modernity through a new digital heritage artwork, and (b) scientific research. In the first case, visitors can explore the history of Mafia and Anti-mafia through audiovisual narratives (multivisions) activated by touch screens. In the second case scholars can access the Digital Library to study the audiovisual repository of the RAI. Thus the J.P. becomes a 'station' of Public & Digital History for all who wish to consult and analyze documentaries heritage made available by RAI Teche on a free access basis.

5. *The Read Thread*

Petrosino is the immigrant that any country would like to welcome and had to be represented in an environment where his ideas could live on. That is why an unusual *Little Italy* has been designed: real in all its elements but redesigned precisely so that it could be the environment of Joe's ideas and not his real life. And it's precisely this abandoned reality that allows approaching the truth to be shared with the public. The red thread that that connects the J.P. experience trail is a digital narration made using the most modern tracking and mapping technologies. The actors act in an imaginary *Little Italy* reconstructed through pieces of real set design, pieces of set design digitally reconstructed in 3D and pieces of set design designed in pencil to enhance the imaginary component of the story that winds through the encounter between Petrosino and characteristic figures of the mafia and the fight against the mafia. The last narration enables the audience to meet with Don Luigi Ciotti, the clergyman and founder of the LIBERA Association. LIBERA's principle "resist means to exist" is explicit for the struggle against the mafia in defense of legality all over the world. Don Luigi Ciotti acts himself in the film in order to bring out the universal components that make our daily behavior the real substratum of the fight against organized crime.

5 Application

The J.P. is a storytelling museum that aims to train its visitors to grasp the current and past realities of the many mafias and embrace the struggle of the anti-mafias. Its global aim is to train its visitors perceive and practice legality and raise their ability for semiotic codes and critical reflection in the critical topic of good citizenship. Four components have been integrated in the design of J.P.: (a) the scientific component led by the Department of Communication Science, Chair of Public and Digital History, University of Salerno; (b) the digital archive of news made available by RAI TECHE (RAI Digital Archives), which has been re-configured into an structured archive of history available to the audience; (c) the creative component that has involved authors and artists from different backgrounds; (d) the component that daily contributes to the culture of the fight against the mafia represented by the LIBERA Association.

Bridging the space-time gap between contemporaneity and past civilization is one of the most important themes and challenges that a narrator has in front of him. A fracture creates inner disarray because the references and beliefs relating to one's

own value system, but it is this disharmony that leads to reflection. As John Dewey suggests in his *Art as an Experience*, emotion is the conscious sign of a fracture, present and looming [21]. Disharmony is thus the opportunity for reflection- a guiding principle for the design of J.P. The desire for the restoration of unity transforms the mere emotion to the condition for the realization of harmony. This J.P. harmony is made of sensory perceptions and rational processing together, is therefore an interactive process. When harmony is achieved, reflection is incorporated into objects such as meaning. It's the beginning of the chain reaction where the past is brought into the present in such a way as to make it possible to the broader and deeper the content of the latter. This complex and articulated process, made up of crises, reflections and answers, is able to restructure the criteria of analysis towards a new and more advanced balance useful to the J.P. audience, as the whole museum is built as theatrical performance around the ideal and archetypal evolution of Patrosino's drama: it is the hero's ability to cross into the legend and imagination of his time that led the building of the J.P. experience as a balance between history and memory through the lens of dramaturgy.

The main medium used in the J.P. design to create the harmony condition is the *multivision*, a complex audiovisual technology, which is integrated different types of documents (fotos, texts, manuscripts, objects, acting, shooting on locations, archival materials, newspapers; permanents; digitized objects; animations, music, sound etc.) into meaningful subdivisions (chapters) and integrates the whole into a cultural communication project through comparisons, juxtapositions and contrasts continuously counter-placing contemporary elements incorporating rich media. The four multivisions projected in the four rooms have allowed to fully exploiting animation and use the RAI Teche archives and documents and all real deposits of culture available. Thsu we are enabled to exploit the infinite potential of static documents with unprecedented possibilities for the creation of emotions and special effects by enriching them with new elements. The use of digital graphics and videos have allowed many possible changes, enabling to infer the unknown from something known within the horizon of the visitors, put together and reassemble. Stories presented in the four guiding multivisions in the four rooms are dealing with four concepts, that make up the mafia mentality (1,3) and the anti-mafia mentality (2,4): (1) *Fear* in front of the many mafias; (2) *Courage* to stand up against them; (3) *Connivanc*e, illegality and complicity with the many mafias; and (4) *Freedom* from complicity, are not made only by documents, but by a cluster of links between each document that creates a bridge between each event, between a letter and photograph, an object and a label i.e. multiple links between different elements. The J.P. multivision set has thus merged elements of archives in one great ensemble that offers the possibility to create emotions and thus interact with the audience, where varied data are put together in a counterpoint of a contemporary event to facilitate perception and understanding (Fig. 1).

Fig. 1 Visitors customizing their experience in the J.P. itinerary. Joe Petrosino House Museum, 2017. Courtesy, Aldo Di Russo

6 Conclusion

The digital revolution has changed our way to access culture and the technologies used are can have a function in completing the path to the innovation. Scientific research for the last 30 years has turned on a light in the operation of our cognitive/emotional system, has given us a coherent vision on the role and mechanisms of acquisition of the knowledge and importance of the emotional system on the results.

In Europe, the prevailing idea is that of a creative and artistic with the works of the past that can offer the possibility for cultural heritage to 'interfere' and interact with the creative and cultural industry, which is currently growing rapidly, precisely because of the digital revolution. The need to enhance the value of cultural heritage identified the need to elaborate new narrative structures and new thinking is required to contribute to increasing social and economic value of the same mechanisms that push the public towards exhibitions, museums and excavations, helping them to interpret the message and reveal meanings and consequently values. The heritage sector is not always successful in activating the cognitive-emotional process of the audience because it is still hostage to the belief that there is a need for an indoctrinated interpretation. The widespread view that the mere contact with domain specific information transmits culture by osmosis is proved false. Instead, the narrative museum, by its very nature, induces empathy through the active participation of the audience. The audiovisual, in its most advanced forms, becomes the protagonist of the museum itself. Adherence to the rigor of research is an essential and not alienable point, and for this reason the presence of the team of multiple experts in the field is essential to the experience design.

The presence of different professional points of view is useful: one archaeological and historical, or historical and epistemological, or a sociological and an aesthetic one, important to provide the narrator with the data around which to make the story flow and around which to develop the imaginary part. Imaginary, as already mentioned, does not mean 'fantasy' but means, once identified with the experts the point of arrival, to break away from reality and bring the public closer to the truth. We need to take on board a new overall vision. We need to realize that knowledge is not an accumulation of information, but a reconversion of internal balances within its own context, the re-establishment of a balance altered by emotion.

The information, explanations and lessons are absolutely necessary and offer insights that each one of us to refine knowledge and context, but they can't be the first page of the interface speaking of museums. It is necessary to know how to integrate the component of the audiovisual language design as part of the process without relegating the content and content modes as if they were the add-on of a technology, planned downstream of it. On the contrary it is the artistic language, articulated on the basis of a narrative, to attract the audience and set in motion a cognitive activity and an aesthetic experience at the same time. The success of the J.P. depends on the value chain put in place for its implementation. It was not a question of exposing information about the character to the public, despite the fact that there was a long and articulated research behind it. It was also not a question of describing the biography of a man who was also a key figure in the history of the struggle against the mafia, nor of "administering" the interpretation of the curator, but of constructing the tools so that the public could interpret the phenomenon and enter, each with its own context of use, in harmony with the world we wanted to represent. That's why literary passages were used instead of editorial descriptions, and archival materials were re-purposed in a new audiovisual language and varied virtual environments suitable for multimedia installations. To combine art and science means to respect the historical rigor, adapting the imagination necessary to go beyond the simple vision of reality towards the search of truth.

References

1. Valéry P (1934) Pièces sur l'art. Gallimard, Paris
2. Braudel F (1987) Grammaire des civilisations. Arthaud-Flammarion, Paris
3. UNESCO (2017) Operational guidelines for the implementation of the world heritage convention. UNESCO World Heritage Centre, Paris
4. Benjamin W (1963) Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit. Suhrkamp, Frankfurt am Main
5. Paris T (2014) New approaches for greater diversity of cinema in Europe. Analyses of experiments launched in the context of the preparatory action. Circulation of the European Films in the digital era. European Parliament and European Commission, Brussels
6. Bollo A, Da Milano C, Gariboldi A, Torch C (2017) Study on audience development—how to place audiences at the centre of cultural organisations. European Commission, Brussels
7. Metzdorf M (2014) The implementation of the audiovisual media services directive by national regulatory authorities. JIPITEC 5:88–101
8. European Commission (2016) European Audiovisual Media Services Directive, COM(2016) 287 final, Brussels. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0013&from=EN7
9. Papathanasiou-Zuhrt D, Thomaidis N, Di Russo A, Vasile V (2018) Multisensory experiences at heritage places: SCRIPTORAMA, the Black Sea Open Street Museum. In: Vasile V (ed) Caring and sharing. The heritage environment as an agent for change. Springer, Cham, pp 11–49
10. Di Russo A (2018) I musei narranti, in Racconti da Museo. In: Dal Maso C (ed) Storytelling d'autore per il Museo 4.0. Edipuglia, Bari, pp 3–24
11. Schopenhauer A (1977) Werke in zehn Bänden, Band 1–4, Zürich

12. Voltaire (1734) Discours en vers sur l'homme, Le CDI Ecole Alsacienne. https://www.ecole-alsacienne.org/CDI/pdf/1400/14110_VOLT.pdf
13. Di Russo A (2005) Nuove opportunita a vecchi preguidizi per l'audiovisivo italiano AAM TAC Arts and Artifacts in Movie. Technol Aesthet Commun 2:175–187
14. Di Russo A (2018) Culture as a value. Archaeostorie. J Public Archaeol 2, Section SATURA LANX (pp 1–15) (in press). www.archeostoriejpa.eu
15. de Voldere I et al (2017) Mapping the creative value chain. European Commission, Brussels
16. Niggemann E, De Decker J, Lévy M (2011) The new renaissance. Report of the Comité des Sages. Reflection Group on bringing Europe's cultural heritage online. Publications Office of the European Union, Luxembourg
17. Eco U (2011) Il museo nel terzo millenio. Guggenheim Museum, Bilbao, 25 June, pp 1–14. http://www.umbertoeco.it/CV/Il%20museo%20nel%20terzo%20millennio.pdf
18. Eco U (2003) Ho un sogno: vorrei un museo con un'opera sola, Il Sole 24 ore, 5 November
19. European Parliament (2016) Audiovisual Media Services Directive. http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/581398/EPRS_BRI(2016)581398_EN.pdf
20. European Commission (2016) Audiovisual and media services directive, 2016/Article 16: Promotion European Works in Practice. https://ec.europa.eu/digital-single-market/en/news/revised-guidelines-monitoring-application-articles-16-and-17-audiovisual-media-services-avms
21. Dewey J (1934) Art as experience. Perigee Books, New York

The Dynamics of Small and Peripheral Airports in Tourism and Regional Development: The Case of Greece

Dimitrios Tsiotas, Spyros Niavis, and Serafeim Polyzos

Abstract Air transportation is a component of the national economies and plays an important role in the conduct of communication (especially amongst peripheral places), in the promotion of tourism, and generally in the economic and regional development. Within this context, this paper studies the regional dimension of the air transport in Greece, emphasizing to the factors that determine the attractiveness of the Greek regional airports by excluding the metropolitan cases of the Athens' and Thessaloniki's airports. The analysis is applied on air traffic statistics and on available spatial and financial information. For the study and the evaluation of the airport dynamics, a complex multiplier index is proposed, the results of which comply with the observations of the common practice and they can be used in other areas of application. The overall approach illustrates the contribution of the small and regional airports to tourism and regional development in Greece.

Keywords Regional airports · Spatial dynamics · Airport dynamics

1 Introduction

Airports worldwide vary both structurally and functionally [1–4], a fact which emerged an adequate number of studies dealing with aviation connectivity and airport classification, both in academic (by researchers) and institutional (by entities such as the European Union—EU) level. For instance, in 2005, the EU proposed an airport categorization based on the annual passenger traffic [5], which was debated mainly because it didn't include surrounding information of the airports [6]. Other approaches consider criteria related to the airports' operational purpose (e.g. leisure, business trips, etc.) [7, 8]. Despite that the relationship between airport functionality and regional development was studied in many papers [9–13], the question "Does economic growth

D. Tsiotas (✉) · S. Niavis · S. Polyzos
University of Thessaly, Volos, Greece
e-mail: tsiotas@uth.gr; spniavis@uth.gr

promotes airport development or vice versa?" is still open [13]. The existence of an airport induces economic and social benefits [13, 14] to local communities, by providing accessibility to other regions [13–16], which favors the development of economic activities, including those related to tourism [17, 18]. The attractiveness of an airport's region is a major development factor, but it may also induce negative economic and environmental externalities due to market failures and to inefficient use of resources [19–21]. Moreover, investments in air transport may be inefficient due to possible high opportunity capital costs and rather low airports' connectivity [20].

Tourism is strongly related to air transport [22, 23]. According to [23], there is a bidirectional relationship between these two concepts, where attractive regions enhance local air transport whilst well interconnected airports promote tourism development. This is obvious by examining the effects of the Low-Cost Carriers (LCCs), which in many cases result to the emergence of new destinations [24]. In Greece, regional airports have many peculiarities comparatively with other European countries, which are related to the rich Greek island geomorphology (it consists of 227 inhabited islands covering the 1/5 of the total area), the airports size, seasonality, high interdependence with tourism activity (75% of international tourist arrivals are conducted by air), and to the fierce competition with other transport modes [4]. It is noteworthy that about 70% of the Greek airports are located in the insular country. This ratio seems to follow the insular-mainland tourist accommodation ratio the odd of which is estimated about 60–40% [1–4].

On the other hand, the lack of efficiency in Greek airports restricts their contribution to regional development [25], due to seasonality (which led to underutilized capacity) and to the lack of advanced management practices [25, 26]. Underutilized capacity was hindered by the late emergence of the LCCs in the Greek market [27] and by the lack of Public-Private Partnerships (PPPs) [28]. Recently, a major shift towards private management was the concession agreement for the management of 14 regional airports between the Greek government and the Fraport Company [29].

Within this context, this paper studies the characteristics of 37 Greek regional airports (excluding Athens and Thessaloniki), aiming to assesses the dynamics of the small and regional airports in Greece and to illustrate their contribution to tourism and regional development. The remainder of the article is organized as follows: Section 2 presents the materials and methods used in the analysis. Section 3 presents the results and their interpretation through the regional and tourism development perspective. Finally, in Sect. 4 conclusions and some policy proposals are given.

2 Materials and Methods

Provided that in Greece only Athens and Thessaloniki (which are excluded from the analysis) have the critical size to be considered as megacities [30], all other airports belong to the regional airports' category. For managing purposes, the 37 Greek regional airports are grouped, in terms of insularity and annual passenger traffic (for the period 1994–2013), into four categories, as shown in Table 1.

Table 1 Classification of the Greek regional airports

Large insular (LI)		Medium insular (MI)		Small insular (SI)		Mainland (ML)	
Name	ICAO code	Name	ICAO code	Name	ICAO code	Name	ICAO code
Zakinthos	ZTH	Karpathos	AOK	Astypalaia	JTY	N.Aghialos	VOL
Heraklion	HER	Kefallonia	EFL	Ikaria	JIK	Aktio	PVK
Corfu	CFU	Limnos	LXS	Kalymnos	JKL	Alexandroupolis	AXD
Kos	KGS	Mykonos	JMK	Kasos	KSJ	Araxos	GPA
Rhodes	RHO	Mytilini	MJT	Kastelorizo	KZS	Ioannina	IOA
Santorini	JTR	Samos	SMI	Kithira	KIT	Kavala	KVA
Chania	CHQ	Skiathos	JSI	Leros	LRS	Kalamata	KLX
		Chios	JKH	Milos	MLO	Kastoria	KSO
				Naxos	JNX	Kozani	KZI
				Paros	PAS		
				Stitia	JSH		
				Skiros	SKU		
				Syros	JSY		

The analysis is conducted in two stages. At the first, the airports dynamics are modeled in terms of the passenger traffic undertaken by each airport. For capturing such dynamics a composite multiplier indicator (named Airports Dynamics Composite Index—ADCI) is proposed and is defined as follows:

$$ADCI_i = \frac{\Delta x_i}{E(\Delta x | x \in G_i)} \cdot \frac{100 \cdot (\Delta x_i / x_{i,1994})}{CV(G_i)} \tag{1}$$

where $i = 1,2,\ldots,37$, is the indicator of a regional airport, Δx_i is the airport's (i) annual passenger traffic change between 1994 and 2013 $\Delta x_i = x_{i,\,2013} - x_{i,\,1994}$, G_i is the category of airport i, according to Table 1, $E(\Delta x | x \in G_i)$ is the average annual passenger traffic change for the airports lying at the same category with airport x_i, the factor $100 \cdot (\Delta x_i / x_{i,\,1994}) = 100 \cdot (x_{i,\,2013} - x_{i,\,1994} / x_{i,\,1994})$ is the relative passenger traffic change of airport i, and $CV(G_i)$ is the coefficient of variation of the annual traffic in airport i, expressing the homogeneity of air traffic through time in this airport.

Based on ADCI, an airport is highly dynamic when it has high positive changes (absolute and relative) of annual traffic and quite low variability in its performance over time. The ADCI has been composed in a context that high values express high dynamics.

At the second stage, airports are examined in terms of tourism development in their regions. Despite that the effect of an airport, especially for the largest ones, is not limited to its region [20], using the administrative regional basis suggests a good proxy for identifying the connectivity strength between airports and local development [15], and therefore the administrative unit of prefecture is used in this study for

Greece. Two methods are used to capture the relationship between air traffic and tourism development. The first is based on correlation between annual passenger arrivals at airports and tourists' arrivals at the respective prefectures (for the period 2003–2015). Due to limited data availability, the Spearman correlation coefficient is used [31]. At the second step, the tourism development importance of airports is measured by the ratio of the annual foreign tourists' arrivals to the total annual foreign tourists' overnights at the hotels, for a prefecture, as shown in Eq. (2).

$$THI_i(\text{Tourism Hub Index}) = \frac{\text{international arrivals at airports of prefecture } i}{\text{international overnights at hotels of prefecture } i}$$

(2)

The THI captures whether airports are significant in filling the supply of the hotels in their regions. Scores close to one express that the airport acts as a hub for a wider region, since the airport arrivals exceed overnights at the hotels and thus a part of the foreign tourist flows is being forwarded to adjacent regions (destinations). Data in this part refers to the period 1994–2013 and is extracted (for arrivals) from the Civil Aviation Authority [32] and (for overnights) from [33]. Spatial data is extracted from [34].

3 Results and Discussion

From the 45 airports constructed in Greece 39 were active in the reference period, while the remaining 6 were out of service. Figure 1 depicts the geographical location of the active regional airports and it presents their division into geographical quadrants (Q1–Q4), where some basic figures, such as density (d_i), share of passenger traffic (t_i), and some other traffic information is shown. Initially, it is observed that the spatial distribution of the SI group extends mainly into the region of the southern Aegean (Q4), whilst the MI group extends into the central and northern Aegean region, exception from EFL and AOK. In addition, the LI group is located in the southern Aegean and the Ionian seas. Finally, the LI group accommodates half of the total passenger traffic, being followed by the MI group airports with 25%.

Table 2 shows the results of the ADCI calculations. Initially, the ML cluster included in (Q1, Q2) shows limited dynamics (negative ADCI values), except from the AXD that is positive probably because it serves high domestic traffic and large number of armed forces serving in the camps. The east and south east Aegean cluster MJT, JKH, JIK, SMI, LRS, JKL, KGS, RHO, and KZS generally shows a positive trend along the route, except SMI (negative ADCI value). Dominant cases here are RHO and KGS. In addition, the western regional arc of airports CFU, PVK, EFL, GPA, ZTH, KLX, and KIT presents positive prospects, except Corfu (CFU) that shows a lag comparatively with the other airports of the LI category. This lag is partially reflected on the CFU's low domestic traffic, which corresponds to 9.66% of
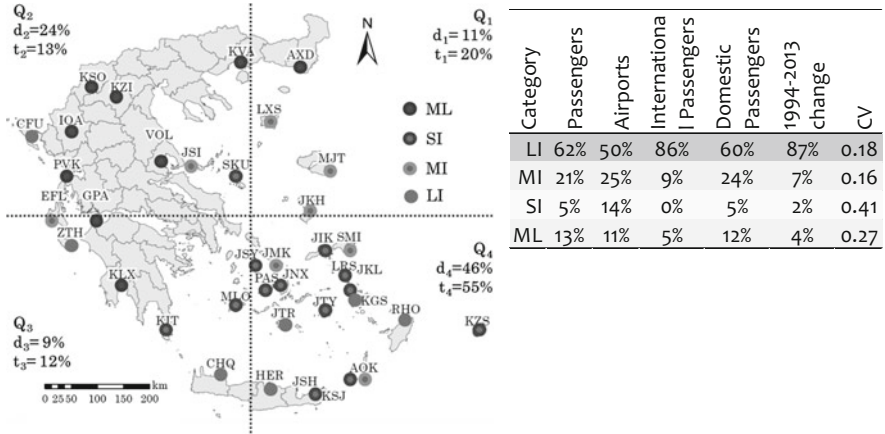
Fig. 1 Spatial distribution and basic traffic figures of the Greek airports

Table 2 Results of the ADCI calculations

	LI		MI		SI		ML	
	Rank	ADCI	Rank	ADCI	Rank	ADCI	Rank	ADCI
1	CHQ	7.377	JMK	28.737	JIK	86.335	PVK	22.630
2	RHO	7.176	EFL	10.113	JKH	38.719	VOL	11.596
3	HER	6.098	MJT	0.902	SKU	12.111	KLX	7.657
4	JTR	2.996	AOK	5.024	JKL	10.181	GPA	6.792
5	KGS	2.957	JKH	0.007	JTY	8.864	AXD	0.615
6	ZTH	2.550	JSI	0.005	LRS	8.740	KSO	−0.050
7	CFU	0.505	LXS	−1.009	KIT	6.608	KZI	−0.146
8			SMI	−2.049	MLO	2.456	KVA	−0.290
9					KZS	1.675	IOA	−0.383
10					JNX	1.449		
11					KSJ	−0.037		
12					JSY	−0.292		
13					PAS	−0.778		

the total and to 67.62% of the LI's average, whereas its international traffic reaches 14.30% of the total, hovering around the LI's average.

Amongst the other airports, PVK shows the highest dynamics. The central Aegean airports JMK, JSY, JNX, PAS, MLO, JTR, and JTY show marginally positive trends, since the cluster JMK, MLO, JTR, and JTY records a positive performance, the JNX is static, whereas JSY and PAS are negative. Mykonos (JMK) is one with the highest ADCI in the MI category. The group CHQ, HER, JSH, KSJ, and AOK shows positive trends, except KSJ that is marginally static. The major CHQ and HER airports tap on the high tourism attractiveness of Crete, showing high ADCI values within their category. Finally, the airports VOL, JSI,

Table 3 Spearman's correlation coefficients (ρ) between airport arrivals and hotel overnights, for the Greek prefectures (2003–2015)

Prefecture	Airport	ρ	Sig.
Kyklades	Kyklades Airports[a]	0.925	0.000
Dodekanisos	Dodekanisos Airports[b]	0.899	0.000
Evros	Alexandroupolis	0.820	0.000
Chania	Chania	0.820	0.000
Heraklion	Heraklion	0.754	0.002
Kefalonia	Kefalonia	0.503	0.067

[a]MLO, JMK, JNX, PAS, JTR, JSY
[b]JKL, JTY, AOK, KSJ, KZS, KGS, LRS, RHO

SKU, and LXS show positive dynamics with a clear geographic configuration. Airports VOL and SKU belong to the highest of their categories, JSI is static, whereas only LXS is negative.

Table 3 shows the calculations of the Spearman's coefficient, where a significant positive correlation between tourists' arrivals at airports and hotels is captured for 6 out of 21 prefectures. For the other 15 cases no linear relationship between airport and hotels arrivals is significant. This illustrates that airports have a structural role mainly for serving the islands and especially for the most tourism-developed of them.

Moreover, highest correlations are detected for airports that accommodate rather high passenger traffic, presenting a variety of alternative flight options to passengers. Therefore, tourism in Kyklades and Dodekanisos regions and in Chania and Heraklion prefectures appears more sensitive to their airports' performance, in comparison with other continental areas but also with a number of insular destinations (such as Corfu and Zakynthos). This denotes that, in many cases, regional airports are not the major entrance gates for tourists due to competition with other transport modes, since many ports operate as gates in insular areas. Finally, the significant result for Evros prefecture is remarkable, implying that hotel arrivals are sensitive to this airport that acts as gate for tourists' entrance.

Table 4 shows the results of the THI calculation. For 15 cases the index exceeds the critical value of 100%, denoting that international arrivals at airports exceed those of hotel overnights at the airports' prefectures. Airports with highest score are in their majority insular (except PVK) and large in size (in terms of passenger flows). High scores are also observed for the prefectures of LXS, MJT, KVA, VOL, whereas all other cases are far below 10%.

In general, the tourism-oriented airports are mainly insular and they are acting as gates. Islands with THI > 100%, appear to operate as hubs forwarding traffic to destinations of nearby prefectures. In contrast, regional airports with rather low THIs are found on destinations where tourism flows are mainly directed by other transport modes and thus they fail to acquire a leading role in their area traffic. For those prefectures, the metropolitan airports ATH and SKG operate as gates for international tourists' arrivals, whereas other modes are used by tourists to reach their destinations.

Table 4 Results of the THI calculations

Airport	THI (%)	Airport	THI (%)	Airport	THI (%)	Airport	THI (%)
PVK	1071	KGS	153	KVA	50	MLO	0.00
EFL	232	GPA	135	VOL	26	JNX	0.00
JTR	229	CHQ	134	JKH	7.47	PAS	0.00
JSI	227	RHO	121	SKU	1.58	JSY	0.00
HER	196	SMI	109	AXD	1.03	JKL, JTY, and LRS	0.00
KLX	166	JMK	105	KSO	1.03	AOK and KSJ	0.00
CFU	164	LXS	80	JSH	0.11	KZI	0.00
ZTH	163	MJT	59	IOA	0.01	JIK	0.00

4 Conclusions

This paper examined the dynamics of 37 regional (without ATH and SKG) airports in Greece, on traffic and spatio-economic information for the period 1994–2013, aiming to highlight the regional dimension of air transportation and its relationship with tourism. The analysis was based on further grouping into four categories and it showed a rather concentrated aviation market, since >50% of the traffic was concentrated in the south-east Aegean region, while the mainland traffic was <25%. Despite that this empirical research was applied to Greece, which is a coastal country with significant peripheral island morphology, the methodological framework of this paper has the merit to be independent to the case study and to provide insights broader than the cases where many islands are part of a country. This is because, in the analysis, an independent to the case study grouping was applied and a composite index was proposed (ADCI), which provides insights (such as revealing gaps in the dynamics of developed airports) that cannot be captured by classic descriptive methods.

In terms of tourism, airports appeared diverse developmental dynamics at different regions. Correlation analysis between airport arrivals and hotel overnights showed that the existence of an airport is mostly critical for the most developed tourism regions and lesser critical for other regions, where other transport modes prevail. Moreover, the size of the airports matters, as in the most cases the traffic of the largest airports was more related the adjacent hotel sector. In addition, the tourism hub index (THI) calculation showed that larger airports acquired a more strategic role for forwarding international tourism flows. These airports exceeded a critical point of traffic, which makes them more attractive for passengers, due to better connectivity, and thus to operate as hubs for the adjacent prefectures.

Overall, this paper configures a helpful basis for the local authorities to become fully aware of the dynamics of their airports and to adjust their policies in strengthening their role for the local societies. Moreover, the tourism actors can understand whether the airport plays a dominant role in filling their supply and thus to drive funding and marketing sources for its further enhancement.

References

1. Polyzos S (2011) Regional development. Kritiki Publications, Athens (in Greek)
2. Tsiotas D, Polyzos S (2015) Analyzing the maritime transportation system in Greece: a complex network approach. Netw Spat Econ 15(4):981–1010
3. Harrigan J (2010) Airplanes and comparative advantage. J Int Econ 82:181–194
4. Tsiotas D, Polyzos S (2015) Decomposing multilayer transportation networks using complex network analysis: a case study for the Greek aviation network. J Complex Netw 3(4):642–670
5. European Commission (2005) Community guidelines on financing of airports and start-up aid to airlines departing from regional airport. Off J Eur Union. OJEU-2005/C 312/01
6. Heymann E (2005) Expansion of regional airports: misallocation of resources. Deutsche Bank Research, November 18
7. Graham B (1998) Liberalization, regional economic development and the geography of demand for air transport in the European Union. J Trans Geogr 6(2):87–104
8. Jarach D (2001) The evolution of airport management practices: towards a multi-point, multi-service, marketing-driven firm. J Air Trans Manag 7:119–125
9. Goetz AR (1992) Air passenger transportation and growth in the U.S. urban System, 1950–1987. Growth Chang 23:218–242
10. Robertson J (1995) Airports and economic regeneration. J Air Trans Manag 2(2):81–88
11. Green RK (2007) Airports and economic development. Real Estate Econ 3(1):91–112
12. Button K, Doh S, Yuan J (2010) The role of small airports in economic development. J Airport Manag 4(2):125–136
13. Janic M (2017) The sustainability of air transportation. A quantitative analysis and assessment. Routledge, London
14. Kavoura A, Kefallonitis E (2018) The effect of social media networking in the travel industry. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 4053–4063
15. Brueckner JK (2003) Airline traffic and urban economic development. Urban Stud 40 (8):1455–1469
16. Percoco M (2010) Airport activity and local development: evidence from Italy. Urban Stud 47 (11):2427–2443
17. Lakshmanan TR (2011) The broader economic consequences of transport infrastructure investments. J Trans Geogr 9(1):1–12
18. Sellner R, Nagl P (2010) Air accessibility and growth—the economic effects of a capacity expansion at Vienna International Airport. J Air Trans Manag 16(6):325–329
19. Amoroso S, Caruso L (2010) Regional airport: study on economic and social profitability. Int J Sustain Dev Plan 5(2):175–184
20. Allrogen F, Malina R (2014) Do the regional growth effects of air transport differ among airports? J Air Trans Manag 37:1–4
21. Zak D, Getzner M (2014) Economic effects of airports in Central Europe: a critical review of empirical studies and their methodological assumptions. Adv Econ Bus 2(2):100–111
22. Khadaroo J, Seetanah B (2008) The role of transport infrastructure in international tourism development: a gravity model approach. Tour Manag 29(5):831–840
23. Bieger T, Wittmer A (2006) Air transport and tourism—perspectives and challenges for destinations, airlines and governments. J Trans Manag 12(1):40–46
24. Donzelli M (2010) The effect of low-cost air transportation on the local economy: evidence from Southern Italy. J Air Trans Manag 16(3):121–126
25. Tsekeris T (2011) Greek airports: efficiency measurement and analysis of determinants. J Air Trans Manag 17(2):140–142
26. Psaraki-Kalouptsidi V, Kalakou S (2011) Assessment of efficiency of Greek airports. J Airport Manag 5(2):170–186
27. Papatheodorou A, Arvanitis P (2009) Spatial evolution of airport traffic and air transport liberalisation: the case of Greece. J Trans Geogr 17(5):402–412

28. Arvanitis P, Papatheodorou A (2015) Greek airports in transition: from public ownership to PPP concessions. J Airport Manag 9(3):284–295
29. Bellos E (2017) In Fraport since yesterday 14 airports, the price of 1,2 bill, was paid. Daily Newspaper (Kathimerini). http://www.kathimerini.gr/904901/article/oikonomia/epixeirhseis/sth-fraport-apo-x8es-ta-14-aerodromia-katavlh8hke-to-timhma-toy-12-dis
30. Polyzos S, Tsiotas D (2012) The evolution and spatial dynamics of coastal cities in Greece. In: Polyzos S (ed) Urban development. Intech Publications, Croatia, pp 275–296
31. Norusis JM (2005) SPSS 13.0 statistical procedures companion. Prentice Hall, New Jersey
32. Civil Aviation Authority (1997–2018) Statistical data. http://www.ypa.gr/profile/statistics/
33. Hellenic Statistical Authority (1997–2018) Hotels, rooms for rent and tourist campsites. http://www.statistics.gr/en/statistics/-/publication/STO12/-
34. Google Maps (2013) Google mapping services. www.google.gr/maps?hl=el

Cultural Tourism, Destination Branding and Spatial Experience Design: Contemporary Hospitality Design in Cyprus

Anna Efstathiou and Eleonore Zippelius

Abstract Cultural tourism is becoming a predominant form of special interest tourism in Cyprus, but stands in stark contrast to the actual user perception and experience within the sector. It is assumed that this stems to a great extent from a low appreciation of sense of place by local residents and stakeholders. Therefore, the present study attempts to investigate ways of promoting cultural experience in tourism in relation to the sense of place. It is also discussed how this can contribute to destination, place and product marketing in cultural tourism towards a brand that is based on local culture and, furthermore, socially constructed. The paper explores cultural tourism and cultural destination branding in Cyprus. It aims to question shortcomings and investigates how memorable tourist experiences with cultural relevance can be further expanded towards a holistic hospitality design and branding. The above derived criteria are showcased through student projects related to Hospitality Design in its broader sense. The study presents a number of design proposals exploring the visual vocabulary and the notions signified in relation to tangible and intangible heritage. Spatial interpretations explore the ongoing process of a creative reconsideration of culture. Heritage and traditional values are communicated through direct reference or indirect transfer complementing the experience of sense of place in cultural tourism.

Keywords Cultural tourism · Spatial experience · Hospitality design

A. Efstathiou (✉) · E. Zippelius
University of Nicosia, Nicosia, Cyprus
e-mail: efstathiou.a@unic.ac.cy

1   Cultural Tourism, Destination Branding and Sense of Place

A full understanding of the tourist needs and the characteristics of the hosting natural and built environment is the fundamental base for the development and implementation of a successful tourism concept. The natural environment comprises not only natural landscape, but also its inhabitants and the built environment represents as much the past as the contemporary expressions of local culture.

Cultural tourism offers a complexity of experiences related to places [1]. "The influential realm of the tourist experience consists of the physical and social environment. The physical environment provides the setting for tourist activities and a space for social interaction" [2]. A strong sense of place, that offers deep emotions and feelings, links the place, or destination with the experience of the tourist [3]. Therefore, cultural experience is closely related to the sense of place and intrinsically linked to local identity. Rich and diverse "sensoryscapes" that combine visual, olfactory, aural and tactile experiences are generating a strong link between the physical environment and the cultural tourist [4].

The culture of a place does not only comprise cultural heritage, but also cultural expressions of contemporary living and is manifested in tangible, physical assets, cultural landscapes, places, sites and buildings, as well as in intangible, non-physical assets that comprehend cultural knowledge, skills and practices [5]. The later is apparent in a rich variety of handicrafts, visual arts, gastronomy and culinary practices, social practices, rituals and festive events, music and performing arts, oral traditions and expressions, and knowledge and practices concerning nature and the universe [6]. Moreover, the variety of tangible assets is defined also by the scale: from cultural landscapes and regions, over cities and towns, districts, neighbourhoods, and squares to building ensembles, individual buildings, interiors, and furniture.

The local identity mentioned previously is significant for the marketing of a place in the tourism industry. Destination branding determines a set of marketing activities in order to identify, differentiate and promote a distinct image of a touristic destination. It aims at creating, consolidating and reinforcing positive experiences and memories [7] and seeks to provide "a combination . . . of all products, services, and ultimately experiences provided locally" [8]. As such it includes an amalgam of goods and services [9]. A successful cultural destination branding and marketing has to be integrative and promote a strong sense of place and a rich spatial experience. It is, therefore, necessary that destinations are seen as places full of meaning that generate emotions and memorable experiences [3].

2   Cultural Tourism in Cyprus

Tourism in Cyprus is one of its major economic inputs; however, it is only recently, that serious studies were carried out to support the island's sources of income. Until the millennium the development of this sector was continuous to a fairly good pace based on the Sea & Sun model, but during the first decade of the twenty-first century signs of stagnation were detected mainly due to many new and enthusiastic competitors and a slow reaction of the country to the international trends. The combination of internal and external factors of this problem was examined and studies were undertaken, in order to lead to effective action plans that will add positive value to all parties involved: the locals, the investors, and the tourists. Some of the detected weaknesses of the past were: the focus mainly to the Sea and Sun model without looking into alternative types of tourism, the overdependence on specific markets, the seasonality besides the excellent climatic conditions even in winter, the lack of clear strategy and the poor branding and marketing performance. The results of the investigation reveal that a major reason for Cyprus' poor performance is that in traditional markets, there is a low understanding of what the destination can offer to tourists. It is suggested that Cyprus can increase its competitiveness with regards to products that are different from Sea & Sun. Cultural Tourism could be an alternative.

According to the findings and in relation to the competitors in the Mediterranean area, Cyprus has the lower promotion of cultural resources. Only 32% of the tourists are completely positive that Cyprus has an outstanding cultural heritage and it offers an array of memorable experiences [10, p. 43] and only one in two respondents who stated that cultural tourism was an important criterion for choosing Cyprus has actually enjoyed cultural tourism [11]. This means that there is a lot of potential and challenge for improvement towards this direction. Historical and cultural activities complement at the moment the Sea & Sun main activity. However, the island's culture and heritage appear to be one of its most important assets as "Cyprus possesses a wide array of historical & cultural attractions", that are "easily accessible due to the country's size"[10].

One of the suggested missions proposed by the studies would be to offer memorable experiences to the international tourists particularly culture and nature related. The studies also address the issue of soulless architecture and the loss of Cypriot local identity in order to achieve authenticity and access to a very large market [10, pp. 23, 24]. Providing micro experiences that create local flavor could be regarded as a reinforcer. Activities, positive emotional mood, seducing elements and memorabilia are considered elements to offer memorable experiences [10, pp. 163, 164]. Launch "Made in Cyprus" and "Soul of Cyprus" initiative should be of major significance among priorities. This should invite all possible cultural organisations and design institutions to join forces towards a reconsideration of the ways that cultural identity is perceived both by locals and tourists. Moreover, branding and marketing should be strengthened by designing "more appealing promotional visual content and improve the quality of the collaterals and content that is generated"[10] and Cyprus should invest on a strong brand image as it now

appears to have a weak and undifferentiated brand [10, pp. 76, 81]. Marketing is suggested to turn from traditional to 360° digital [10, p. 25]. Design of spaces and products faces therefore a huge challenge and broad educational and informational modes are necessary throughout the society.

3 Culturally Relevant Design in Design Education as an Integrative Process

Cultural product design "is a process of rethinking or reviewing cultural features and then redefining the process in order to design a new product to fit into society and satisfy consumers via culture and esthetic" [12]. Culturally relevant design production should transcend a design that fits within and complements a sense of place. An integrative design approach takes under consideration the needs of all involved parties, but also covers the variety of dimensions, scales, time periods and senses. This responsive and sustainable approach improves touristic experience by meeting tourist expectations while it supports the economic, social and cultural context [12, 13].

During the design process cultural features are identified and correlated with necessary user and product attributes to form a design model that is further translated into a cultural product. The design process is broken into four phases starting from investigation and the setting up a scenario, over telling a story and writing a script, to designing the product. In step 1 key cultural features are identified and represent a scenario. On three different levels—the outer, tangible level, the mid or behavioral level and the inner, intangible level—economic, social and technological aspects are taken into consideration. Phase 2 focuses on user observation and aims at storytelling in order to define a product with cultural meaning based on investigation. Part 3 deals with concept development and 4 finalizes and implements the product design [12].

Relevant student projects are presented in the following in relation to the previous analysis. The purpose is to examine the young insiders' interpretation of contextual significance and cultural relevance in their effort to propose an authentic and meaningful tourist experience based on local identity and sense of place and a sustainable, economic, social and cultural development.

Professional design practice and design education can contribute to the effective presentation of the Cypriot identity and the design of spaces to host and encourage memorable experiences and a sense of place. Awareness of the true value of the cultural heritage of Cyprus should extend the borders of institutions and reach the market. The strategy to be used to achieve culturally relevant design is based on a dual approach: education and integrative design. Education, does not only provide a close connection to culture but also offers the opportunity to engage fresh and creative minds from an insider's cultural perspective. Architecture and design students should be encouraged to be involved in discovering and producing the

cultural heritage of the island by participating to real life transdisciplinary projects, introducing themselves, but also the local markets to the authenticity and the value of the Cypriot tradition. The design of spaces and products that would be authentic and provide the background for memorable experiences, blend past and contemporary cultural expressions of the local unique identity and offer a unique sense of place.

4 Culturally Relevant Hospitality Design Case Studies

4.1 Rehabilitating Prodromos Village

The redevelopment of Prodromos Village, Cyprus and its landmark the abandoned Verengaria Hotel was a project proposal within Unit 7 of the Architecture Programme, University of Nicosia (see Fig. 1). A thorough site analysis of the hotel, the surrounding natural landscape, and the mountain neighbouring villages focused on the sense of place. The local and the tourists' perspectives were taken into consideration. The analysis was conducted on multiple scales of space from the region and village level to the hotel interior. The main objectives of the scenario were the revitalisation and rehabilitation of an abandoned rural area the adaptive reuse of the built environment and the transformation into a sustainable touristic attraction. The potential of the existing context was further developed considering tangible and intangible assets and adding value through touristic activities and a continuous connection to the city. The sense of place and the experience of it are augmented by combining and balancing old and new, by inserting new structures within the old and by adding new activities to the existing environment. This resulted to a strong integrative and responsive approach providing continuous communication of experiences and stimulating sustainable development both by private and public sectors.
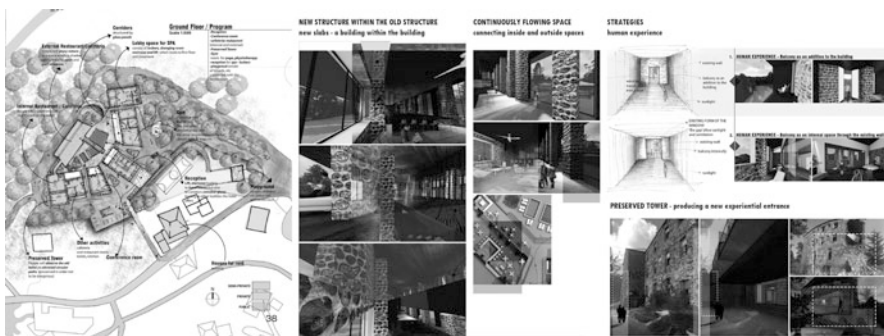
Fig. 1 "Rehabilitating Prodromos Village" UNIC student project. Student's name: Hadjigeorgiou J., supervisors: Lapithis P, Papadopoulou A, Zippelius E. (Photography source E. Zippelius 2017)

4.2 Hospitality Design with Cultural Relevance in Tochni, Larnaca, Cyprus

Aspects of Cyprus culture inspired the works of interior design students in a real life project of the University of Nicosia for the reuse of a traditional complex of houses in the village of Tochni of the Larnaca area as agrotouristic establishment. The owner explained his vision and students researched, interviewed the local sources and proposed design outcomes respecting the traditional architecture aiming to enhance cultural experience. "The main educational purpose was to guide students to understand the core of the Cypriot cultural heritage, to respect it and become able to reproduce values and interpret heritage by design in a productive and respectful manner" [14]. Students attended a workshop under the title "Experimenting with the living past" [15] in order to be introduced to the sustainable preservation of built heritage and explored significant visual components and the techniques, the materiality, the textures, the colours, the scale related to Cypriot culture. Traditional techniques and cultural heritage led students to design interpretations and a synthesis of unique, sensitive, respectful but also innovative approaches and brought together the designers, the local investors and the tourists.

4.3 Designing a Spa with Cultural Relevance

The GROHE Design Series was launched in 2012 by GROHE, a German manufacturer of sanitary ware, in order to promote and reward the interdisciplinary design of students in the fields of interior design, architecture and applied multimedia/graphic communication. The collaboration between GROHE and the Departments of Architecture and Design and Multimedia of the University of Nicosia, in spring 2018, focused on the design of a home spa with local cultural relevance promoting the Cypriot identity through the GROHE products. The designed environments could be widely used in hospitality environments promoting cultural relevance through interior and product design. A preliminary visual vocabulary of the Cypriot context through patterns, materials, textures, colors forms and techniques was followed by a thorough investigation of the user perspective, the characteristics of the sanitary products and the properties of the proposed space. The result was a spatial organisation in coordination with cultural and natural factors. It combined the tangible level with the behavioural and intangible attributes. The developed visual vocabulary, user scenario, and spatial design proposals were reviewed and tested and finally formalised and represented.

Project 1: "He was grand but she left an era" The students identified components that constitute Cypriot culture and after intensive analysis they focused to three main cultural features—mythology, architecture and nature—with an emphasis on the myth of Aphrodite and Adonis, the internal courtyard of the typical vernacular
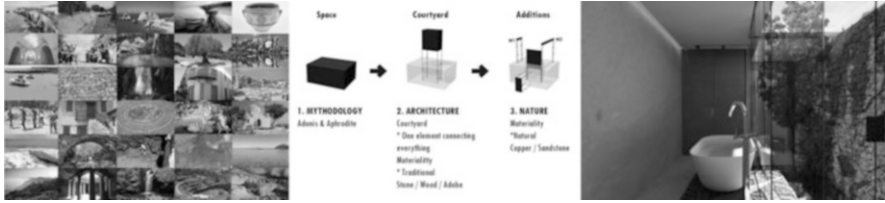
Fig. 2 "He was grand but she left an era" UNIC/GROHE student project. Students' names: Papaperikleous A., Kokia N., Poyadji M., supervisors: E. Zippelius, K. Ioannou, M. Stavridi, GROHE representative Varitimidou L. (Photography source E. Zippelius 2018)

Fig. 3 "Lefkara Delight" UNIC/GROHE student project. Students' names: Farmakis S., Timotheou F., Karotsi I., supervisors: E. Zippelius, K. Ioannou, M. Stavridi, GROHE representative Varitimidou L. (Photography source E. Zippelius 2018)

Cypriot architecture and materiality. Special emphasis was given to the relation between in- and outside, the courtyard, the spatial zoning and flows and the reference to the Cypriot cultural landscape. A complex reading of tangible and intangible cultural elements resulted in a strong integrative and responsive approach that is capable of supporting emotions and feelings and creating memorable experiences (see Fig. 2).

Project 2: "Lefkara DeLight" The chosen key cultural features complement a sense of place. The visual vocabulary combines cultural, historic and natural assets. Cultural meaning derived from two themes, bathing—the Roman and Ottoman bath—and the specific location—the village of Lefkara with its spatial sequences, traditional houses, natural stone and traditional embroidery (see Fig. 3). The design involves many senses such as hearing, touch and vision. The later sense is stimulated by light and its effects of shadows and reflection, forms and colours. The combination of tangible and intangible features provides a complex and authentic experience.

Project 3: "Nudists on the rocks" The project focuses on the strong bonds between natural landscape and local culture (see Fig. 4). This is exemplified by the mythical birthplace of Aphrodite, which also links to the thematic of bathing. Spatial form and flow are derived from the conch sea shell. The various interior spaces are visually separated. A serial vision draws the user further into the space providing a sense of here and there. This is leveraged by pointedly inserted openings that recreate a visual correlation between in- and outside, culture and nature.
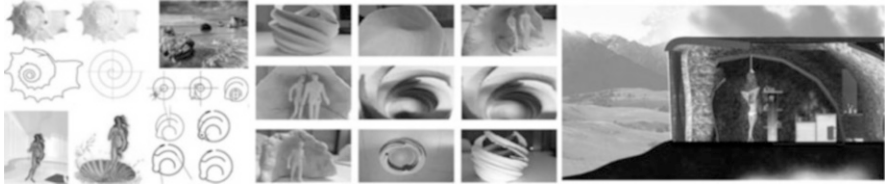
Fig. 4 "Nudists on the rocks" UNIC/GROHE student project. Students' names: Athanasiou A., Voniatis D., Xenofontos K., supervisors: E. Zippelius, K. Ioannou, M. Stavridi, GROHE representative Varitimidou L. (Photography source E. Zippelius 2018)

4.4 Brief Discussion on Case Studies

The projects showcase an understanding of culture as concept and process [16] and the generation of memorable experiences based on an investigation and interpretation of sense of place [17]. The design process transcends thereby a mere formal transformation of cultural product design [12] by adding value with regards to authentic experiences and the sustainable management of existing resources in an integrative process in various scales and dimensions. Integration also refers to all stakeholders, from tourists and investors to industry and locals, and the cooperation of relevant disciplines concerning analysis, planning and design.

5   Conclusions

Cyprus Tourism has to broaden its spectrum to all alternative models of tourism, among them cultural tourism in order to reassure a bright future. Cultural tourism and the destination branding of Cyprus have to be supported by all productive forces and all disciplines involved. The design institutions and the related organizations, among them design education have to train not only their students, but also the general public and specifically the hospitality stakeholders towards a culturally relevant contemporary design that will promote the cultural identity, and will create products, interiors, buildings and environments that will celebrate the Cypriot identity seen from a contemporary sustainable and innovative approach. From the design of memorabilia to the design of memorable interiors and the revitalisation of the urban spaces, the Cypriot context should express a unique identity and the richness of its culture.

References

1. Noy C (2007) The poetics of tourist experience: an autoethnography of a family trip to Eilat. J Tour Cult Chang 5(3):141–157. https://doi.org/10.2167/jtcc085.0

2. Quinlan Cutler S, Carmichael B (2010) The dimensions of the tourist experience. In: Morgan M, Lugosi P, Ritchie B (eds) The tourism and leisure experience: consumer and managerial perspectives. Channel View Publications, Bristol, para 17
3. ScholarWorks@UMass Amherst. https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1727&context=ttra
4. Mazumdar S (2003) Sense of place considerations for quality of urban life. In: Guteroy N, Ozsoy A (eds) Quality of urban life: policy vs practice. Istanbul Technical University, Istanbul, pp 83–97
5. McKercher B, Du Cros H (2002) Cultural tourism: the partnership between tourism and cultural heritage management. Haworth Hospitality Press, Philadelphia
6. UNWTO (2012) Tourism and intangible cultural heritage. UNWTO, Madrid
7. Goeldner CR, Ritchie JRB (2009) Tourism: principles, practices, philosophies. Wiley, New York
8. Buhalis D (2000) Marketing the competitive destination of the future. Tour Manag 21:98. https://doi.org/10.1016/So261-5177(99)00095-3
9. Intechopen Homepage. http://cdn.intechopen.com/pdfs/35715/InTech-The_role_and_importance_of_cultural_tourism_in_modern_tourism_industry.pdf
10. THR (2017) Cyprus tourism strategy 2030: final report [online]. https://issuu.com/presidency-reform-cyprus/docs/doc27._final_report_tourism. Accessed 29 Jun 2018
11. Hospitality and Leisure Group of PwC Cyprus & PwC's Chair at the University of Nicosia (2013) Opening the vault of tourism in Cyprus. A study on the competitiveness and prospects of tourism in Cyprus, Nicosia, pp 8–9
12. Lin R, Sun M, Chang Y, Hsieh Y, Huang Y (2007) Designing "culture" into modern product: a case study of cultural product design. In: UI-HCII 2007, 2nd International Conference on Usability and Internationalization. Springer, Berlin, p 148. https://doi.org/10.1007/978-3-540-73287-7_19
13. University of ÖsternNorrbottenHomepage. http://www.hfon.org/download/18.5b678c9813cb8a6abd51720/1361354674545/Exploring+Culture.pdf. Accessed 18 Jul 2018
14. Kazamia K, Efstathiou A (2018) Cultural relevance through interior design (an Investigation of the Cypriot Tradition in Hospitality Design)
15. Efstathiou A, Shehade M (2017) Experimenting with the living past. Catalyst Workshop, Department of Architecture, University of Nicosia
16. Bonink C (1992) Cultural tourism development and government policy. MA Dissertation, Rijksuniversiteit, Utrecht
17. McClinchey K (2016) Going forward by looking back: memory, nostalgia and meaning-making in marketing for a sense of place. In: TTRA 2012 International Conference, Virginia Beach, VA, p 23

Innovative Mobile Tourism Services: The Case of 'Greek at the Hotel'

Ioanna Antoniou-Kritikou, Constandina Economou, Christina Flouda, and Panagiotis Karioris

Abstract Mobile services have become an essential tool for the tourism industry. Today's tourists expect to get personalized access to information anytime, anywhere and in real time. Mobile technologies can fulfill their expectations and support them before, during and after their trip. In the hotel industry there are apps advertising services and experiences, the hotel can offer guests including restaurants, bars and discos, planned daily or weekly activities (tours, cooking, traditional dancing lessons etc.). The smart 'hotel of the future' can be a place where guests get access to information whenever and wherever they need it, through context-aware mobile applications that can enhance user experience via beacons and digital signage technologies. This paper highlights the added value that mobile applications can bring to hotel services. 'Greek at the hotel' is an example of a Mobile Assisted Language Learning (MALL) app developed for tourists, offering 'hotel-specific' language material in Greek. It can be customized for each hotel and enriched with photographic material from all the premises so that guests can get familiarized with the hotel even before their arrival in the country. The content is translated in English and other support languages can be added upon request. The innovative feature of this app lays in the fact that users can access language material in real time by getting notifications to their smart device once they are inside or outside the premises with the help of beacons.

Keywords MALL services · 'Context-aware' app · Beacons · Smart 'hotel of the future' · M-tourism

I. Antoniou-Kritikou (✉) · C. Economou · C. Flouda · P. Karioris
Institute for Language & Speech Processing/R.C. ATHENA, Marousi, Greece
e-mail: agianna@ilsp.gr

1 Introduction

The rapid growth of smart devices nowadays allowed their use in various sectors, including education, safety, entertainment, tourism and others [1–3]. The hotel industry is also a sector that can benefit from mobile technologies. Many hotels nowadays offer mobile applications advertising their amenities to their clients; hotel residents download the app to their phone and get informed about special events, activities, offers and other similar information.

This paper aims at highlighting additional ways that mobile technologies can offer to improve hotel services. In this framework, 'Greek at the hotel' is used as an example of an app combining advertising hotel services with language teaching. Its innovation lays in the fact that it is a MALL app with 'hotel specific' language material which can help hotel guests communicate with the staff in Greek. The material will be customized for each hotel and enriched with photographs from the premises. Tourists can download the app by the time they make the reservation and familiarize themselves with the hotel and study the language material at their own pace. By the time they arrive at the hotel, the use of beacons technology will allow them to get real time notifications to their smart devices with the language material they need for communication.

At present, Greek at the hotel is available for Greek with English as support language; other support languages can be added upon request to cover the different nationalities of hotel guests.

However, this innovative service is transferable to other languages; apps with content in different languages, other than Greek, would give tourists around the world the opportunity to communicate with hotel staff in their language. On the one hand, hoteliers can promote the language of their country, as well as the services of their hotel; tourists, on the other hand, can spend their free time creatively.

2 The Smart 'Hotel of the Future'

The smart 'hotel of the future' will offer access to advanced technologies which can accelerate services, personalize the guest experience, build resource allocations to support guest requests, enable preventative maintenance and improve employee productivity [4]. Hotel residents expect to have access to information in real time whenever and wherever they need it [5] and this has led to the increasing development of mobile applications that belong to the family of the 'so-called' context-aware applications, a competitive field that gains a lot of interest. According to Gartner [6], context aware computing is "a style of computing in which situational and environmental information about people, places and things is used to anticipate immediate needs and proactively offer enriched, situation-aware and usable content, functions and experiences". These applications provide users with information and services depending on their location [5]. There are various sensors that can identify

users' surrounding area, like GPS, magnetometer, barometer, gyroscope or accelerometer [7]. In the outdoor environment, GPS technology is mainly used; this technology is not effective indoors, due to constraints such as ceilings and solid walls [8, 9]. Therefore, the technologies that can be used for context awareness in indoor environments are RFID, NFC and Bluetooth [7]. Other methods developed for indoor navigation are Wi-Fi, GSM/CDMA and broadcast FM radio, as well as artificial vision utilizing cameras and acoustic waves [9]. Among them, the wireless methods are preferred, since they offer better accuracy, less cost of system resources and are usually cheaper [1].

Beacons belong to the wireless 'family' and are small devices using Bluetooth technology to communicate with other Bluetooth enabled devices [10]. "A Bluetooth-equipped device like a smart phone can 'see' a beacon once it's in range, much like sailors look for a lighthouse to know where they are" [11]. Their main advantages are their low price, small size, absence of cables and, more importantly, they are supported by mobile operating systems. Beacons use Bluetooth Low Energy (BLE) that is a version of the commonest Bluetooth protocol, designed to use very little power and send less data [12]. In terms of hardware, a beacon consists of a Bluetooth chipset, a battery and an antenna [10]. The battery life of a beacon is estimated around 3 years long, depending on factors such as packet's setting or even working temperature. Its maximum range is around 70 m without physical obstacles [12].

The use of beacons and digital signage technologies can enhance hotel services in various ways. Hotel residents, for instance, get information on their mobile devices about special offers inside specific hotel areas like the spa or the restaurant; hotel cleaners, on the other hand, know when guests are still in a room [13]. A thorough inspection of the hotel places is required to decide where to attach the beacons and the areas where guests are most likely to look for information [14]. In order to determine the number of the required beacons and the final budget, other issues need to be taken into consideration like obstacles or walls, the number of floors and, generally, the features of the building. In outdoor areas, like the pool, the pool bar or even the parking area, beacon technologies would provide guests with instant spot-on information, on their smart phones or tablets [15]. Ultimately, the beacons' transmission should be tested to make sure that it is not influenced by walls or ceiling material [11].

3   The Case of 'Greek at the Hotel'

'Greek at the hotel' is a MALL app targeting Android/iOS users, with English as support language. It is meant to be a real time communicative assistant allowing tourists to talk in Greek with the staff in the various hotel premises via beacons and digital signage technologies.

3.1 'Greek at the Hotel' as a MALL App

Mobile Assisted Language Learning (MALL), a derivative of Computer Assisted Language Learning (CALL), appeared in the early 2000s as a result of the rapid growth of mobile technologies, including mobile phones, mp3 and mp4 players, tablets etc. The main feature of mobile learning is "the potential for the learning process to be personalized, spontaneous, informal and ubiquitous" [16].

Nowadays, the capacity of mobile devices is greater than ever. As a result, mobile learning has overcome restrictions such as place constraints, allowing access to the learning material on the bus, the train, etc., outside or at work, meaning at any time and any place (ibid.). The use of mobile applications for educational purposes is currently the third most popular category of applications downloaded from the App store [17].

Compared to traditional means of language learning, 'Greek at the hotel', as a MALL app, promotes learner centered learning [18]. Once users download it to their device (even from the time they make their hotel reservation), they can use it whenever and wherever they want, since it does not require internet connection. This provides, among others: (a) instantaneous searches, (b) function beyond poor network connections and (c) consistent performance [19].

The app is customized to the needs of each hotel; the language material is hotel-specific and is enriched with photographic material from all the premises so that guests get familiarized with the hotel even before their arrival in the country. Users, for example, can study 'a priori' the dialogues or the expressions they might need in the various hotel areas and use them when they arrive.

The 'Greek at the hotel' app comprises four main sections:

1. Let's read Greek
2. Useful phrases
3. Let's speak Greek

The first section familiarizes users with the Greek alphabet, letter combinations and stress. By navigating to the Greek alphabet or letter combinations, users get examples of use, audio recordings, illustration, translation and transliteration in the International Phonetic Alphabet (IPA). As far as stress is concerned, users learn about the position of stress in Greek, with examples and audio recordings by native speakers.

'Useful phrases' is a list of useful phrases in Greek (cf. Table 1), offering users a quick guide for all circumstances. The phrases are accompanied by their translation in English, transliteration and audio recordings.

'Let's speak Greek' constitutes the main component of the application and consists of expressions of everyday use incorporated in short dialogues

Table 1 Example of the useful phrase section

Thank you!	ευχαριστώ!	/efxaristó/
Good morning!	καλημέρα!	/kaliméra/

Table 2 Example of dialogues records

Asking questions at the hotel reception
• *Dialogue 1*
– Where is breakfast area?
– On the ground floor.
• *Dialogue 2*
– What is the Wi-Fi password?
– Athens123.

Fig. 1 Asking questions at the hotel reception
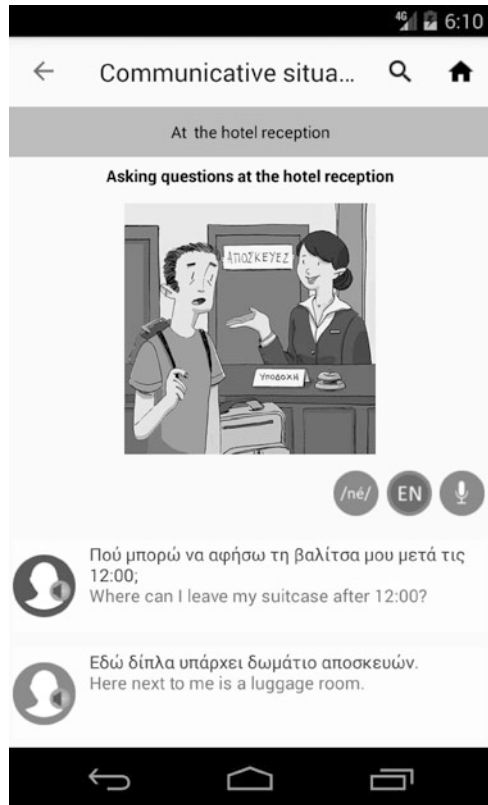
(cf. Table 2). The dialogues cover various communicative situations that can take place in different hotel premises (at the hotel reception, at the swimming pool, at the restaurant etc.).

Each dialogue is followed by transliteration, illustration, audio recordings by native Greek speakers and translation in English. Role-play exercises allow users to compare their recording with the native speakers thus practicing their pronunciation (cf. Fig. 1).

The app is customized to the needs of each hotel in terms of language content and photographic material. This means that the dialogues incorporated in the app are adapted to the premises of a particular hotel, i.e. the number of floors of the building, the location of the swimming pool(s) or the toilets.

To facilitate navigation, a Searching tool in English and Greek has been incorporated. The tool is working in all menus (Let's read Greek, Useful phrases and Let's speak Greek). It is worth noting that English can be substituted by other support languages upon request.

3.2   'Greek at the Hotel' as a Communicative Assistant in Real Time

'Greek at the hotel' aims at helping tourists communicate in Greek in different circumstances depending on where they are located. The innovative aspect of the app lays in the fact that users can walk in and outside the hotel and receive real time notifications on their mobile phone, corresponding to where they are, e.g. dialogues that can be useful in the reception area, the Spa, the breakfast area, the hotel room, the bar etc. The notifications encourage users to select from the dialogues that correspond to the communicative situation in the current location.

BLE Beacons is the technology used to achieve this functionality. Initially, a spatial study of the hotel is necessary to decide on the best place where the beacons must be attached, in order to provide the best user experience. Then, users must activate the Bluetooth receiver at their phone. The user device (smart phone or tablet) can communicate with the Beacons via Bluetooth. Thus, while users move inside the hotel and their device 'sees' a beacon in its range, the corresponding language material is displaying on the screen.

4   Conclusion

Advances in mobile technology are expected to create innovative experiences for consumers and foster a sustainable competitive advantage for tourism destinations and tourism-related suppliers. M-tourism encompasses a proliferation of mobile tourism guides offering diverse functionality including booking the room and paying for it, providing emergency and navigation services, different kinds of tourist information and support during the trip [20].

Especially in the hotel sector, context-aware MALL apps constitute a promising field that can further enhance user experience, allowing guests to access information whenever and wherever they need it, inside or outside the hotel via beacons and digital signage technologies. This may comprise the differential competitive advantage in the services sector where such synergies may in fact take place [21–23]. Even though the use of the beacon technology in hotels is still in its early stages, it gives new opportunities for engagement with their guests in a rather personalized way.

'Greek at the hotel' is an innovative app developed for tourists visiting Greece, offering 'hotel-specific' information in real time for communication. The

combination of a beacon's experience with language material for tourists in Greek could be beneficial for both the hotel and the visitor. On the one hand, the app can be an important tool for retaining customers by building bonds of loyalty and engagement; visitors, on the other hand, could enjoy an overall experience that can save them from 'lost in translation' circumstances, making their stay in the hotel unforgettable!

As far as the language material is concerned, it consists of short dialogues that can be used in the various hotel premises, allowing tourists to communicate in Greek with the staff. In addition, users have access to information related to the Greek alphabet, letter combinations, stress and useful. The language material and information are customized to each hotel; support languages can be added upon request.

'Greek at the hotel' is of great importance, because it contributes to the dissemination of the Greek language to foreigners visiting the country and provides hotel guests an additional innovative service. When it will be localized to a specific hotel, it will become an effective advertising tool of the hotel services and a means allowing tourists to spend their free time creatively, before, during and after their visit to the country. It is worth noting that it can also be transferred to languages other than Greek allowing hoteliers to promote the language of their country.

References

1. Junjie L (2014) Survey of wireless based indoor localization technologies. https://www.cse.wustl.edu/~jain/cse574-14/ftp/indoor.pdf
2. Hospotalitytech (2015) How hotels are using beacons and augmented reality. https://hospitalitytech.com/how-hotels-are-using-beacons-and-augmented-reality
3. Mi-Young B, Dae-Jea C (2015) Design and implementation of automatic attendance check system using BLE beacon. Int J Multi Ubiq Eng 10(10):177–186
4. Kane G (2018) The "smart hotel" of the future: transforming the guest experience in the ME. https://ameinfo.com/transport-and-tourism/tourism/smart-hotel-future-guest-experience/
5. Nasim A (2016) Context aware application using beacons. Senior projects. Paper 324. http://digitalcommons.bard.edu/senproj_s2016/324
6. Gartner IT Glossary (2018) Context-aware computing. https://www.gartner.com/it-glossary/context-aware-computing-2/
7. Posdorfer W, Maalej W (2016) Towards context-aware surveys using Bluetooth beacons. Procedia Comput Sci 83:42–49. https://core.ac.uk/download/pdf/81218528.pdf
8. Huang H, Gartner G (2010) A survey of mobile indoor navigation systems. In: Gartner G, Ortag F (eds) Cartography in Central and Eastern Europe. Lecture notes in geoinformation and cartography. Springer, Berlin, pp 305–319. http://www.geo.uzh.ch/~hhuang/pdfs/survey2010.pdf
9. Sheinker A, Ginzburg B, Salomonski N, Frumkis L, Kaplan B-Z, Moldwin MB (2016) A method for indoor navigation based on magnetic beacons using smartphones and tablets. Measurement 81:197–209. https://www.sciencedirect.com/science/article/pii/S026322411500682X?via%3Dihub
10. Kriz P, Maly F, Kozel T (2016) Improving indoor localization using Bluetooth low energy beacons. Mob Info Sys. https://www.hindawi.com/journals/misy/2016/2083094/
11. Kontakt (2018) What is a beacon? https://kontakt.io/beacon-basics/what-is-a-beacon/

12. Pointr (2018) Beacons: everything you need to know. https://www.pointrlabs.com/posts/bea cons-everything-you-need-to-know/
13. Hospitalitytech (2017) Hotels and resorts: the benefits of beacons. https://hospitalitytech.com/ hotels-and-resorts-benefits-beacons
14. Technology4hotels (2017) How hotels can enhance the guest experience with beacon technology. https://technology4hotels.com.au/uncategorized/how-hotels-can-enhance-the-guest-experi ence-with-beacon-technology/
15. Intellectsoft (2018) The many business benefits of beacons. https://www.intellectsoft.net/blog/ many-business-benefits-beacons
16. Miangah T, Nezarat A (2012) Mobile-assisted language learning. Int J Parall Emergent Distr Sys 3(1):309–319
17. Statista (2017) Apple: most popular app store categories. https://www.statista.com/statistics/ 270291/popular-categories-in-the-app-store/
18. Azli W, Parilah S, Maslavati M (2018) Perception on the usage of Mobile Assisted Language Learning (MALL) in English as a Second Language (ESL) learning among vocational college students. Creat Educ 9:84–98. https://doi.org/10.4236/ce.2018.91008
19. Antoniou-Kritikou I, Economou C, Flouda C (2018) 'Quick Greek': A MALL app to support communication in Greek as a foreign language. Proceedings of the 10th EDULEARN18 international conference, pp 3239–3248
20. Baradakis G (2013) Mobile tourism. BA thesis, University of Macedonia. [In Greek]
21. Varelas S, Georgopoulos N (2017a) Competition as a critical factor of the strategic planning of hotel businesses. Strateg Manage Quart 5:16–21. https://doi.org/10.15640/smq.v5n1-2a3
22. Varelas S, Georgopoulos N (2017b) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res 18:121–131
23. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66

Modeling the International Tourism Demand as a Complex Network: The Case of the Global Inbound Tourism Market

Dimitrios Tsiotas, Spyros Niavis, Dimitrios Belias, and Labros Sdrolias

Abstract Tourism is a complex socioeconomic phenomenon that has been diachronically studied through the prism of different disciplines and by using diverse methods and models. Despite its composite nature, tourism has not adequately been examined by researchers from the disciplines studying complexity, such as physics, mathematics, complexity theory, and the modern network science. This paper innovates to be amongst a couple of works that describe the system of the international tourism demand using the network paradigm and modeling it as a complex network (the GITN) in order to provide insights about the network structure and functionality in terms of the interactions existing between its source and destination markets. The analysis is applied using measures and methods of complex network analysis (CNA) and the results are compared with a previous work studying three versions based on different top-market configuration per country of the GITN, where differences are recorded. Overall, the analysis illustrates the existence of hierarchies and of spatial constraints in the structure of GITN and it provides some interesting insights to the governments and to tourism policy makers about the global dynamics of the tourism phenomenon.

Keywords Global tourism · Spatial networks · Complex network analysis

1 Introduction

Tourism is a socioeconomic phenomenon expressed either as the domestic or as the international traveling that aims at recreation, relaxation, and exploration, or at business, knowledge, and generally at the emotional compensation of the travelers [1]. The nature of tourism is by definition complex and it is composed by a set of

D. Tsiotas (✉) · S. Niavis
University of Thessaly, Volos, Greece
e-mail: tsiotas@uth.gr; spniavis@uth.gr

D. Belias · L. Sdrolias
Technological Educational Institute of Thessaly, Larissa, Greece

factors referring to the human needs [2]. This complexity has evolved a variety of quantitative models describing the state of demand and supply in tourism [3]. Recently, CNA, which is broadly called by many scholars as Network Science (NS) [4, 5], has been proven a useful tool (or discipline) for the modeling of complexity because it uses the network paradigm in order to model complex interacting systems into graphs [6].

The NS is gradually being integrated in tourism research and it models some aspects of complexity in tourism [7–11]. The major and most traditional part of this research focuses on the study of tourism destination networks. In this part, the network paradigm is used to model the relationships between various stakeholders (e.g. travel agencies, hotels, restaurants and bars, transportation services, etc.) in a tourism destination, where the structure of the network (e.g. degree, clustering, density, etc.) is being studied to detect hierarchies and practically the hubs (stakeholders) that possess a central role in this network [12]. A special field of this class regards networks generated from social media and internet data and specifically networks that are based on information that tourists profusely and voluntarily post online [7]. Indicative examples are networks constructed on geo-referenced social media posts [13, 14], on specialized blogs [15], or on geo-tagged photos [16].

Another class involves the study of patterns in the tourists' mobility and itinerary networks and in the spatial networks of tourist accessibility [7]. Mobility networks are modeled into directed weighted graphs, where their connections express the frequency with which a tourist visits the attraction points in a destination. Relevantly, links in spatial networks of tourist accessibility express transport connectivity between tourism destinations or attraction places [17], which produce undirected graphs. An emerging part of NS models in tourism research regards the study of visibility graphs [18] produced from tourism time-series data (e.g. time evolution of overnight stays, of tourist flows, etc.). In such models, nodes express time points and links express the state where two nodes are visible through a straight line, without any third intermediating parties disrupt their visibility. The analysis of visibility graphs provides insights about the chaotic patterns and the dynamics ruling these systems [7, 18, 19].

Next, some NA applications to tourism are more singular and thus more difficult to classify. Such applications indicatively regard modeling networks of different travel styles [20], of tourist destination choices based on different time periods [21], or either building econometric models based on network-driven and tourism-driven variables [9]. The common factor in all these applications is the graph representation of the interactive relationships. Finally, few of the NS-papers in tourism research model tourism flows into complex networks. A prime work appeared in 2008 [22], which built a directed weighted network of tourism flows, on data based on 208 countries worldwide. Another study appeared in 2015 [23], which composed four directed weighted networks on hotel and non-hotel tourism flows extracted from 17 regions in Spain. A recent study [7], modeled the global tourism network as a directed weighted graph consisted of 218 countries (nodes), studying different aspects of this network by considering the top-1, -2, and -3 inbound and outbound tourism flows per country.

As being evident from the previous review, despite the capability of NS to model complex systems, this discipline just recently started being integrated in the tourism research in order to model composite nature of the tourism phenomenon. Especially as far as tourism flows is concerned, the relevant studies are just a couple. This paper has the merit to be included amongst these couple of works and to model the system of the international tourism demand as a complex network, the Global Inbound Tourism Network (GITN), aiming to provide insights about the network structure and functionality, using complex network measures and metrics, methods of statistical mechanics, and empirical techniques.

The next sections of this paper present the graph modeling and data of the GITN, the results of the analysis and a discussion on them, and finally the conclusions.

2 Methodology and Data

2.1 Graph Modeling and Data

The GITN is modeled in the *L*-space representation (see [24]) into a directed weighted graph $G(V,E)$, where nodes express tourism destination countries and links the existence of tourism flows between nodes. The GITN is a connected graph, where edge weights express the number of tourists arrived at destination from the country of origin. The data of the GITN refers to the year 2014, includes annual registrations of the top-5 inbound worldwide markets per country and was extracted from the OECD [25].

2.2 Network Measures and Metrics

Table 1 shows the network measures and metrics used in the analysis of the GITN.

3 Results and Discussion

Table 2 shows the results of the network measures calculated for the GITN (hence this network will be symbolized as $GITN_5$) in comparison with the results calculated in [7] for the top-1 (hence $GITN_1$), top-2 ($GITN_2$), and top-3 ($GITN_3$) market cases.

The $GITN_5$ is comparatively smaller in size, possessing the 30% of the GITN computed by [7], whereas its edges are similar to $GITN_2$. In terms of minimum in-degree, the $GITN_5$ has a zero value, whereas all cases computed by [7] are non-zero. This implies that by increasing the resolution in the GITN's top-market configuration (from top-1 to top-5) more information about the lower connectivity network structure (e.g. the spokes) is revealed. Also, the average degree and average

Table 1 Network measures and metrics used in the analysis of the GITN

Measure	Description	Reference
Graph density (ρ)	Fraction of the network existing connections to the number of possible connections.	[26]
Network diameter d(G)	The longest path in the network.	[26]
Degree (k)	Number of edges being adjacent to a given node.	[26]
Strength (s)	The sum of edge weights being adjacent to a given node.	[24]
Clustering coefficient (C)	Probability of meeting linked neighbors around a node.	[24]
Betweenness centrality (CB)	Fraction of all shortest paths passing through a given node to the total number of the shortest paths in the network.	[27]
Closeness centrality (CC)	The inverse total distance along the shortest paths from a given node to all the other nodes.	[27]
Modularity (Q)	Objective function expressing the potential of a network to be subdivided into communities.	[28, 29]
Average path length ⟨l⟩	Average length of the total of network shortest paths.	[24]

Table 2 Network measures and metrics of the GITN

Metric	Unit	GITN$_1$[a]	GITN$_2$[a]	GITN$_3$[a]	GITN$_5$[b]
Network type		Directed	Directed	Directed	Directed
No. nodes	#[c]	214	214	214	75
No. edges	#	148	296	444	268
Max. in-degree	#	n/a	n/a	153	7
Min. in-degree	#	3	4	7	0
Max. out-degree	#	n/a[d]	n/a	60	36
Min. out-degree	#	2	2	2	0
Average degree	#	0.69	1.37	2.03	3.573
Graph density	net	0.003	0.006	0.01	0.048
Average clustering coefficient	net	0.000	0.099	0.182	0.299
Average strength	# tourists	2,511,134	3,291,240	3,567,227	6,066,893
Average path length (bin)	#	1.669	2.976	3.544	2.879

[a]As of [7]
[b]Calculations in this paper
[c]# = Number of cases
[d]Not available

strength scale linearly as the top-market resolution increases, whereas for the graph density and average clustering coefficient the scale pattern appears to be logarithmic. The pattern av.path.length = f(top-market resolution) approximates an inverse U-shaped pattern.

Table 3 shows the top-10 countries for the GITN$_3$ and GITN$_5$, in terms of node degree. The results show many inconsistencies for the in-degree and fewer for the out-degree case, which are probable due to differences in the networks' size. Despite

Table 3 Top 10 GITN countries in terms of node degree

Rank	IN-degree GITN$_3$[a]	IN-degree GITN$_5$[b]	OUT-degree GITN$_3$[a]	OUT-degree GITN$_5$[b]
1	USA (153)[c]	*Slovenia* (7)	USA (60)	Germany (36)
2	*Malaysia*[d] (48)	*FYROM* (7)	UK (33)	UK (31)
3	*South Africa* (36)	*Belgium* (7)	France (27)	USA (23)
4	Canada (34)	Greece (7)	*Canada* (23)	France (19)
5	*Ukraine* (30)	Canada (7)	China (18)	*Italy* (14)
6	*Thailand* (26)	*Hungary* (6)	Germany (17)	*Netherlands* (12)
7	Greece (25)	*Romania* (6)	Russia (16)	Russia (12)
8	*Spain* (20)	*Latvia* (6)	Japan (11)	China (8)
9	*Benin* (15)	USA (6)	*Australia* (10)	Japan (7)
10	*France* (15)	*Colombia* (6)	*New Zealand* (10)	*Spain* (6)

[a]As of Lozano and Gutierrez [7]
[b]In this paper
[c]Numbers in parentheses show the metric value
[d]Non-common entries (regardless their ranking) between the GITN$_3$ and GITN$_5$ are shown in *italics*
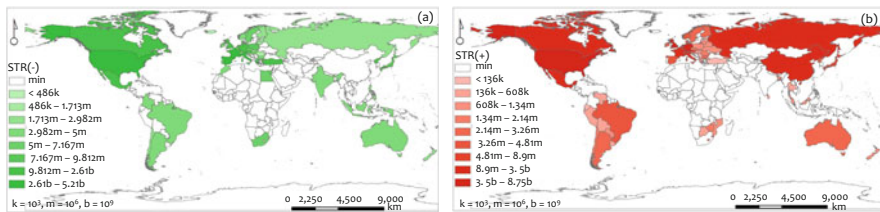
Fig. 1 The node-strengths distribution map of the GITN$_5$ world countries, where (**a**) refers to the incoming strengths (STR$_{(-)}$) and (**b**) to the outgoing strengths (STR$_{(+)}$)

such inconsistencies, common entries imply that the Greece, Canada, and USA have the privilege to attract inbound tourism from relatively greater number of countries, whereas the UK, USA, France, China, Russia, Japan, and Germany relatively distribute their outbound tourism in greater number of countries. Also, provided that the node size of the GITN$_5$ misses to include a considerable amount of the African and NW Asian countries (due to data unavailability), these inconsistencies illustrate indirectly the effect of missing countries in the configuration of the GITN's structure.

Figure 1 shows the node-strengths distribution map of the GITN$_5$, including the in- and out-cases. Both maps illustrate that tourist mobility appears to be a matter of the northern hemisphere. The first (a) map shows that the northern America and the Central and West Europe play a core role in the configuration of the inbound tourism. Map (b) illustrates that the East Europe, the Asian countries, the northern America, and some Latin America countries are central in terms of outbound tourism flows.
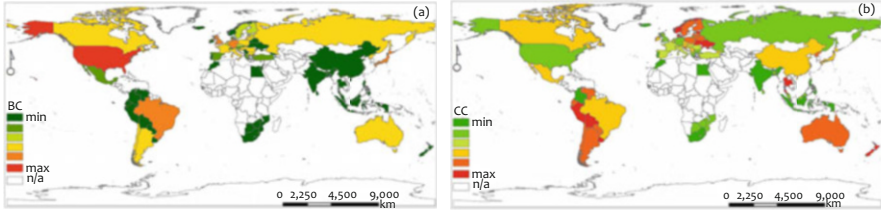
Fig. 2 (**a**) Betweenness centrality (CB) and (**b**) closeness centrality (CC) distribution maps of the GITN$_5$ world countries
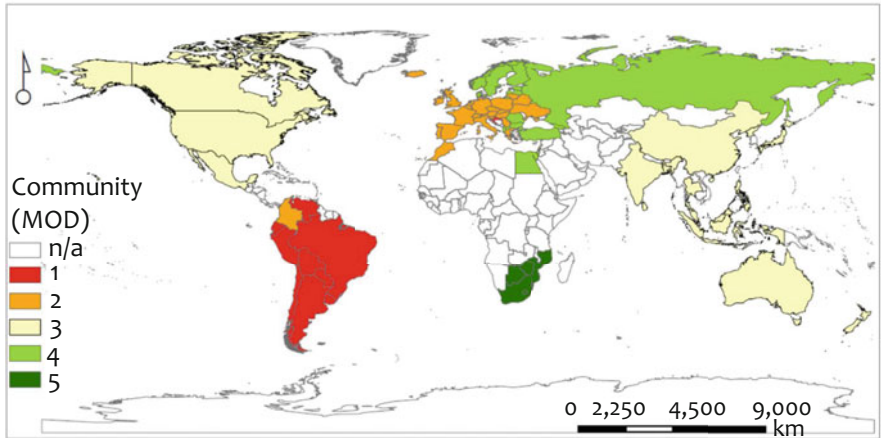
Fig. 3 The GITN$_5$ communities produced by the modularity optimization

Next, Fig. 2 shows the betweenness (CB) and closeness centrality (CC) distribution maps of the GITN$_5$. In the CB case, higher scores illustrate countries included in more network paths, where USA, Brazil, Germany, UK, and Japan are the top-5. In the CC case, higher scores illustrate the countries being closer to others, in terms of steps of separation, where Denmark, Norway, New Zealand, Peru, and Bolivia are the top-5.

Figure 3 shows the map of the GITN$_5$ communities produced by the algorithm proposed by [28], where the modularity optimization process aims to maximize the connections within each community and to minimize the connections between communities. This map illustrates that the modularity optimization produces geographically consistent communities, a fact which complies with the literature stating that community detection in spatial networks is submitted to spatial constraints [24]. However, interesting exemptions are that Croatia belongs to the Latin American community (Mod#1), Colombia and Morocco are included in the European community (Mod#2), and the northern American countries belong to the same community (Mod#3) with the countries of the SE hemisphere (India, Indonesia,

China, Australia). These exemptions imply strong relationships amongst non-neighbor countries included in the same community, which may be either cultural (e.g. the same language), or economic (e.g. transnational economic cooperation), or religious (e.g. the same creed), or other.

Finally, in contrast to the results of [7], who modeled the in-degree ($k-$) and out-degree ($k+$) distributions with power-law (PL) patterns, the respective distributions for the $GITN_5$ ($y_{k-} = -2.123x + 23.342/R^2_{k-} = 0.201$, $y_{k+} = 5.064e^{-0.067x}/R^2_{k+} = 0.41$) do not follow a PL curve (i.e. better fittings than a PL exist), although the determination of their existing curves remains low. However, the undirected degree distribution of the $GITN_5$ ($y_k = 15.477x^{-0.777}/R^2_k = 0.586$) follows a PL pattern but with marginal determination. This implies that $GITN_5$ has a pattern of hierarchy in its structure, but this is far from having the scale-free property (probably due to spatial constraints).

4 Conclusions

Being amongst a couple of works that model the system of the international tourism demand as a complex network, this paper studied the Global Inbound Tourism Network (GITN) using network measures and techniques of complex network analysis. The results were compared with the work of Lozano and Gutierrez [7], who studied three versions of the GITN based on different top-market configuration per country (top-1, -2, and -3). The analysis first provided some indications helping to describe some network measures as a function of the top-market resolution (top-1, top-2, top-3, and top-5) used to construct the GITN. Within this context, by increasing the resolution in the top-market GITN's configuration a gain of information in the lower connectivity network structure was evident. The average degree and strength of the GITN appeared to scale linearly to the increase of the top-market resolution, whereas graph density and average clustering coefficient scale logarithmically. This approach addresses directions for further research, in the field of data analysis, about modeling the GITN under a desirable loss of information.

Comparisons between the top-3 and top-5 versions of the GITN showed top countries in inbound (Greece, Canada, and USA) and outbound (UK, USA, France, China, Russia, Japan, and Germany) tourism. Data unavailability in these comparisons provided insights about the missing countries' effect of in the configuration of the GITN's structure. Analysis on the strengths spatial distribution maps showed that tourist mobility is more a matter of the northern hemisphere and revealed privilege clusters in terms of inbound and outbound tourism flows. The betweenness centrality map showed countries that are central in being included in more network paths, whereas the closeness centrality map illustrated the countries being closer to others, in terms of steps of separation. The modularity optimization analysis on the GITN produced geographically consistent communities, where the exemptions in this process revealed potential strong relationships amongst non-neighbor countries

included in the same modularity community. Spatial constraints, which were evident in the analysis of the GITN, highlighted that geography is an integral part of tourism, which should be taken into account in tourism research.

Overall, this paper promotes the use of CNA in tourism research and it provides insights to the governments and to tourism policy makers about the global dynamics of the tourism phenomenon and of the opportunities for tourism development appearing due to hierarchies configured in the structure of the GITN.

References

1. Kalantzi O, Tsiotas D, Polyzos S (2016) The contribution of tourism in national economies: evidence of Greece. Eur J Bus Soc Sci (EJBSS) 5(5):41–64
2. Tsiotas D, Polyzos S (2014) Analyzing the maritime transportation system in Greece: a complex network approach. Netw Spat Econ 15(4):981–1010
3. Song H, Li G (2008) Tourism demand modelling and forecasting – a review of recent research. Tour Manag 29:203–220
4. Barabasi A-L (2013) Network science. Philos Trans R Soc Lond A, 371(1987):20120375
5. Brandes U, Robins G, McCranie A, Wasserman S (2013) What is network science? Netw Sci 1:1–15
6. Tsiotas D, Polyzos S (2018) The complexity in the study of spatial networks: an epistemological approach. Netw Spat Econ 18:1–32
7. Lozano S, Gutierrez E (2018) A complex network analysis of global tourism flows. Int J Tour Res 1:1–17. https://doi.org/10.1002/jtr.2208
8. Baggio R (2017) Network science and tourism – the state of the art. Tour Rev 72:120–131
9. Tsiotas D (2017) The imprint of tourism on the topology of maritime networks: evidence from Greece. Anatolia: Int J Tour Hosp Res 28:52–68
10. Liu B, Huang S, Fu H (2017) An application of network analysis on tourist attractions: the case of Xinjiang, China. Tour Manag 58:132–141
11. Niavis S, Tsiotas D (2018) Decomposing the price of the cruise product into tourism and transport attributes: evidence from the Mediterranean Market. Tour Manag 67C:98–110
12. Baggio R, Del Chiappa G (2014) Real and virtual relationships in tourism digital ecosystems. Inf Technol Tour 14(1):3–19
13. Provenzano D, Hawelka B, Baggio R (2018) The mobility network of European tourists: a longitudinal study and a comparison with geolocated Twitter data. Tour Rev 73(1):28–43
14. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66
15. Chung HC, Chung N, Nam Y (2017) A social network analysis of tourist movement patterns in blogs: Korean backpackers in Europe. Sustainability 9:2251
16. Junker C, Akbar Z, Cuquet M (2017) The network structure of visited locations according to geotagged social media photos. In: Camarinha-Matos L, Afsarmanesh H, Fornasiero R (eds) Collaboration in a data-rich world. PRO-VE 2017, IFIP advances in information and communication technology, vol 506. Springer, Cham, pp 276–283
17. Tsiotas D, Niavis S, Sdrolias L (2018) Operational and geographical dynamics of ports in the topology of cruise networks: the case of Mediterranean. J Transp Geogr 72:23–35
18. Tsiotas D, Charakopoulos A (2018) Visibility in the topology of complex networks: introducing a new approach. Physica A 505:280–292
19. Baggio R (2014) Complex tourism systems: a visibility graph approach. Kybernetes 43:445–461

20. Park S, Tussyadiah IP, Mazanec JA, Fesenmeier DR (2010) Travel personae of American pleasure travelers: a network analysis. J Travel Tour Mark 27:797–811
21. Khalilzadeh J (2018) Demonstration of exponential random graph models in tourism studies: is tourism a means of global peace or the bottom line? Ann Tour Res 69:31–41
22. Miguens JIL, Mendes JFF (2008) Travel and tourism: into a complex network. Physica A 387:2963–2971
23. Gonzalez-Diaz B, Gomez M, Molina A (2015) Configuration of the hotel and non-hotel accommodations: an empirical approach using network analysis. Int J Hosp Manag 48:39–51
24. Barthelemy M (2011) Spatial networks. Phys Rep 499:1–101
25. Organization for Economic Co-Operation and Development – OECD (2018) OECD.Stat, Inbound tourism. http://stats.oecd.org/index.aspx?DataSetCode=TOURISM_INBOUND
26. Diestel R (2005) Graph theory, 3rd edn. Springer, Heidelberg
27. Koschützki D, Lehmann K, Peeters L, Richter S (2005) Centrality indices. In: Brandes U, Erlebach T (eds) Network analysis. Springer, Berlin, pp 16–61
28. Blondel V, Guillaume JL, Lambiotte R, Lefebvre E (2008) Fast unfolding of communities in large networks. J Stat Mech: Theory Exp 10:P10008
29. Fortunato S (2010) Community detection in graphs. Phys Rep 486:75–174

Netourwork Framework: A New Era in Strategic Innovative Networking System for Tourism Enterprises

Sotiris Varelas

Abstract The research introduces a framework to create cutting-edge data-processing systems for tourism business. In addition, the research studies the use of a Strategic Innovative Networking System to provide integrated information, promotion, connection services and the degree that adds co-value on the tourism enterprises. The goal of these strategic innovative platforms is to extract knowledge for tourism enterprises, to empower brand awareness, to create co-value, to provide marketing services destinations, and to create a network of worldwide partners. The degree of the current use from tourism enterprises for innovative tools that exploits modern technologies such as virtual and augmented reality, webinars, digital training programs, virtual exhibitions—events and digital meetings is also presented.

Keywords Innovation · Strategy · Tourism business

1 Introduction

Digital technologies through communication and marketing perspective offer to a tourism business the competitive advantage that will be implemented even more in future. Future tourism enterprises that will adopt the digital technologies will still focus on the creation of sustainable advantages for the benefit of their organization. Innovation and technology in the marketing and communication field require a hybrid approach by modern tourism organizations. In operational level, hospitality businesses are influenced by cutting edge technologies and the impact to their brand awareness [1, 2]. Tourism business should understand the fundamental conditions of the changes they have to deal with, in order to proceed their digital transformation that will ensure not only sustainability but also profitability of their organizations. In this research, the digital information and communication technologies make it

S. Varelas (✉)
Neapolis University of Pafos, Pafos, Cyprus
e-mail: s.varelas@nup.ac.cy

possible for a tourism company to facilitate intra-corporate collaboration and communication between their strategic partners [3]. The aim of this paper is to present current trends that may be useful in the tourism industry.

2 Methodology

The research aimed to introduce a framework to create cutting-edge data-processing systems for tourism business, ensuring innovative growth in a changing global environment. The methodological tools used to draw conclusions were applied in an innovative manner in terms of universality and directness as they approach the innovative technologies using the case study of a company in operation [1, 2]. The research will focus on specific modern technologies such as virtual and augmented reality, webinars, digital training programs, virtual exhibitions—events and digital meetings. The aim of this study is to clarify several aspects of the digital tools and to introduce a management model in order to a holistic approach.

3 Digital Technologies and Innovative Growth

Digital technologies allow not only the development, the analysis and the storage of information and data, but also the creation of new knowledge, helping to obtain a competitive advantage [4–6]. Tourism Business through innovation seeks to gain a market, whereas the whole business structure is inspired by the search for value innovation, the search for diversification with low cost based on a reconstructionist view [7]. Digital adoption rates in the tourism industry are rather low, although most technical barriers have been mostly succeed in dealing with large number of problems. However, concerns about trust seem to impede the development of electronic relationships in the tourism sector. The use of digital application has resulted in cost savings, but has also presented the opportunity of increased attendance due to lower costs, resulting in an expanded reach of organizational and business messages [8].

4 Growth Case Study: The Netourwork Framework

The enterprise that we use as a case study "NeTourWork" is a digital superstructure for tourist services and destinations that can provide integrated networking, information, promotion and connection services. Underpinned by collective innovation and a strategy of creative competition, NeTourWork:

- empowers brand awareness
- creates co-value
- provides a platform for marketing destinations and services
- creates a network of worldwide partners and helps coordinate its activities provides support in the fields of marketing and promotion.

NeTourWork offers a dynamic and modern way to create valuable innovation in the field of connection, in the cutting-edge promotion of destinations, tourist organizations, specialized products and services in hospitality and other sectors in the global tourist market. With modern services, netourwork offer the ability to connect and promote our partners within an ever-growing matrix of specialized professionals in the globalized environment.

Netourwork services promote the tourist products of our partners in/with:

- Tour operations
- Travel agencies
- OTAs
- Airlines
- Travel editors
- Destination and tourism specialists

Netourwork is targeted at upwards of 70,000 professionals in the field of tourism spanning 30 countries worldwide, offering a unique dynamic. NeTourWork uses specialized filters to identify tourism professionals who provide the services clients wish to promote.

NeTourWork goal is to bring together all the creative and productive forces at work in tourism, creating a base for communication across an ever-growing network that will serve to promote tourism globally. NeTourWork has assembled the following matrix of services:

Vreminars & Webinars
Virtual & Digital Specialist Training Programs
Virtual & Digital Exhibitions
Digital B2B Meetings
Virtual & Digital Contests [9].

4.1 The Netourwork Business Model

The business model of Netourwork describes the procedures of how the innovative platform creates co-value, delivers vision and value, describes the core strategic focus areas and the main inputs—outputs, outcomes and specific activities. A business model is part of a company's strategy and the holistic application for a modern tourism enterprise.

4.2   Netourwork Framework Parameters' Analysis and Literature Associations

Vreminars and Webinars Digital and virtual applications allow information to be created and presented through seminars with advanced visualizations for the user. Digital tools for Vreminars (Virtual Reality Seminars) and Webinars provide a visual reconstruction of tourist businesses' functions and strategic locations, turning their uniqueness into images. Webinar is a contraction of on-line seminar, which was type of online meeting or presentation. It provides participants and hosts a platform to communicate [10]. Many researchers confirm the necessity of virtual and digital communication through online seminars and events and the use of social media [11–13]. In 2010, over 70% of event organizers tried to low their promotion expenses, and 38% replaced live meetings with virtual meetings or conference calls [14]. Webinar has already become popular in the business world, with 74.3% users see webinar as a helpful tool and they are satisfied with the services that the company provided [10].

Virtual Reality and Digital Specialist Training Programs (vrTRAINING & digiTRAINING) Netourwork's second innovative tool is virtual reality training programs through which connects business and educational programs for specialists. Netourwork apply cutting edge simulation and 3D representation technologies to create an interactive educational experience in which the user has the opportunity to connect with tourist products. The issue of online training as marketing-educational innovative application has grown in importance in light of recent researcher that describe an online training experience as an activity to replace educational activities [15].

Digital and VR Tourism Expos (digEXPO & vrEXPO) Netourwork creates virtual events focusing on a range of innovative topics. Users can connect live with the businesses that interest them through digital meet-ups. The digital visitor can participate at certain date the digital exhibition and get the information needed about the specialized participants on the platform. According to the Journal of Convention & Event Tourism, Virtual reality give professionals the ability to:

- increase revenue and cut costs,
- extend the brand,
- broaden the brand community,
- track attendees, and
- permit rapid and personalized response [16]. This tool goes in line with the literature that highlights that the term virtual exhibition has many advantages and adds value at the enterprises that adopt such multimedia technologies [17, 18].

Digital B2B Meetings (digiMEETINGS) Users can connect with specific audiences (tour operator, travel agent, OTAs, airlines, tourism specialists) worldwide through b2b meetings The online b2b meetings are arranged by a specialized

algorithm that digitally matches the best suited professionals with each other. Digital B2B Meetings are defined as an interorganizational information warehouse through which multiple buyers and sellers interact electronically [19]. Most studies in the field of online meetings, have focused on general trading business's and not specific to tourism enterprises [18, 20].

Digital Contests Netourwork also offers digital contests for unique destinations and other tourism organizations by taking advantage of the modern digital tools including virtual reality apps. According to current researches digital contest increase the motivation of people in order to learn and promoting a specific field, with low resources and using online social connections between people [20, 21].

5   Discussion and Conclusion

The new digital changing environment directs tourism enterprises to operate and implement the importance of new technologies from the perspective of innovation and knowledge management. Traditional strategies focusing on the company itself have now been replaced by network strategies, affected with the use of value innovation. Business models that are based on online platforms and the use of digital technology may provide companies with data that may be useful for marketing decision making [22, 23]. The implementation of digital tools described in this paper may be employed in the promotion of destinations [24, 25], services in a specific area, such as restaurants [26] but also cultural heritage of a destination can be promoted in combination with digital educational programmes via museums [27] with the aforementioned innovative tools.

This study had a few limitations, specifically that the findings are based on a certain enterprise used as a case study. Future research could explore the introduction of the technologies presented above in conjunction with the management of the touristic enterprises.

References

1. Varelas S (2016) Strategy and innovation for a new tourism environment outside competition. Int J Dev Res 06:0851–10855
2. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res 18:121–131
3. Poulis E, Poulis K, Dooley F (2011) ICT innovation in a non-high technology sector: achieving competitive advantage in the shipping industry. Serv Ind J. https://doi.org/10.1080/02642069.2011.623776
4. Buhalis D (2003) eTourism, information technology for strategic tourism management. Prentice Hall, Harlow

5. Buhalis D, Zoge M (2007) The strategic impact of the internet on the tourism industry. In: Sigala M, Mich L, Murphy J (eds) Information and communication technologies in tourism. Springer, Wien, pp 481–492

6. Eraqi M (2006) Tourism services quality (TourServQual) in Egypt: the viewpoints of external and internal customers. BIJ 13:469–492

7. Chan WK, Mauborgne R (2005) Blue ocean strategy: how to create uncontested market space and make the competition irrelevant. Harvard Business School Press, Boston, MA

8. Frost S (2008) Webcasting: the new essential ingredient of B2B success. A Frost & Sullivan White Paper, Palo Alto, CA

9. http://www.netourwork.com

10. Bai L, Chen W (2010) How internet marketing tools influence customer relationship management – an analysis based on webinar. Dissertation, Hogskolan-Halmstad

11. Damer B (2008) Meeting in the Ether: a brief history of virtual worlds as a medium for user-created events. J Virt Worlds Res 1:1–17

12. Kavoura A (2016) How can mobile accounting reporting benefit from the imagined communities? Int J Mob Comput Multi Commun 7:36–52. https://doi.org/10.4018/IJMCMC.2016040103

13. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and future outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 3827–3838

14. Scofidio B (2009) Looking ahead. Association Meetings Magazine

15. Garcia-Mateos G, Fernandez-Aleman L (2009) Make learning fun with programming contests. In: Transactions on edutainment II. Lecture notes in computer science, 5660. Springer, Dordrecht, pp 246–257

16. Pearlman D, Gates N (2010) Hosting business meetings and special events in virtual worlds: a fad or the future? J Conv Event Tour 11:247–265

17. Dziekan V (2012) Virtuality and the art of exhibition. Curatorial design for the multimedia museum. The University of Chicago Press, Chicago, IL

18. Dumitrescu G, Lepadatu C, Ciurea C (2014) Creating virtual exhibitions for educational and cultural development. Informatica Econ 18:102–110

19. Grewal R, Comer JM, Mehta R (2001) An investigation into the antecedents of organizational participation in business-to-business electronic markets. J Mark 65:17–33

20. Rohm A, Kashyap V, Brashear T, Milne G (2004) The use of online marketplaces for competitive advantage: a Latin American perspective. J Bus Ind Mark 19:372–385

21. Combefis S, Wautelet J (2014) Programming trainings and informatics teaching through online contests. Olympiads Inform 8:21–34

22. Kontis AP, Lagos D (2016) Data driven marketing decision making: an application of DEA in tourism marketing channels. In: Rontos K, Jose F (eds) Modeling and new trends on tourism: a contribute for social and economic development. Nova Publishers, New York, pp 195–214. ISBN: 978-1-63485-920-2

23. Skoultsos S, Kontis AP, Sarantakou E (2017) Conceptualization of changes in tourism industry's distribution channels: the case of peer-to-peer business models and sharing economy platforms. Rev Tour Sci 16:292–303

24. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) IGI Global, Hershey, pp 45–66

25. Nechita F, Demeter R, Briciu VA, Kavoura A, Varelas S (2019) Projected destination images versus visitor-generated visual content in Brasov, Transylvania. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham

26. Kavoura A, Tiago T (2016) Understanding online communities on social networks via the notion of imagined communities: the case of TripAdvisor. Int J Web Based Commun 12:238–261. https://doi.org/10.1504/IJWBC.2016.077759
27. Kavoura A, Sylaiou S (2018) Effective cultural communication via information and communication technologies and social media use. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 7002–7013

Social Media Celebrities and Para-social Relationships: The Chinese Context

Meng Tao, Hamza Kaka Abdul Wahab, and Jashim Khan

Abstract The purpose of this study is to examine the role of social media celebrity plays in developing para-social relationship with their audience. The research examines this relationship by investigating (a) the mediating role of numbers of hours enthusiast spent interacting with celebrities and (b) the moderating role of celebrity identification in the relationship between social media celebrity effect and para-social relationship. An online survey gathered 527 response from female students between the ages of 18–30 years who follow social media celebrities. Result shows that hours spent online with social media celebrities mediate the relationship between the effect of social media celebrities and para-social relationships. Moderated mediation reveals that the indirect path (hours spent with social media celebrity online) through which social media celebrities exert their effect on para-social relationships is dependent on the enthusiast identification with social media celebrities. This paper makes available important findings for marketers, governments and academics. Businesses may make use of the role play by social media celebrities in influencing women and as a result use them to promote their products. Governments can also use the celebrities to pass on information to their followers on matters regarding social vices. The role of time spent online with social media celebrity and identification on para-social relationships are discussed together with future research directions.

Keywords Social media celebrities · Para-social relationship · Identification

M. Tao (✉)
International Business School, DUFE, Dalian, China
e-mail: menstao@dure.edu.cn

H. K. A. Wahab
School of Business Administration, DUFE, Dalian, China

J. Khan
University of Surrey, Guildford, UK

1   Introduction

Most young women have been carried away by social media celebrities they follow on different social media platforms, and young women from China are no exception. Social media platforms such as; Sina Weibo, QQ, RenRen, Youku and WeChat are heavily followed in China. The followers of these celebrities see them as their peers and therefore engage them in interactions which leads to social comparison [1] and spend hours on social media reading about the post and looking at the pictures/ videos their favourite social media celebrities upload on their blogs [2]. Online communities can bring social values to their users and see the internet as a potent channel for a person(s) to create an intimate relationship with peers and to augment the person's way of life or welfare [3, 4]. Numerous researchers have postulated that the followers establish para-social relationships with the celebrities which leads to one sided intimacy [5, 6]. Nevertheless, the perception of having intimate relationship with the celebrities is nothing but a mere illusion, since is it established and maintained only by the follower, without the awareness of the celebrity [7]. Some scholars are of the view that identification with a celebrity affects the follower's behaviour, values and beliefs and these make hem side with whatever the celebrity trumpets through numerous sociocultural contexts [8, 9] (for instance, conscientizing the public about drug abuse and its avoidance [8]; creating public awareness regarding child abuse [9]. Empirically, recent research findings have asserted a strong backing for a relationship between social relationship and identification. For instance, [10] opined that para-social relationships with Angelina Jolie triggers her fans to identify with her. Moreover, followers identifying themselves with media celebrities usually get heightened as their para-social relationships with the celebrities get established [8, 9]. Irrespective of the fact that influence of mediated celebrities has a significant relationship with para-social relationships [11]; there seem to be a lacuna in the literature to add hours spent online as a mediator between social media celebrity influence and parasocial relationships and celebrity identification as a moderator.

The study dwells on the influence of social media celebrities in the Chinese context. It investigates the mediating effect of hours spent online and the moderating effect of identification on the mediation. We focused on the following research questions in relation to the research objectives: (RQ1) what is the mediating effect of hours spent online in the relationship between social media celebrities and parasocial relationships? (RQ2) what is the moderating effect of identification in the relationship between social media celebrities and parasocial relationships? (RQ3) what is effect of identification moderating the mediated relationship of hours spent online between social media celebrities and parasocial relationships?

2 Background

2.1 Conceptual Model

In this study celebrity influence model propounded by [9] was used but a slight change was made to it so as to investigate the influence of social media celebrity on para-social relationships. Identification moderates social media celebrity which is the independent variable and hours spent online which on the other hand is the mediator between social media celebrity and para-social relationships. Social media celebrity also directly influences para-social relationships which is the dependent variable.

2.2 Social Media Celebrity

Social media celebrity (SMC) social media celebrity is an individual who has become famous as a result of His or Her activities on social media platforms. Social media celebrities usually influence their followers and this leads to social impact; which is defined as an influence exerted on person's way of thinking, how the person behaves which is triggered by the implied, real, or imagery existence or activities of others [12]. Social media platforms are the easiest and quickest ways for users in establishing and sharing what is known as user-generated messages and, an instant communication with different users on several devices held in the hand [13].

2.3 Identification

Celebrity identification has to do with an individual adopting the opinion or attitude of another individual to create and maintain a desirable relationship with the individual via psychological means [14]. Empirical research findings have postulated a strong support for a relationship between social relationship and identification [15, 16]. It has been suggested that, in the course of identification with the media celebrities, an audience could tend to believe that he or she and the celebrity have something in common and this will make him or her identify with the celebrity [17, 18].

2.4 Para-social Relationships

Para-social relationships are one sided relationships established by followers of a celebrity with the celebrity not being aware of the relationship. Para-social relationship brings about intimate relationship which is perceived by an individual to have

with media celebrities [5, 6]. The celebrity influence model proposed that exposure to the media is the basis of establishing parasocial relationships. By virtue of the social relationship with celebrities on social media, followers of these celebrities view themselves as having some levels of closeness with the celebrities [8–10, 17, 19].

2.5 Hours Spent Online

The chances of meeting celebrities in person are very small so they (followers) often get to link up with the celebrities via the media which social media is no exception. In order to keep in touch with the celebrities, they spend some quality time to follow them on their social media blogs to read their latest posts, look at their photos, and gossips about the celebrities and access other updates [2]. It was found out that users spend hours online with the average number of hours spent weekly online being 17.4 in 2019, which increased to 19.7 by 2010 [20].

3 Research Methodology

Female students of Dongbei University of Finance and Economics, Dalian, China were sampled for his research. Simple random sampling technique was employed. Pertaining to this study all the items used were adopted from published literature with some modification made to them. We used constructs from (CPPI) Celebrity–Persona Parasocial Interaction Scale [21], (CPI) Celebrity-Persona Identification Scale to measure the participants' identification with the social media celebrity [22], and influence of social media celebrity [19]. For the scale, we adopted a five point Likert scale spanning from 1 = strongly disagree to 5 = strongly agree for all the items. Answers were given in a 5 point scale from 1 = strongly disagree to 5 = strongly agree. Majority of the respondents were between the ages of 18–22 years old representing 49%. Majority of the respondents (86.3%) were heterosexual and the celebrity with the highest identification was Papi Tyan (47%). The highest number of hours spent online by the respondents to interact with their social media celebrity idol is 1 h, representing (50.9%). 527 questionnaires were used for the analysis. We obtained the questionnaires within period of April 15th to May 17th, 2018.

4   Results, Discussion and Conclusion

To analyze unidimentionality, exploratory factor analysis (EFA) employed using SPSS, version 20. In addition, we found all the individual factor loadings to be highly significant, giving support for convergent validity [23]. We calculated the Cronbach alpha coefficient, composite factor reliability, and average variance extracted for each of the scale and the values were in the desirable range.

We used hierarchical multiple regressions to test the mediating effect of hours spent online and hierarchical moderated regression to test the effect of celebrity identification effect on the relationship between hours spent online and para-social relationships. Both analysis (mediation and moderation) followed procedure shown by [24] utilizing Hayes model [25].

The results show that the direct effect of social media celebrity on para-social relationship is weak in presence of numbers of hours enthusiast spent interacting with celebrities ($\beta = 0.52$, S.E. = 0.03, p < 0.05) suggesting partial mediation. The effect of social media celebrity on para-social relationship is significant via the mediator numbers of hours enthusiast spent interacting with celebrities. In other words, the relationship is also significant indirectly social media celebrity → numbers of hours enthusiast spent interacting with celebrities → para-social relationship ($\beta = 0.15$, S.E. = 0.03, Boot LLCI = 0.10, Boot ULCI = 0.19). Absence of zero between Boot LLCI (Boot Lower Level Confidence Interval) and Boot ULCI (Boot Upper Level Confidence Interval) supports that social media celebrity and para-social relationship is stronger when enthusiast spend longer hour interacting with the celebrity. Our result buttresses the findings about the number of hours being spent on the web by web users [20]. Our unique contribution to social media celebrity literature is on showing a moderated mediation analysis. Moderated mediation reveals that the indirect path (hours spent with social media celebrity online) through which social media celebrity exerts their effect on para-social relationship is dependent on the enthusiast identification with social media celebrity (see Table 1).

The result of this research contributes to understanding social media celebrities influence and hours spent online by their followers on para-social relationships. Although there is a partial mediation between social media celebrities and para-social relationships established by the followers as a result of hours spent interacting with them (social media celebrities), on the other hand, the relationship is significant. This suggest that, marketers and businesses alike can capitalise on this to use social

Table 1 Mediated-moderation result for influence of social media celebrities on para-social relationships

Mediator	Identification[a]	Conditional direct effect	SE	Sig	LLCI	ULCI
Hours with SM celebrity	−0.84	0.01	0.01	NS	−0.01	0.03
	0.00	0.06	0.01	0.03	0.04	0.09
	0.84	0.11	0.02	0.00	0.07	0.15

[a]Value of the moderator are the mean and ±SD from mean

media celebrities to endorse and also promote their products and services on social media platforms which would be a cheaper form of promotion as against the traditional media such as; television, magazine, radio etc. Government and NGO's can also take advantage of the relationship between the followers and social media celebrities to aid in communicating their agenda on social media on social issues (such as child abuse, prostitution, HIV-Aids) affecting the youth and women as a whole. It is very crucial to note that the indirect path where social media celebrities influence para-social relationships depend on the follower's identification with the social media celebrity as a result of the hours spent online. So by virtue of this, social media celebrities can be used by marketers to endorse their products and services on their individual blogs and pages. Limitation of the study pertain to gender and location. The study sampled the views of only female respondents from a single university in China. To better investigate the influence of social media celebrities on para-social relationships, we recommend future researchers to incorporate both male and female respondents and also widen the scope of the geographical location of the respondents when collecting data for the study. We again recommend to future researchers to investigate the possible relationship between social media celebrities and identification, with para-social relationships as the moderator.

References

1. Chan YY (2011) Chinese journalists circumvent government's tight restrictions. Nieman reports
2. Redmond S, Holmes S (eds) (2007) Stardom and celebrity: a reader. Sage, Los Angeles
3. Eastin MS, LaRose R (2005) Alt.support: modeling social support online. Comput Hum Behav 21:977–992. https://doi.org/10.1016/2004.02.024
4. Xie B (2008) The mutual shaping of online and offline social relationships. Inf Res Int Electron J 13(3):18
5. Horton D, Strauss A (1957) Interaction in audience-participation shows. Am J Sociol 62 (6):579–587. https://doi.org/10.1086/222106
6. Hartmann T, Goldhoorn C (2011) Horton and Wohl revisited: exploring viewers' experience of parasocial interaction. J Commun 61(6):1104–1121. https://doi.org/10.1111/j.14602466.2011.01595
7. Giles DC (2002) Parasocial interaction: a review of the literature and a model for future research. Media Psychol 4(3):279–305. https://doi.org/10.1207/S1532785XMEP0403_04
8. Brown WJ, de Matviuk MAC (2010) Sports celebrities and public health: Diego Maradona's influence on drug use prevention. J Health Commun 15:358–373
9. Brown WJ, Basil MD, Bocarnea MC (2003) The influence of famous athletes on health beliefs and practices: Mark McGwire, child abuse prevention, and androstenedione. J Health Commun 8:41–57
10. Kosenko KA, Binder AR, Hurley R (2016) Celebrity influence and identification: a test of the Angelina effect. J Health Commun 21(3):318–326. https://doi.org/10.1080/10810730.2015.1064498
11. Wen N (2017) Celebrity influence and young people's attitudes toward cosmetic surgery in Singapore: the role of parasocial relationships and identification. Int J Commun 11:19
12. Latane B (1981) The psychology of social impact. Am Psychol 36:343–365. https://doi.org/10.1037/0003-06636.4.343

13. Sundar SS, Limperos AM (2013) Uses and grats 2.0: new gratifications for new media. J Broadcast Electron Media 57(4):504–525. https://doi.org/10.1080/08838151.2013.845827
14. Kelman HC (1958) Compliance, identification, and internalization three processes of attitude change. J Confl Resolut 2(1):51–60. https://doi.org/10.1177/002200275800200106
15. Hoffner C (1996) Children's wishful identification and parasocial interaction with favorite television characters. J Broadcast Electron 40(3):389–402. https://doi.org/10.1080/08838159609364360
16. Hoffner CA, Levine KJ, Toohey RA (2008) Socialization to work in late adolescence: the role of television and family. J Broadcast Electron Media 52(2):282–302. https://doi.org/10.1080/08838150801992086
17. Cheney G (1983) The rhetoric of identification and the study of organizational communication. Q J Speech 69(2):143–158. https://doi.org/10.1080/00335638309383643
18. Cohen J (2001) Defining identification: a theoretical look at the identification of audiences with media characters. Mass Commun Soc 4(3):245–264
19. Chia SC, Poo YL (2009) Media, celebrities, and fans: an examination of adolescents' media usage and involvement with entertainment celebrities. J Mass Commun Q 86(1):23–44. https://doi.org/10.1177/107769900908600103
20. Hargittai E, Litt E (2011) The tweet smell of celebrity success: explaining variation in Twitter adoption among a diverse group of young adults. New Media Soc 13(5):824–842. https://doi.org/10.1177/1461444811405805
21. Bocarnea MC, Brown WJ (2007) Celebrity-persona parasocial interaction scale. In: Reynolds RA, Woods R, Baker JD (eds) Handbook of research on electronic surveys and measurements. Idea Group Reference, Hershey, PA, pp 309–312
22. Brown W (2007) Celebrity-persona identification scale. In: Handbook of research on electronic surveys and measurements. IGI Global, Hershey, PA, pp 302–305
23. Bentler PM (1992) On the fit of models to covariances and methodology to the bulletin. Psychol Bull 112(3):400
24. Preacher KJ, Rucker DD, Hayes AF (2007) Addressing moderated mediation hypotheses: theory, methods, and prescriptions. Multivar Behav Res 42(1):185–227
25. Hayes AF (2012) PROCESS: a versatile computational tool for observed variable mediation, moderation, and conditional process modelling

Environment and Tourism: An Interactive and Creative Relation—The Cases of Vorres Museum and a Cultural Network of Cities

Elina Riga and Eleftheria Sklavounou

Abstract Tourism experience affects and is influenced by space and place. In recent years the impact of mass tourism is far from positive for the place. Switching from mass tourism to alternative can transform the tourist from a passive receiver into an active co-creator. Through the examples of Vorres museum and the railway network of the Peloponnese, the importance of alternative tourism is analyzed, emphasizing the positive effects for both the tourist and the native. In particular, through the experiential learning of the educational programs of the Vorres Museum, the visitor-tourist experiences the space, interacting with the exhibits, creating the necessary interaction. While, in the general case of the Peloponnese railway network, a mix of different types of alternative tourism is being presented. A journey through an abandoned route, with the aim of offering balanced both to the tourist and the native, with a prerequisite for the participation of both. The two examples show that either alternative tourism operates individually, as in the case of the museum, or works collectively in the form of a trip, the result can be just as encouraging. In both cases, the importance of interaction, interaction and the development of social relations is emphasized. The tourist experience is directly influenced by the new way of perceiving and useful space.

Keywords Alternative tourism · Cultural heritage · Interaction · Museum · Educational program · Contemporary Greek art · Train · Railway tourism · Rail network of Peloponnese

E. Riga (✉)
University of the Aegean, Mytilene, Greece

E. Sklavounou
University of West Attica, Aigaleo, Greece

1 Introduction

Greece has been a strong tourist attraction for many years with a positive impact on the country's economy. In recent times, however, the increase of mass tourism tends to destroy the very environment that hosts it. The imprudent use of natural resources, the environmental burden, the growth of illegal economies, seasonal unemployment, social and environmental deterioration and inflation are some of the negative effects caused by unplanned growth of tourism.

On the contradiction of this saturated form of tourism appears the alternative tourism, a form of sustainable tourism that sensitizes and activates the tourist on environmental and cultural issues. Greece has a rich background where all forms of alternative tourism can be developed, as characteristic mentioned: conference tourism, urban, cultural, religious, archaeological, educational, sightseeing, sports, nautical, agrotourism, geotourism, healing etc.

1.1 Sustainability of Cultural Tourism

The programming of sustainable tourist development depends on the specialized and de-centralized planning of tourist development, with emphasis on the balance among the economy, the society and the environment. Tourism has the potential to contribute decisively to peripheral development enhancing the financial activities of the country's periphery [1].

Cultural tourism is one form of tourism which can develop, respecting the principles of sustainable development and contributing to the viable growth of the region1. Especially, unifying spaces of the re-used building is an important tool for the development of cultural tourism [2].

2 Case Study: Vorres Museum—Educational Programs

2.1 Museum Educational Programs: Their Importance for the Vorres Museum

The Vorres Museum is at the forefront of the cultural touristic scene of Athens since the 1980s [3]. As both a Contemporary Greek Art and a Folk Art Museum, it embraces history and art from ancient Greece up to present-day. Its extensive artistic collection (850 works of which approximately 230 are presented) and its well-planned spaces, both indoors and outdoors, constitute a pole of attraction to both Greek and foreign visitors. The exhibitions, the social and corporate events, the coffee shop and, above all, the educational programs, monopolize the interest of any tourist who wishes to both acclimatize and interact with the environment.

The fact that the museum makes an effort to approach the local and broader community outside its walls is an important and decisive communication strategy. Its close proximity to the "Eleftherios Venizelos" Athens international airport is a major advantage, thus facilitating the tourist to make a cultural stop, either on his way to or from the airport: To feel the space and the museum exhibits via interactive programs and to activate all his senses during his involvement with the Mediterranean garden and his visit to the traditional coffee shop. This fact contributes to the elimination of any possible stereotypes, namely that the museum is an institution that is limited to only a few or adult visitors or that it generates passive viewers only, inactive during their visit, forming thus an elite character.

2.2 Thematic/Museological Idea: Title—"What Happens to the Materials When They Are Transformed?"

The design of a new educational program does not derive from some original idea, but from the need to improve in accordance with the contemporary museum approach, in the already existing program. Thus, the program is designed for any age and is adjusted according to the visitor's requirements and specifics.

2.3 Setting the Program Goals

The central aim of the suggested museum educational program is the visitors' acquaintance and familiarization through the concept of reusing materials, with art and specifically with abstract art, utilizing interaction, recreation and experiential learning.

One of the most important steps for the success of any museum educational program is to set specific educational goals and priorities [4]. Of course, there are certain common axes that characterize all the programs and serve as common ground and a starting point. For example, placing the visitor at the center of the experience, emphasizing his individual preferences.

Based also on the first criterion, the museological theory and practice dictate the shifting of interest from the exhibits to the visitor—though such handling is at the discretion of each museum. This in no way means that the artifacts, the collection, are no longer the core of the foundation—but it indicates the awareness that the tourist-visitor is of the utmost importance, without whom the museum is unable to accomplish its task and therefore it should take into account his needs, without being held hostage by them.

2.4 Implementation Area

Though a relatively small museum, there are many different spaces that can meet different needs [5]. Thus, the realization of the program can take place both in the new wing, the main area for events, as well as in the old gallery leading to the far end of this section. The big advantage of the museum is the basement of the old gallery which has been readapted for the artistic workshops.

2.5 Program Implementation (Description—Phases)

The objects can be used as "keys" that will unlock information and facts, if properly addressed. Every visitor-tourist can take on the role of a researcher or even of a detective, who will have to utilize various clues, such as the exhibits, which, though he cannot touch, he can study scientifically and draw his conclusions.

Phase One The first phase is the introductory part of the program with the assistance of story-telling, a museum educational tool which is mainly applied to groups and is utilized not only for informative purposes, but also to elicit emotional involvement. Moreover, it serves as motivation for active participation in the activities to follow. At this stage of the narrative, visitors may express themselves freely, communicate their views, get psychologically involved in the evolution of the program, emotionally as well as mentally, and certainly ask the first questions—reflecting on their answers regarding the materials of everyday objects that exist in their lives, making the first inquiries as to their reuse.

Phase Two The objective of the second phase is to strengthen the proactive attitude of the guest during his approach to the exhibition pieces, the direct contact with the exhibits and the museum experience as a whole. This activity enables the visitors to wander on their own around the exhibition, come in contact with its elements and come closer to them.

Phase Three Once the research process is completed, the guests and the guide pass by each exhibit, where the visitor makes a short comment on what the lost material was eventually transformed to.

Phase Four Another goal is achieved through this material-aesthetic activity. The experimentation with different materials, mixed media, as well as the way they are put together, serve as the trigger to produce visual products, by seeing the environment and themselves under a different scope. All of the above is instrumental as regards their perception and contributes to the comprehension of different realities through other pathways [6–8].

3   Case Study: Restart Eleusis—A Cultural Network of Cities

3.1   Restart Eleusis

Restart Eleusis is a project that promotes the alternative tourism through a form which offers equal benefits for the tourism, the indigenous and the space. It concerns at the re-use—revival of the train and the rail network of Peloponnese, through an alternative way that suggests a cultural network of cities in forms of alternative tourism. It is aimed at tourists and indigenous people in order to encourage them into a participatory and co-creative process. To enhance the exchange of culture, art and experience through a form of empirical recreational process. A type of creative recreation with the aim of participation, exchange, action, knowledge and offering.

The identity of the Peloponnese is composed by its history, culture, nature, activities and gastronomy, elements that support the development of the most of the forms of alternative tourism [9].

The "key" city for the transport to the Peloponnese is Eleusis, (Eleusis = the coming). Eleusis is a city of 60,000 citizens, it is 20 km far from Athens and the port of Piraeus and will be one of the European Capitals of Culture for 2021. Eleusis, for the Restart Eleusis project, acts as the "start", that aims to promote the cultural wealth of the Peloponnese, reinforce the idea of the institution of Capital of Culture.

3.2   The Metric Rail Network

The railway network in the Peloponnese in 2011 suspended its operation after about 130 years. Since then, a network linking more than a hundred cities and villages has ceased to operate, except for some parts. Nonetheless, although inactive, it is still one of Europe's largest metric networks and in recent years has prompted international interest. In 2016, the ETH Zurich organized an international symposium in Zurich on the topic of "Tourism, Train and Regional Development". The main objective of the symposium was to look for the possibility of a reactivation, either partly or completely, of the Railway Network and its inclusion in the UNESCO World Heritage Network [10, 11].

3.3   Concept

The idea of restart Eleusis concludes with the proposal to re-use the abandoned Metric Rail Network of the Peloponnese via a multi-space train. It is a tourist train that follows a circular two-way route starting from Elefsis, utilizing the network to its full extent. Various actions take place in the train wagons, either when in motion

or when stationed at each station. During the stop, the train joins the station and operate as a unit.

The train consists of different thematic wagons, which each time composed according to the visitors-tourists interests. Indicatively, there are wagons that hosts the library, the workshop, the viewing and exhibition wagon, the café-bar, the kitchen and the restaurant, also the sleeping wagon. The aim is, through the actions in the wagon areas, to promote the participation of the user-traveler, thus achieving mutual cooperation, acquaintance, exchange and co-creation. For example, at the viewing wagon, a photography group can exhibit the pictures they take after a sightseeing around Peloponnese and that exhibition can travel all over the rail network. At the kitchen wagon, tourists can be taught by the locals traditional recipes and all together prepare a meal from the fruits that they have collected. At the café-bar wagon, wine tastings take place, after a visit to the local vineyards or even the participation to the harvest. The train is not just a means of transport but it is a means of transporting culture, folklore, art and experience.

But the journey does not stop there. Each station is also connected with the other areas by using existing road networks and paths, which are often abandoned. The purpose is for the tourist to be able to go from the station to the center of each city or village and then, via other networks to be able to access to other tourist spots of interest. This way, the region is utilized in a wide range of ways and not in part.

4   Conclusion

With this proposal to re-use the rail network, the benefits are equal for both the tourist and the native. In small towns and villages, the attraction of tourists directly affects the local economy. The tourist development of a region leads to an increase in consumption of natural resources, to increased trade and consequently to the growth of agricultural crops. Therefore, there is an increase in the primary and secondary sectors. At the same time, jobs increase and new jobs are creating by attracting young people from all the specialities, occupations are reviving. Creating conditions so the locals, especially young people, remain in their area. People who live in isolation, have the opportunity to occupy, for example pensioners can occupy at info points and feel again active members of society. Apart from the economic benefits, this proposal can directly contribute to the development of social relations. Even the need for communication can lead to the acquisition of a new language, even the exchange of culture, customs and ideas can affect to the routine. There is a fermentation between tourists and locals with positive results for both sides. Moreover, the rail network utilization enhances tourism during the whole year, contributes to the smooth distribution of tourists, avoiding networks overload and seasonal unemployment, by expanding the alternative tourism [12–15].

5   Epilogue

The space is remodeling and evolving to attract the tourist into an interactive tour. A tour that is equally influenced by three factors: the tourist, the locals and the environment, improving the general tourist experience.

References

1. Constantin DL, Mitrut C (2007) Strategies for cultural tourism, sustainability and regional development. A case study in Romania. Paper presented to the 47th congress of European Regional Science Association, Paris
2. Agaliotou M, Panos P (2015) Cultural festivals on sites of cultural heritage as a means of development of alternative forms of tourism. Springer, Procedia
3. http://www.vorresmuseum.gr/gr/about
4. Nikonanou N (2015) Museo-pedagogy: from theory to practice. Pataki Publications, Athens
5. Anderson M (2009) Using stories to enhance historical understanding. In: Rethinking learning, museums and young people. MuseumsEtc, Edinburgh
6. Gavrilaki I (2015) The museum as a game or Alice in Wonderland. University of Crete, Heraklion
7. Maddern E (1992) Teacher's guide to storytelling at historic sites. English Heritage, London
8. Rottmann K (1998) Eigenes Tun hilft Sehen-Bidnerish-Practice Vermittlungsarbeit. Museumspadagogik in Koln, Museumsdienst Koln, Koln
9. Tourist guide: Mythical Peloponnese. http://www.mythicalpeloponnese.gr/
10. Zartaloudis G, Koutelidis D, Nathenas G, Fasoulas SP, Karatolos D, Philippoupolitis A (1997) Railways of Greece, MILITOS
11. Eleftherotypia (1999) Feature: the history of railway. Eleftherotypia, Athens
12. Lagos D (2005) Touristic economy. Kritiki, Athens
13. Zacharatos GA (2003) Package tour. Propombos Publications
14. Tsartas P (1996) Travel, tourists, places: sociological approaches in tourism. Exantas, Athens
15. Kalokardou R (1995) Built environment and tourism: a difficult relation, Pandemo-Digital Library. Panteion University

Trust and Role in the Sharing Economy

Tao Meng, Chang He, and Jashim Khan

Abstract The study on trust mechanism of sharing economy has attracted wide attention. Meanwhile, in the process of value-creation in sharing economy, users also play dual roles-a producer and a consumer. Existing studies on trust in sharing economy is still in infancy, and most studies are drawn from previous research models, and less consider the influence of the dual role on trust in sharing economy. Thus, based on trust theory and role theory, the paper studies the relationship trust and behavioral intention to share. The study uses the empirical research to analyze data with the software of SPSS 20.0 and AMOSS 22.0. In total, 420 valid questionnaires are collected. The results show that users as resource users concern more on interpersonal trust, whereas they pay more attention to institutional-based trust when their roles are transformed into resource providers. It is worthwhile to mention the finding is different from previous studies conducted in developed countries, which stressed more on institutional-based trust. Finally, the results not only provide a new insight for exploring the mechanism of sharing economy but also offer some management suggestions for enterprises and providers.

Keywords Sharing economy · Role theory · Interpersonal trust · Institutional-based trust

1 Introduction

The sharing economy has catalyzed many successfully commercial stories, especially for accommodation and transportation. However, in the absence of a legal mechanism, the issue of trust in the sharing economy has been questioned.

T. Meng (✉) · C. He
Dongbei University of Finance & Economics, Dalian, China
e-mail: mengtao@dufe.edu.cn; hechang@dufe.edu.cn

J. Khan
University of Surrey, Guildford, UK

Compared with the traditional economy, the sharing economy is less constrained by the laws and regulation, so trust plays a vital role in the reduction of risk and uncertainty in the sharing economy [1]. Previous researches on trust concern on Business-to-Customer (B2C) and Business-to-Business (B2B) [2–5]; however, currently, more and more researchers come to find trust is a driving factor of Customer-to-Customer (C2C) [6, 7]. Sharing economy is an economic activity that takes the Internet platform as the medium between private individuals, so it is considered as a special C2C and has caused similar the problem of trust. Moreover, in the sharing economy, customers' role becomes dynamic and diversified in the process of value creation [8]. The boundary of consumers and producers becomes increasingly blurred. Individuals start to have a new role—"prosumer"—a mix of consumers and producers [9]. Based on role theory, one situation will call for an individual's one role, such as acting resource providers and resource users in the production and consumption respectively in the sharing economy. Once the main role of an individual in the situation is confirmed, an individual will take adaptive actions [10]. It can be seen that the role theory a powerful theoretical tool for studying the sharing economy.

The paper thus outlines a conceptual model for the trust mechanism in the sharing economy by role theory and trust theory. Two research questions are mentioned: (1) How trust affects the intention to share? (2) Based on different roles played, which types of trust have the greater effect on the intention to share? In addition, two research objectives also are shown: one is to explore the relationship between trust and intention to share, and the other is to discuss the differences of effects of types of trust on the intention to share in the influence of role playing. This study contributes to exploring the connotation of the sharing economy in theory as well as provides practical management tools for enterprises.

2 Background

2.1 Trust in Sharing Economy

Trust has been widely studied in the field of IS. However, with the emergence of the sharing economy, it is necessary to re-consider and re-examine the role and nature of trust in sharing economy. At present, B2C and B2B mainly take into account trust to professional e-vendors/intermediaries, while C2C mainly relies on trust between consumers and service providers [11]. As a special type of C2C e-commerce, trust in the sharing economy is more complex. Compared with B2C, B2B and C2C, Möhlmann [12] listed four factors of differentiation of sharing economy: (1) Sharing economy exists a "triad of relationship", which results in three different targets of trust, that is "trust towards peer, platform and product (3p)". (2) Compared with B2C, B2B and even C2C, social aspects are more significant in the sharing economy. (3) Sharing economy concerns more on access to shared goods or services not to obtain ownership, which indicates peers require a higher level of trust and

reciprocation. (4) Sharing economy is usually associated with service-exchange rather than activities of pure goods exchanges. Based on these four characteristics, it is necessary to explore trust in the explicit context of the sharing economy.

Existing researches on trust in sharing economy cover a consumer's perspective and mention two targets [13–18]: providers and the platform. However, none of these models covers three targets (product, peer and platform) and these studies also ignore double profiles of users within the sharing economy. Hence, the paper attempts to build a comprehensive conceptual model of trust including three targets of trust and role transformation in two different contexts of sharing economy.

2.2 Role in Sharing Economy

Role theory originated from Drama and was later applied in the field of sociology and psychology to explain subject's behavior in the social system. Role refers to a set of behavior pattern that conforms to social expectations possessed by individuals in specific social status, so people's social behavior can be predicted and explained according to social status and role-playing. Montgomery [10] found each of individual played multiple roles and which kind of one role an individual played mainly depending on the situation. Thus actors needed to transform roles by the situation they were in.

In the traditional economy, transaction subjects usually refer to enterprises and customers. Enterprises are responsible for production and sales, while the main task of the consumer is consumption. Both parties play a single and static role. In sharing economy, consumers and producers are acted as private individuals, and value creation emphases on a static relationship between customers and enterprises no longer, but focuses on a diversified and dynamic relationship among user-platform-user. Users have dual profiles, that is a producer and a consumer. Hence, the study on trust in sharing economy is inseparable from role theory, and different roles playing also generate distinctive trust cognition.

3 Research Methodology

Airbnb as one of the most successful sharing economy commercial models is selected as the research object. To test the research model, the study employs an empirical study, and a closed-ended question is designed to collect data. Respondents are identifed as individuals who knew or used the Airbnb. All constructs are measured by a 5-point Likert Scales, ranging from 1 (disagree strongly) to 5 (agree strongly). To ensure the content validity of the questionnaire, all items for measuring the constructs are adopted from previous literature. Trust in peers (ability, benevolence, and integrity) is developed using the work of Gefen and Straub [5] and Lu et al. [7]; while trust in platform (service quality and safety & protection) use works

of Kim et al. [19], Watson et al. [20] and Mcknight et al. [21]. The proposal of Comer et al. [22] is used for trust in product. Finally, the construct of intention to consume and supply refer to the work of Lu et al. [7].

The study requests participants to respond questionnaires from both perspectives of resource users and providers. A data consultant company was recruited to help collect data. After collecting data, some invalid questionnaires were deleted through trap questions and duration of answer questions. Altogether, 420 valid questionnaires were collected, in which 252 females (60.0%) and 168 males (40.0%). The majority were between 25 and 36 years old (76.2%). A total of 420 respondents, 276 respondents knew Airbnb but not use, while 144 respondents used Airbnb. Also, in order to obtain data from both different perspectives, respondents were asked to fill the questionnaire in 1 day apart. After data collection, the correlation analysis on corresponding constructs (i.e. trust in peers' ability from resource provider and trust in peers' ability from resource users) was examined. The results showed all corresponding correlation coefficient was less 0.5, which indicated data collected was valid and reliable.

4   Results and Discussion

The study adopted the software of SPSS 20.0 and AMOSS 22.0 to test validity and reliability. A principal component analysis (PCA) was used to examine the factorial validity of the scale. Seven constructs were obtained from the perspective of resource users, while six constructs were extracted from the perspective of resource providers. The loadings of items on the expected factors were higher than 0.5, while loadings on other factors were lower than 0.5, indicating good construct validity. The AVE for each construct was above 0.400; all CRs were greater than 0.600; all Cronbach's alpha values were more than the 0.7 thresholds. These indicators showed the scales had high reliability. Moreover, Table 1 showed the correlation matrix and the square roots of the AVEs. The square root of the AVEs were the diagonal elements, and they were greater than their corresponding correlation coefficients with other factors. The result showed that the scales had good discriminant validity.

Regression analysis was performed to test the relationship between the construct. From the perspective of resource users, the regression analysis was done between independent variables of trust in platform (service quality and safety & protection), trust in peer (ability, benevolence and integrity) and trust in product and the dependent variable of intention to consume. After adding the control variables (age, gender, usage and risk propensity), the model for R was 0.707, R^2 was 0.500, and the adjusted R^2 was 0.488, indicating goodness of fit. Moreover, the value of F was 40.919 ($p < 0.001$), so the effect of regression was significant. As shown in Table 1, trust in peer (ability, integrity and benevolence) had a positive effect on the intention to consume. Regarding trust in platform, safety & protection positively influenced the intention to consume, while service quality had no significant impact. In addition, a higher level of the trust in product also increased

Table 1 Results for multiple regression analysis

Intention to consume			Intention to supply		
	Coef.$^{\text{sig}}$	T-value		Coef.$^{\text{sig}}$	T-value
Platform$^{\text{cSQ}}$	0.037	1.203	Platform$^{\text{sSQ}}$	0.284***	5.515
Platform$^{\text{cS\&P}}$	0.134***	4.169	Platform$^{\text{sS\&P}}$	0.222***	5.488
Peer$^{\text{cAB}}$	0.098***	2.975	Peer$^{\text{sAB}}$	0.245***	5.614
Peer$^{\text{cIN}}$	0.154**	4.585	Peer$^{\text{sIN}}$	0.069	1.568
Peer$^{\text{cBE}}$	0.176***	5.404	Peer$^{\text{sBE}}$	0.085*	1.967
Product$^{\text{AB}}$	0.112***	3.559			
(Intercept)	0.368	1.494	(Intercept)	−0.260	−0.794
Female	0.055	0.953	Female	0.095	1.275
Age	0.033	1.010	Age	−0.054	−1.268
Usage	0.194***	3.200	Usage	0.134	1.703
Risk propensity	0.034**	2.483	Risk propensity	0.023	1.306

SQ service quality, *S&P* safety and protection, *AB* ability, *IN* integrity; *BE* benevolence
***$p < 0.001$; **$p < 0.01$; *$p < 0.05$

intention to consume. In control variables, only both usage of Airbnb and risk propensity positively influenced the intention to consume. On the other hand, from the perspective of resource providers, the same analysis was also adopted. The model of R was 0.659, R^2 was 0.434, and the adjusted R^2 was 0.421, and the value of F was 34.888 ($p < 0.001$), which indicated the model was significant. The results showed trust in platform (service quality and safety and protection) had a positive effect on the intention to supply. In term of trust in peer, except trust in peer integrity, both trusts in peer ability and benevolence had the positive impact on intention to supply. And all control variables had no significant impact.

5 Conclusion

The result of this study contributes to understanding the role of trust on the intention to share in the perspective of consumers and suppliers. As resource users, they focus more on interpersonal trust, whereas as resource providers, institutional-based trust is more important. Thus, the findings of the paper set implications for academics. First, the study further enriches the application of trust theory on the Internet. Second, the paper constructs the model of trust in sharing economy utilizing the role theory. It not only offers a new insight for probing into the connotation of sharing economy, but also explores the implementation mechanism for sharing economy in a new clue. Third, in the sharing economy, trust in product plays a crucial role in influencing on the intention to share, which contributes to filling the research blank of trust towards product in sharing economy. In addition, implications for practitioners are from the results of the research. First, for service providers, it is important to establish interpersonal trust between sellers and buyers, such as

building reputation [13]. Second, without violation of privacy, service providers present detailed and rich personal information to exhibit high levels of integrity and benevolence, such as no criminal record, identity verification, personal photos, stories about a landlord, e.t. [17, 18]. Third, to avoid information asymmetry, service providers can rely on high-technology, such as playing video or VR to reduce cognitive errors. On the other hand, resource providers lay their micro-entrepreneurial fate into the hands of the platform. Thus, the platform not only provides business chances for resource providers but also ensure their rights and interests against losses. First, the platform expands the volume of demand and enrich categories of products/service and helps resource providers to grasp the operation process and rules quickly. Second, the platform should set a sound institution mechanism to avoid accidents or damage to properties, such as insurance, guaranty or security system. Last, sharing economy platforms should establish transparent, reasonable and flexible profit-sharing mechanism to decrease conflicts between suppliers and the platform.

Limitation of the study is about sample data. It is such difficult to contact users belonging to dual identities that the paper collect data by transformation of individual roles, which leads results to be questioned. Thus, researchers make efforts to contact with platform enterprises to collect data in the future. Second, trust is a multidimensional construct, and it exists a dynamic evolutionary process, so further studies stress on antecedent factors of trust and relationships of elements of trust in sharing economy.

References

1. Barnes SJ, Mattsson J (2016) Understanding current and future issues in collaborative consumption: a four-stage Delphi study. Technol Forecast Soc Change 104:200–211. https://doi.org/10.1016/j.techfore.2016.01.006
2. Doney PM, Barry JM, Abratt R (2007) Trust determinants and outcomes in global B2B services. Eur J Mark 41:1096–1116. https://doi.org/10.1108/03090560710773363
3. Gefen D (2002) Customer loyalty in e-commerce. J Assoc Inf Syst 3. https://doi.org/10.17705/1jais.00022
4. Gefen D, Benbasat I, Pavlou P (2008) A research agenda for trust in online environments. J Manage Inform Syst 24:275–286. https://doi.org/10.2753/MIS0742-1222240411
5. Gefen D, Straub DW (2004) Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. Omega 32(6):407–424. https://doi.org/10.1016/j.omega.2004.01.006
6. Jones K, Leonard LN (2008) Trust in consumer-to-consumer electronic commerce. Inf Manag 45:88–95. https://doi.org/10.1016/j.im.2007.12.002
7. Lu Y, Zhao L, Wang B (2010) From virtual community members to C2C e-commerce buyers: trust in virtual communities and its effect on consumers' purchase intention. Electron Commer Res Appl 9:346–360. https://doi.org/10.1016/j.elerap.2009.07.003
8. Hamari J, Sjöklint M, Ukkonen A (2016) The sharing economy: why people participate in collaborative consumption. J Assoc Inf Sci Technol 67:2047–2059. https://doi.org/10.1002/asi.23552

9. Ritzer G, Jurgenson N (2010) Production, consumption, prosumption: the nature of capitalism in the age of the digital 'prosumer'. J Consum Cult 10:13–36. https://doi.org/10.1177/1469540509354673
10. Montgomery JD (1998) Toward a role-theoretic conception of embeddedness. Am J Sociol 104:92–125. https://doi.org/10.1086/210003
11. Leonard LNK (2012) Attitude influencers in C2C e-commerce: buying and selling. J Comput Inf Syst 52:11–17. https://doi.org/10.1145/1282100.1282180
12. Möhlmann M (2016) Digital trust and peer-to-peer collaborative consumption platforms: a mediation analysis. Soc Sci Electron Publ. https://doi.org/10.2139/ssrn.2813367
13. Ertz M (2015) Women trust others and consensus; men trust numbers and their own judgment: a conceptual analysis of the impact of the self-construal mechanism on the relationship between online feedback mechanisms and online trust. Int J Bus Inf 10:387
14. Kamal P, Chen JQ (2016) Trust in sharing economy. PACIS 109. http://aisel.aisnet.org/pacis2016/109
15. Tussyadiah IP, Park S (2018) When guests trust hosts for their words: host description and trust in sharing economy. Tour Manag 67:261–272. https://doi.org/10.1016/j.tourman.2018.02.002
16. Wu J, Ma P, Xie KL (2017) In sharing economy we trust: the effects of host attributes on short-term rental purchases. Int J Contemp Hosp Manage 29:2962–2976. https://doi.org/10.1108/IJCHM-08-2016-0480
17. Mittendorf C (2016) What trust means in the sharing economy: a provider perspective on Airbnb.com. Proceedings of the 22nd Americas conference on information system, San Diego, CA
18. Mittendorf C (2017) The implications of trust in the sharing economy – an empirical analysis of Uber. Proceedings of the 50th Hawaii international conference on system sciences. http://hdl.handle.net/10125/41866
19. Kim DJ, Ferrin DL, Rao HR (2008) A trust-based consumer decision-making model in electronic commerce: the role of trust, perceived risk, and their antecedents. Decis Support Syst 44:544–564. https://doi.org/10.1016/j.dss.2007.07.001
20. Watson RT, Leyland FP, Kavan CB (1998) Measuring information systems service quality: lessons from two longitudinal case studies. MIS Q 22(1):61–79. https://doi.org/10.2307/249678
21. McKnight DH, Choudhury V, Kacmar C (2002) Developing and validating trust measures for e-commerce: an integrative typology. Inform Syst Res 13:334–359. https://doi.org/10.2307/4132332
22. Comer JM, Plank RE, Reid DA et al (1999) Methods in sales research: perceived trust in business-to-business sales: a new measure. J Pers Selling Sales Manage 19:61–71. https://www.jstor.org/stable/40471734

Online Personal Selling, Need for Touch and e-Loyalty

Jashim Khan, Zuo Na, and Meng Tao

Abstract This research examines the relationship between online website quality (eTailQ) and e-loyalty by examining (a) the mediating role of need for touch (NFT) and (b) the moderating role of online personal selling influencing the mediation. Non-probability criterion-based purposive sampling resulted 346 participants participating in this research. Results show that NFT mediates the relationship between eTailQ and e-loyalty. Moderated mediation reveals that the indirect pathways (NFT) through which eTailQ exerts its effect on e-loyalty is dependent on the value of real-time online personal selling of the website. Managerially, the study explains quality of website is effective to enhance consumer loyalty when online retailers provide ways to reduce NFT in their website and that personal selling seem to moderate the likelihood of repeat purchase.

Keywords Retailer website quality (eTailQ) · Online personal selling · Need for touch (NFT)

1 Introduction

Driven by the boom in online shopping with $2.3 trillion in 2015 globally [1], China represents $776.5 billion in total online sales in 2017 [2]. Given the prominence of online shopping in China, managing online service quality (e-service) and maintaining consumer online loyalty (e-loyalty) becomes priority for online retailers (e-tailer). A Number of researchers have highlighted why consumer perception of online service (e-service) quality is important [3–5] and how e-service quality can significantly affect attributes like, e-loyalty [6–8]. Online shopping presents

J. Khan (✉)
University of Surrey, Guildford, UK
e-mail: j.a.khan@surrey.ac.uk

Z. Na · M. Tao
IBC, Dongbei University of Finance and Economics, Dalian, China

convenience, utilitarian shopping motives and lacks on need for touch or sensory gratification [9]. Researches pertaining to online retailer's website quality (eTailQ) identify website characteristics [10], website design and web functionality [11] and security, perceived risk and privacy concern influence online shopping and consumer e-loyalty [12]. Limited number of studies examined the role of need for touch (NFT) in online shopping context. There is research that suggest that NFT has differential influence on online shopping based on the devices consumers use (e.g. mobile phone versus computer) [13]. Furthermore, online real-time personal selling, usually more emphasised in traditional-retail circumstance, is incorporated in online service (e-service) quality to measure consumers' shopping experience and predict their online purchase behavior [14]. Recent literatures discuss that the propensity to trust salespeople can effect customer behavior via Internet [15]. The real-time presence of online personal selling play an important role in customer e-loyalty [16]. Despite the relationship of e-service, e-tail quality and e-loyalty is established [17]; there seem to be a gap in literature to incorporate the role of online real-time personal selling and NFT within the relationship between eTailQ and e-loyalty.

The research focuses on Chinese e-commerce, exploring customer behavior in the digital marketing context. This research examines the relationship between online website quality (eTailQ) and e-loyalty by examining a) the mediating role of NFT and b) the moderating role of online personal selling influencing the mediation. We address three research questions in line with this aim: RQ1) what is the mediating impact of NFT in the relationship between eTailQ and e-loyalty? RQ2) what is the moderating impact of online personal selling in the relationship between eTailQ and e-loyalty? RQ3) what is the impact of online personal selling moderating the mediated relationship of NFT between eTailQ and e-loyalty.

2   Conceptual Model

This research adapts Wolfinbarger and Gilly's (2003) study to investigate the influence of website quality and online shopping loyalty. The website quality eTailQ identify website design, fulfillment/reliability, security/privacy, and customer service influencing shoppers' purchase.

2.1   Need for Touch

Need for touch (NFT) is defined as a preference and motivation by extracting and utilizing information obtained from touching products [18, 19]. The instrumental NFT and the autotelic NFT are two aspects of this construct. The former one refers to the pre-purchase touch that is goal-oriented. The latter one is hedonic-oriented, which seeks sensory stimulation and enjoyment [20].

2.2 Online Personal Selling

Recent literatures suggest that personal selling represents the most crucial and effective means of customers-buyer relationship development [21], and is a critical incentive for loyalty [22]. Online personal selling is the indispensable part of the purchase process over the Internet [23]. Customers may require more specific information and suggestions offered by online salespeople.

2.3 Loyalty

[24] conceptualise loyalty into two aspects including attitude and behavior. In terms of attitude, customers who hold the sense of loyalty empress their favorite, commitment and purchase intention to the same brand [25]. As for the behavior, for instance, consumers will continue to purchase from the same sellers or brands frequently, thus leading the relationship between them to be strengthened.

3 Method and Analysis

The study was conducted in China using a cross sectional survey approach. All the items were adapted from the published literature and modified to the context of this study. Source of constructs: eTailQ [8], NFT [18]; online personal selling [16] and loyalty [6]. Double translation procedure was adapted to suit Chinese participants [26]. 42.6% of the participants are between 18 and 25 years old and 50.8% are male. The majority of the responders (40.5%) shop online 1–2 times per month. A total of 346 usable questionnaires were gathered. The survey was open for 1 month, between May 25, 2017 and June 28, 2017 in China.

The most commonly used test for internal consistency is Cronbach's Alpha. What constitutes a minimum acceptable alpha level is debatable, however "a widely advocated level of adequacy for alpha value is 0.70" [27]. However, according to [28] "it may decrease to 0.6 in exploratory research" (p. 125). We calculated the Cronbach alpha coefficient, composite factor reliability, and average variance extracted for each of the scales and all the values were in the desirable range. We tested for alternate models and found the original model to be better than all constrained models. Our measures had required construct validity.

We used Harman's one factor to examine the presence of method effect in the data. All the variables were entered into an exploratory factor analysis, using principal component analysis with Varimax rotation, to determine the number of factors that are necessary to account for the variance in the variables. The factor analysis, revealed the presence of distinct factors with eigenvalues greater than 1.0. We used hierarchical multiple regression to test RQ1 and hierarchical moderated

regression to test RQ2. Moderated mediation was assessed following [29] suggested procedure to test RQ3. A total of 32 items measured on 5 points Likert scales were used.

4 Results

Results show that need for touch (NFT) mediates the relationship between online website quality (eTailQ) (website design, fulfillment/reliability, security/privacy, and customer service) and e-loyalty, (except security/privacy). The online website quality (eTailQ) and need for touch (NFT) were positively related ($\beta = 0.34$, $p < 0.001$) and need for touch (NFT) and e-loyalty were significant ($\beta = 0.19$, $p < 0.001$). The direct effect of website quality (eTailQ) on e-loyalty in presence of need for touch (NFT) was insignificant ($\beta = 0.03$, S.E. $= 0.01$, $p > 0.05$). We found the support for RQ1 that need for touch (NFT) mediate the relationship between online website quality (eTailQ) and e-loyalty (RQ1). This relationship is prominent indirectly eTailQ $\rightarrow$ NFT $\rightarrow$ e-loyalty ($\beta = 0.06$, S.E. $= 0.03$, BootLLCI $= 0.02$, BootULCI $= 0.13$). Absence of zero between Boot LLCI (Boot Lower Level Confidence Interval) and Boot ULCI (Boot Upper Level Confidence Interval) supports our RQ1. We followed Hayes [29] to establish moderation when testing RQ2. The moderating variable online personal selling and e-loyalty were significant and positively related ($\beta = 0.23$, S.E. $= 0.09$, p < 0.001). The interaction term for online website quality (eTailQ) with online personal selling ($\beta = 0.19$, S.E. $= 0.08$, p < 0.001) were significant in predicting e-loyalty. Moderated mediation was assessed following Hayes [29] to determine whether the strength of the mediation differs across the levels of the moderator in predicting the effect of online website quality (eTailQ) and e-loyalty. Moderated mediation is demonstrated when the conditional direct effect of online website quality (eTailQ) on e-loyalty via need for touch (NFT) differs in strength across the values of the moderator (online personal selling). We operationalized high and low levels of online personal selling as one standard deviation above and below the mean score. Table 1 presents the estimates, standard errors, and significance value of the conditional direct effect of independent on dependent variable at values of the moderator. Moderated mediation reveals that the indirect pathways (NFT) through which eTailQ exerts its effect on e-loyalty is dependent on the value of real-time online personal selling of the website.

Table 1 Moderated mediation result for online personal selling and NFT

Moderator	Level	Conditional direct effect	SE	LLCI	ULCI
Online personal selling	−0.78	0.22	0.12	−0.02	0.46
	0.00	0.37	0.10	0.17	0.56
	0.78	0.51	0.10	0.31	0.72

Results show that need for touch mediates the relationship between online website quality eTailQ (website design, fulfillment/reliability, security/privacy, and customer service) and e-loyalty, (except security/privacy). Moderated mediation reveals that the indirect pathways (NFT) through which eTailQ exerts its effect on e-loyalty is dependent on the value of real-time online personal selling of the website. In conclusion, this study provides novel finding and fills the gap in the literature by examining the role of online personal selling and need for touch in the relationship between retailer website quality and consumer loyalty. Moderated mediation reveal that the strength of mediation (NFT) differ across the levels of the moderator (online personal selling) in explaining the effect of eTailQ and e-loyalty. The result of our study suggest that quality of website is effective to enhance consumer loyalty when online retailers provide ways to reduce NFT in their website and that personal selling seem to moderate the likelihood of repeat purchase.

5 Discussion and Conclusion

In conclusion, this study provides novel finding and fills the gap in the literature by examining the role of online personal selling and need for touch in the relationship between retailer website quality and consumer loyalty. Moderated mediation reveal that the strength of mediation (NFT) differ across the levels of the moderator (online personal selling) in explaining the effect of eTailQ and e-loyalty. The result of our study suggest that quality of website is effective to enhance consumer loyalty when online retailers provide ways to reduce NFT in their website and that personal selling seem to moderate the likelihood of repeat purchase. Our study is in line with [23] study that highlighted the need for personal selling in online purchase. The absence of tactile input is one of the most commonly cited reasons why customers reluctant to shopping via Internet [30]. E-retailers may be able to leverage existing forms of marketing tools, such as low price stimulation, to compensate for the inability to touch the online products [4]. Online sellers make effort to create a more pleasant and enjoyable shopping experience to cover the negative effect caused by unavailable haptic feedback [31]. Thus, the influence of need for touch on online purchase intention is important and may ameliorate when online personal selling is live and creates engagement.

Our study sheds light on Chinese e-commerce, exploring customer behavior in the digital marketing context. We suggest that online retailers should work on improving website quality to encourage e-loyalty. High quality product and 3D demonstration of product online will enhance consumer experience and reduce the need for touch in online purchase. Online retailers should focus on automating online personal selling in an effort to help consumers shop effortlessly [13]. Previous studies prove that the salespeople are crucial for cultivating the loyal relationship with customers [16]. When customers seek suggestions from online salesperson, the evaluation of this interaction can better predict the loyalty.

Our research was limited to China and could include other countries where online shopping is prominent. Further, this examination was restricted to understanding online website quality (eTailQ) and e-loyalty. Future research is recommended to examine attitudes towards online purchase, such as between purchasers vs. non-purchasers and different age and socio-economic groups.

References

1. Nielsen (2016) Nielsen global connected commerce survey, Q4. http://www.nielsen.com/cn/en/insights/reports/2016/global-qbn-q4-2016.html
2. China Ministry of Commerce (2016) The global B2C sale value is predicted to increase 17.5% in 2016. http://www.mofcom.gov.cn/article/i/jyjl/m/201612/20161202099853.shtml
3. Cheng JMS, Wang EST, Lin JYC, Chen LS, Huang WH (2008) Do extrinsic cues affect purchase risk at international e-tailers: the mediating effect of perceived e-tailer service quality. J Retailing Cons Serv 15:420–428. https://doi.org/10.1016/j.jretconser.2007.11.001
4. Lee GG, Lin HF (2005) Customer perceptions of e-service quality in online shopping. Int J Retail Dis Manag 33:161–176. https://doi.org/10.1108/09590550510581485
5. Yoo B, Donthu N (2001) Developing a scale to measure the perceived quality of an internet shopping site (SITEQUAL). Q J Electron Commer 2:31–45. https://doi.org/10.1007/978-3-319-11885-7_129
6. Dai H, Haried P, Salam AF (2011) Antecedents of online service quality, commitment and loyalty. J Comput Inf Syst 52:1–11. https://doi.org/10.1080/08874417.2011.11645535
7. Ding DX, Hu PJH, Sheng ORL (2011) E-SELFQUAL: a scale for measuring online self-service quality. J Bus Res 64:508–515. https://doi.org/10.1016/j.jbusres.2010.04.007
8. Wolfinbarger M, Gilly MC (2003) eTailQ: dimensionalizing, measuring and predicting etail quality. J Retailing 79(3):183–198. https://doi.org/10.1016/S0022-4359(03)00034-4
9. Hsiao C, Yen R, Li EY (2012) Exploring consumer value of multichannel shopping: a perspective of means-end theory. Internet Res 22:318–339. https://doi.org/10.1108/10662241211235671
10. Tandon U, Kiran R, Sah A (2018) The influence of website functionality, drivers and perceived risk on customer satisfaction in online shopping: an emerging economy case. Inf Syst E Bus Manag 16:57–91. https://doi.org/10.1007/s10257-017-0341-3
11. Sohn S, Seegebarth B, Moritz M (2017) The impact of perceived visual complexity of mobile online shops on user's satisfaction. Psychol Mark 34(2):195–214. https://doi.org/10.1002/mar.20983
12. Cui F, Lin D, Qu H (2018) The impact of perceived security and consumer innovativeness on e-loyalty in online travel shopping. J Travel Tour Mark 1:1–16. https://doi.org/10.1080/10548408.2017.1422452
13. de Vries R, Jager G, Tijssen I, Zandstra EH (2018) Shopping for products in a virtual world: why haptics and visuals are equally important in shaping consumer perceptions and attitudes. Food Qual Prefer 66:64–75. https://doi.org/10.1016/j.foodqual.2018.01.005
14. Bilgihan A (2016) Gen Y customer loyalty in online shopping: an integrated model of trust, user experience and branding. Comput Hum Behav 61:103–113. https://doi.org/10.1016/j.chb.2016.03.014
15. Friend SB, Johnson JS, Sohi RS (2018) Propensity to trust salespeople: a contingent multilevel-multisource examination. J Bus Res 83:1–9. https://doi.org/10.1016/j.jbusres.2017.09.048
16. Brach S, Walsh G, Hennig-Thurau T, Groth M (2015) A dyadic model of customer orientation: mediation and moderation effects. Br J Manag 26(2):292–309. https://doi.org/10.1111/1467-8551.12049

17. Malik ME, Ghafoor MM, Iqbal HK, Riaz U, Hassan N, Mustafa M, Shahbaz S (2013) Importance of brand awareness and brand loyalty in assessing purchase intentions of consumer. Int J Bus Soc Sci 4:167–171. https://pdfs.semanticscholar.org/6d15/0ef53b0bbdcccfc4ef8a6903f75f19612773.pdf
18. Peck J, Childers TL (2003) To have and to hold: the influence of haptic information on product judgments. J Marketing 67:35–48. https://doi.org/10.1509/jmkg.67.2.35.18612
19. Elhai JD, Levine JC, Dvorak RD, Hall BJ (2016) Fear of missing out, need for touch, anxiety and depression are related to problematic smartphone use. Comput Hum Behav 63:509–516. https://doi.org/10.1016/j.chb.2016.05.079
20. Peck J, Wiggins J (2006) It just feels good: customers' affective response to touch and its influence on persuasion. J Market 70:56–69. https://doi.org/10.1509/jmkg.70.4.56
21. Echchakoui S (2014) Salesperson profitability in relationship marketing. J Model Manag 9:306–323. https://doi.org/10.1108/JM2-02-2014-0014
22. Thananuraksakul S (2018) Factors influencing online shopping behavior intention: a study of Thai consumers. AU J Manag 5:41–46. https://doi.org/10.24331/ijere.432350
23. Finn A, Kayande U (1997) Reliability assessment and optimization of marketing measurement. J Mark Res 34:262–275. https://www.jstor.org/stable/3151863
24. Jacoby J, Kyner DB (1973) Brand loyalty vs. repeat purchasing behavior. J Mark Res 10:1–9. https://www.jstor.org/stable/3149402
25. Nguyen Thuy TT, Thanh Q (2016) An analysis of brand personality on brand loyalty in frozen seafood supermarkets in Ho Chi Minh City. J Aquacult Res Dev 7(3):412
26. McGorry SY (2000) Measurement in a cross-cultural environment: survey translation issues. Qual Mark Res Int J 3:74–81. https://doi.org/10.1108/13522750010322070
27. Netemeyer RG, Bearden WO, Sharma S (2003) Scaling procedures: issues and applications. Sage, London
28. Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL (2010) Multivariate data analysis. Pearson, Harlow
29. Hayes AF (2012) PROCESS: a versatile computational tool for observed variable mediation, moderation, and conditional process modeling
30. Havas (2013) Digital and the new consumer: emerging paths to purchase. http://theprblog.co.uk/mobile-shopping-consumer-habit/#.U58jWY1dXfV
31. Yoo WS, Lee Y, Park J (2010) The role of interactivity in e-tailing: creating value and increasing satisfaction. J Retailing Cons Serv 17:89–96. https://doi.org/10.1016/j.jretconser.2009.10.003

The Passage from the Materialistic Approach to the Integrated One in Cultural Heritage and Cultural Policies: Challenges and Perspectives

Evangelos Papoulias and Efharis Mascha

Abstract The paper aims to address the theoretical framework within which models of cultural management have developed in the framework of cultural heritage. More specifically, we tend to discuss a particular movement, which characterizes both institutions, UNESCO and the Council of Europe. In the aftermath of the Second World War firstly UNESCO and later on the Council of Europe are the principle institutions for designing and implementing cultural policies so as to protect and safeguard cultural heritage. The paper aims to address the role of both institutions and how they have been developing over time from a materialistic approach to a more integrated one. This theoretical approach will be supplemented by a critical approach and a case study. The case study derives from Spain and specifically the Alhambra Palace and Albyzin neighborhood.

Keywords Cultural heritage · Living heritage · Integrated approach · Alhambra · Albayzin

1 Introduction

The aim of the paper is to address the theoretical framework in cultural heritage as it has been developed from the study of two major institutions of cultural policy, that of UNESCO and the Council of Europe. Both are responsible for designing and guiding the national cultural policies among the EU states and beyond Europe in the case of UNESCO. Both institutions have developed their approach on cultural policy considering initially cultural heritage from a materialistic perspective and moving towards an account of social integration. In doing so, we are looking for a new

E. Papoulias (✉)
National and Kapodistrian University of Athens, Athens, Greece
e-mail: papoulias@uoa.gr

E. Mascha
Hellenic Open University, Patras, Greece

passage between the two institutions that could enhance and create a new cultural heritage policy more integrated to the social fabric entailing recent developments.

Thus, we will firstly discuss this theoretical movement and what actually signifies for the designing of cultural policies. Then, we will critically discuss the role of a case study where both institutions have played a significant role to the development of the specific monuments and the nearby area, i.e. the local community. This one derives from Spain and the area of Granada, where is situated the Alhambra Palace and Albyzin neighborhood. Finally, the paper reaches a set of conclusions significant for sustainable development and cultural policies within the margins of austerity measures and financial crisis.

2 Theoretical Encounter on Models of Cultural Management

2.1 UNESCO and Cultural Policy

UNESCO's key priority is the protection of Cultural Heritage [1]. UNESCO's programs aim to enhance awareness, the protection of cultural goods and the promotion of the knowledge in society. UNESCO, has an international-intergovernmental character and also coordinates efforts to protect Cultural Heritage. In particular, the rescue of UNESCO's Cultural Heritage concerns the following three ways:

(a) the dissemination of scientific and technical information [2], as well as awareness-raising of global public opinion on the importance and protection of the cultural heritage.
(b) "International Rescue Campaigns" [3], long-term and costly programs, as well as technical training programs for the conservation of archaeological monuments, etc.
(c) Regulatory action, which is the most relevant at both national and international level. For this purpose, International Conventions [4, 5], Recommendations and Declarations are drawn up.

However, it is very important to mention taking up Auwera's view that UNESCO in crisis situations does not work pro-actively but with extreme slowness and its diplomatic action is usually fruitless, without any real effect [6]. However, given the role of UNESCO's protection and peaceful management of Cultural Heritage, it is important to look at the development of models of cultural management.

2.2 Models of Cultural Management

Cultural heritage management is a complex and interdisciplinary process because it refers to the comprehensive and integrated treatment and protection of the Cultural Heritage, not only its financial management. More significantly, it is not only the position and archaeological value of a monument or a set of monuments, but above all the social benefit of the whole as represented by the various social groups or social actors of the local community [7]. Consequently, I manage a cultural activity or organization does not mean sterile financial management of this but a clear orientation towards the community, sustainable development with a holistic approach from a management perspective.

We reached this conclusion following a study of three management models [7, 8]. The goal of the first model (nineteenth century) was essentially to preserve the material "material based approach" from any deterioration or destruction in order to be passed on to future generations. The exclusive responsibility for this preservation lies with the experts or the group of experts without the participation of the society, as the latter can be considered as not having the same or even may have a conflicting interest from that of the experts. This model is expressed in the Charter of Venice (ICOMOS 1964) and consequently in the 1972 UNESCO World Heritage Convention. This model is considered a "conventional model" and is now outdated.

The "value based approach" [7] was developed in the 1980s and we see its substantial implementation in the Operational Guidelines and the Burra Charter (ICOMOS Australia 1999). This model emphasizes the values that different groups of people/interest groups attribute to the Cultural Heritage. Groups may be of different types, such as workers' unions, religious groups, or just residents and tourists or other guides. Hence, management is a process that "embraces the whole of society" [7]. Experts do not have the primary role as in the materialistic model, but the role of overseeing and actually encouraging and involving the individual social groups, who remained silent in the past or did not have the opportunity to express their interests/interests. This model is clearly more pluralistic than the previous one and particularly difficult in the process of managing a monument or location.

The third and last model, the Living Heritage Approach [7], has taken place over the past decade thanks to the International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM) in Rome. This model takes care of the cultural heritage that continues to exist today, evolves and is expressed through material and intangible elements. Such examples are mainly from traditional settlements, historic cities, religious sites and cultural landscapes. The heart of the model lies in the fact that it "marks a transition from monuments to societies, from material to intangible connections of societies with cultural heritage and from the concept of discontinuity to continuity" [7].

The latter model is clearly less democratic than the value-based model, but it better perceives interest groups in cases where Cultural Heritage goods are in progress. Later on (see Sect. 3), we will analyze an extremely important site of Cultural Heritage in Granada, where the Alhambra Historical Monument and the

Albayzin neighborhood coexist in order to highlight the features of the above management models and the transition to the Living Cultural Heritage.

2.3 The Council of Europe: General Framework

On the strength of its experience resulting from 40 years of discussions and exchanges between experts and political representatives, the Council of Europe has drawn up and, once adopted, implemented several founding conventions which have been transposed into national legislation of European countries, creating the foundations of a greater Europe of heritage [9]:

- the European Cultural Convention (Paris, 1954—ETS No. 18)
- the European Landscape Convention (Florence, 2000—ETS No. 176)
- the Framework Convention on the Value of Cultural Heritage for Society (Faro, 2005—CETS No. 199).

These conventions have become reference texts and have been supplemented by a range of declarations, recommendations and resolutions [10]. They also provided the countries with tools to protect and enhance their tangible and intangible heritage. The conventions open new horizons for measures that should have been taken for the protection of archaeological heritage during the last decades. In terms of Council of Europe, the three pillars, as important directions of cultural policy, that present the passage from materialistic approach to integrated one are a) the "Integrated Conservation" b) the "Integrated Management" (not officially stated but established through a number of operational programs—CSF and ESPA) c) the "Integrated Approach" promoting cultural heritage on the basis of an integrated approach while taking into account the cultural, economic, social, historical, educational, environmental and scientific components.

2.4 The "Integrated Conservation"

Having regard to the pioneering work of the Council of Europe in the field of cultural heritage and, in particular, the European Architectural Heritage Year organized in 1975 and concluded with the European Charter of the Architectural Heritage (Charter of Amsterdam), which led to growing awareness at European level of the importance of heritage and the adoption for first time of "integrated conservation" heritage policies in all member States. Considering the irreplaceable contribution of heritage experts that is reflected in many conventions, the implementation and follow up of which is the responsibility of the Council of Europe member States in cooperation with relevant stakeholders, namely in

- the Convention for the Protection of the Architectural Heritage of Europe (Amsterdam, 1975—ETS No 75, Granada (revised), 1985—ETS No. 121)
- the European Convention on the Protection of the Archaeological Heritage (revised) (Valletta, 1992—ETS No. 143)

The "Integrated conservation", a dynamic new policy of protection and enhancement is urgently implemented, and our society during the last four decades find itself obliged to give up the heritage of buildings and sites which form its traditional environment [10]. Protection is needed today for historic towns, the old quarters of cities, and towns and villages with a traditional character as well as historic parks and gardens. The conservation of these architectural complexes can only be conceived in a wide perspective, embracing all buildings of cultural value, from the greatest to the humblest—not forgetting those of our own day together with their surroundings. This overall protection will complement the piecemeal protection of individual and isolated monuments and sites. The significance of the "Integrated conservation" and justification for implementing it are now more clearly perceived. It is known that historical and archaeological continuity must be preserved in the environment if we are to maintain or create surroundings, which enable individuals to find their identity and feel secure despite abrupt social changes.

2.5 The "Integrated Management"

The term "Integrated management" established through the implementation of a number of operational programs. For example, the impact of European Union "Structural funds" for culture in Greece from 1994 to 2006 were two major "Community Support Frameworks" concerning economic and social development, which were planned and implemented. Funding for cultural policy amounted to 1.3 billion euros, an unprecedented investment for culture in Greece [11]. The rationale behind the EU Structural Funds has been all along to strengthen socio-economic cohesion within Europe by overcoming regional disparities and inequalities. At the same time, it aims to contribute to the EU 2020 vision of 'smart, inclusive and sustainable' development. These three aspects are up to discussion in the forthcoming negotiations as such a complex program requires a certain adaptation. In this context, culture should matter if the rationale behind such a vast funding program is to be convincing and understandable not only to managing authorities or operators of projects, but to the citizens of Europe themselves [9]. During the current funding period 2007–2018, 580 million were destined to the protection and preservation of cultural heritage (to the development of cultural infrastructure and to the support of cultural services).

2.6   The "Integrated Approach"

The work of the Council of Europe in the field of cultural heritage has increasingly emphasized an integrated approach (European Parliament resolution of 8 September 2015) [12] that combines the promotion and protection of cultural diversity, democratic governance and democratic innovation. It is essential therefore that decision making involves those most directly affected—the owners, inhabitants, local communities and local authorities—who recognize the specific value of heritage for society. Indeed, national-level cultural heritage protection policies and practices must not be removed from these stakeholders.

An "integrated approach" is necessary if one wishes to achieve cultural dialogue and mutual understanding. It is convinced that such an approach can lead to enhanced social, economic and territorial cohesion, while also contributing to the fulfillment of the goals set in the Europe 2020 strategy. The "integrated approach" addresses, in the context of the development of the new integrated approach to cultural heritage, the following specific recommendations to the Commission [12]: (a) to establish, in line with the current Commission working methods of working across sectors and in a flexible manner, a common approach within the Commission through improved cooperation between the different policy areas dealing with cultural heritage, and to report back to Parliament on the results of this closer cooperation (b) to communicate to potential beneficiaries, in a straightforward and accessible way such as through a single information platform and exchange of best practices in the EU, concerning the existing European funding lines for cultural heritage.

3   A Spanish Case Study

3.1   Alhambra and the Albayzin Neighborhood

Analyzing the particular case study is the outcome both of literature review and a personal observation on the site during summer 2016. The Historical Monument of Alhambra has a history that goes back to the eighth century up to the nineteenth century when the Spanish royal family stopped its residence in Alhambra. Today, the latest statistics indicate that this palace complex is the most visited monument of Spain. In particular, over the last two decades reasons for protecting the monument have led to restrictive measures on its visitation. For this reason, its visit follows a limited and orderly way.

In the present text, we would like to focus on this take-off of the monument in recent decades as well as on the role of the local elites, who have made a decisive contribution in this direction in the context of the transition from the materialistic and the value-based model (see Sect. 2.2) to the three pillars of "integrated conservation (see Sect. 2.3). In 1952, after the archaeological conservation in 1930 at Alhambra

by L. Torres Balbas, the International Festival of Music and Dance in Granada was set and took place in the gardens of the Alhambra. In 1984, the monument is included in the UNESCO Cultural Heritage List as it meets the first three accession criteria. Specifically, as reported by Irwin [13] the Alhambra is not a frozen monument in time but is constantly being constructed and reconstructed.

The Alhambra palace and garden complex was inhabited until 1990, when the site was transferred to the TRUST of the Andalusian Autonomous Regional Unity in Seville, the old paternalistic labor relations were replaced by new impersonal occupational relationships, and the Alhambra residents were transferred in the settlements of Granada [14]. Therefore, during this transition, with the administration of the monument by the local elites in conjunction with Madrid's elite, there were strong elements of the materialistic model but also the transition to the value-based model, where not only the material and the technical uniqueness of the monument, but also the combination of values, tradition, architecture and music alongside a tourist take off, which transformed all the urban fabric of Granada and essentially identified the city's identity with that of the Alhambra [15, 16]. However, it must be borne in mind that this transition has not gone smoothly and without conflict or without injustice. According to Alcantud [14] the former Alhambra residents in a survey spoke nostalgically for the years they were born and lived there, the monument was more alive when they were inhabited, and the tourist and economic development of the site was motivated by local elites and not by all the inhabitants of Granada.

Ten years after Alhambra joined the UNESCO's Cultural Heritage List, we have Albayzin. In 1994, the Albayzin neighborhood was also included in the UNESCO list with the first three criteria, which included Alhambra and specifically its vernacular architecture [16, 17]. This integration as well as the economic flourishing of the region due to the increased tourist traffic significantly changed the urban morphology of this neighborhood and its management is much closer to the characteristics of the "living cultural heritage" model (see Sect. 2.2).

At this point it is worth mentioning the erection of the Great Mosque of Granada. In particular, in May 1981, the Society of the Return of Islam in Spain bought a piece of land in Albayzin with the sponsorship of Libya for the construction of the mosque [18, 19]. In 1984, this community was renamed the Islamic Community in Spain (CIE) and proposed to the Neighborhood Association of the Albayzin (ANA) the erection of the mosque next to St. Nicolas Church. The association replied with a foul and contemptuous move, as the mosque would be lovelier than the church of St. Nicolas, and most importantly, the visitor would have a better view from this point of the Alhambra [19]. Then a series of court disputes followed, which ended in 1993 in the judgment of the Granada city court, which allowed the CIE to proceed with the construction of the mosque. Following this decision, ANA proceeded to a new litigation as to whether the new mosque would destroy the traditional character of the neighborhood and added that now that the neighborhood was included in the UNESCO list there should be a new assessment of that building. However, the Granada region has allowed the construction of the mosque, which began in 1996 despite the chain reaction of the inhabitants. The death of the King of Morocco,

Hassan II, led CIE to the lack of a major sponsor and financial support from the Arab Emirates. On July 10, 2003, the CIE officially celebrated the construction of the new mosque with the participation of prominent personalities from all Arab states [19, 20].

This brief description of the construction of the mosque in the settlement of Albayzin reveals as well as the multiplication of the Arab element, not in terms of its number but in terms of its cultural action [18]. Arab-style tourist shops, Arabian baths, small markets open to Arabic products, spices and clothing, tea shops and East-style cafés lead to the conclusion that the management of Albayzin's Cultural Heritage is essentially an application of the living heritage model (see Sect. 2.2) and integrated approach (see Sect. 2.6).

4   Conclusion: Challenges and Perspectives

In times of straitened economic circumstances, we should avoid unnecessary duplication of activity, so note should be taken not only of potential collaboration with UNESCO, but also of European Union initiatives, particularly the parliamentary resolution "Towards an integrated approach to cultural heritage for Europe" adopted in 2015. Having collaborated very successfully with the European Commission there is an opportunity occasioned by this initiative of the European Parliament together with the Council of Europe's Strategy 21 (which the European Union is invited to join) for further collaboration, building on the well-established synergy achieved through shared interests and joint experiences in the use of cultural heritage as a resource in the pursuit of wider democratic and social objectives. As pointed out from both Alhambra and Albyzin, the passage from the materialistic approach to the integrated one has resulted to a significant boom both in terms of tourism and in terms of community involvement in Granada, in an area that multiculturalism is the a priori basis from centuries among the Arab and the Spanish, the East and the West.

References

1. http://whc.unesco.org/archive/convention-en.pdf
2. http://whc.unesco.org/en/158/και; http://whc.unesco.org/en/list/148
3. Hicks E (2008) Ambassadors of the Albayzin: Moroccan vendors of La Caldereria in Granada, Spain. MA thesis, University of British Columbia, The Faculty of Graduate Studies, Vancouver
4. Zorba M (n.d.) Structural funds and their impact on Cultural Policy: the Greek Case 1994–2006. http://mzorba.gr/2005-2006/eu_stractural.htm#_ednref5
5. http://whc.unesco.org/en/events/937
6. Van der Auwera S (2014) Culture for development' and the UNESCO policy on the protection of cultural property during armed conflict. Int J Cult Policy 20:245–260. https://doi.org/10.1080/10286632.2013.817395
7. Poulios I (2014) The past in the present. A living heritage approach – Meteora, Greece. Ubiquity Press, London

8. Konsola D (1995) Η διεθνής προστασία της Παγκόσμιας Πολιτιστικής Κληρονομιάς (=International protection of World Cultural Heritage). Papazisi, Athens
9. Council of Europe, culture and cultural heritage standards. https://www.coe.int/en/web/culture-and-heritage/standards
10. Herein System, European Heritage Policies. www.herein-system.eu/council-europe
11. Fischer H (2012) Culture and the structural funds in Greece. European Expert Network on Culture (EENC)
12. Towards an integrated approach to cultural heritage for Europe (2014/2149(INI)) Committee on Culture and Education, report. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014IR5515&from=EN. Accessed 3 Nov 2018
13. Irwin Irwin R (2004) The Alhambra. Profile Books, London
14. Alcantud JAG (2012) Social memory of a World Heritage site: the Alhambra of Granada. Int Soc Sci J. https://doi.org/10.1111/j.1468-2451.2011.01802.x
15. Janoschka M et al (2014) Gentrification in Spain and Latin America – a critical dialogue. Int J Urban Reg Res 38. https://doi.org/10.1111/1468-2427.12030
16. Moreh C (2011) Gentrification and urban heritage, the case of Albayzin, MA thesis, Central European University. Department of Sociology and Social Anthropology, Budapest, Hungary
17. de Klerk MM (2001) Historicizing the landscape, recovering the aesthetics of the Alhambra. MS thesis, Massachusetts Institute of Technology, MA
18. Bush O (2015) Entangled gazes: the polysemy of the new great mosque of Granada, Muqarnas 32. Brill, Boston. http://www.academia.edu/18715798/_A_Restricted_Gaze_The_Ornament_of_the_Main_Caliphal_Palace_of_Samarra_
19. Calderwood E (2014) The invention of al-Andalus: discovering the past and creating the present in Granada's Islamic tourism sites. J North Afr Stud 19:27–55. https://doi.org/10.1080/13629387.2013.862777
20. Berjman S (2001/2002) Historical parks and cultural landscapes at risk. Heritage at risk, ICOMOS, Argentina

Carrying Capacity Assessment for Tourism Development: A Strategic Approach

Sotrios Varelas and Dimitrios Belias

Abstract The aim of the current research is to analyze the limits and prospects of tourism development as they are approached and evaluated through the methodological tool of the carrying capacity assessment on a local scale. The study areas where the application of the carrying capacity indices are investigated are Attica, South Aegean, Crete, Central Macedonia, Ionian Islands and Peloponnese. Results illustrate that development of tourism infrastructures and especially accommodation, affects positively the tourism development and contribute the increase of inbound tourism both the extension of the tourism period and the positive economic results of the regions.

Keywords Capacity · Tourism · Strategy · Development

1 Introduction: Useful Definitions and References

"Tourism Carrying Capacity" is defined by the World Tourism Organization as "The maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, socio-cultural environment and an unacceptable decrease in the quality of visitors' satisfaction". Carrying capacity assessment is a research measuring tool of environmental impact in order to support the decisions of destination managers [1]. Whereas Middleton and Hawkins Chamberlain [2] define it as "the level of human activity an area can accommodate without the area deteriorating, the resident community being adversely affected or the quality of visitors experience declining" what both these

S. Varelas (✉)
Neapolis University Pafos, Pafos, Cyprus
e-mail: s.varelas@nup.ac.cy

D. Belias
Technological Educational Institute of Thessaly, Larissa, Greece

definitions pick up on is carrying capacity is the point at which a destination or attraction starts experiencing adverse as a result of the number of visitors.

Using the carrying capacity assessment model in a set of destinations, may result in a sufficient experience for the touristic activity with sustainability and low environmental and social impact on the resource of the touristic area [3]. A large and growing body of literature has investigated the role of Carrying Capacity Assessment for Tourism. More recent attention has focused on the provision of tourism affects socio-economically and environmentally many sectors of the society and the Regional Development [4, 5]. There have been a number of longitudinal studies that determined carrying capacity for economic investments based on an evaluation of the environmental resources of a destination [3, 5–10]. At the same time, research refers to the use of a multidimensional data analytics model that enhance the capacity and competitiveness capabilities of a modern tourist destination through knowledge creation, application and exploitation [11]. Observations and records of different and detailed data are significant components of a tourist information unit and of modern destinations [11]. One major theoretical issue that has dominated the field for many years concerns the role of destination development emphasizing the requirements for Carrying Capacity Assessment [12]. However, much of the research up to now has been descriptive globally, follows a holistic integration, not necessary for tourism, but also based on indicators such as economic, environmental, social, cultural, institutional, managerial endorsed with related factors for national, regional or urban destinations [10, 13, 14]. Finally, a serious attempt to approach, in terms of methodology and research, the critical method of carrying capacity assessment, related to the Greek tourism environment, have reported by many Greek researchers [9, 15–18]. Due to the lack of the necessary data, current research analyzes major economic and tourism indicators and not a hybrid approach of socio-economic and environment indicator. Through the current research it would be able to evaluated the methodological tool of the bearing capacity of tourism development on a local scale and the combination with tourism development widely.

2   Research Aim and Methodology

In this research, tourism is approached from the perspective of regional development, in particular from the perspective of the Regions of Greece in which the use of Carrying Capacity Assessment method was studied empirically through a field research. The study included the review of the literature on the Carrying Capacity Assessment as regards the analysis of Regional Development. To export results it was made use of existing data from the Greek Statistic Authority and the Central Bank of Greece for the year 2017, and calculate throughout a series of indicators. Research provides an advanced methodology addressing the development of destinations and the mapping and combination quantitative—economic and tourism indicators. The combined use of analysis methods such as Descriptive Statistics

entailed a very demanding research paper. However, the paper did not focus only on taking note of the tourism carrying capacity assessment indicators, but also compared them strategically. Through this methodology, the development of a holistic strategic framework was attempted, which resulted in multi-criteria analysis of Tourism Satellite Accounts and indicators of carrying capacity. Therefore, data management, through secondary sources, as well as the analysis and extraction methods described in this research, provided an innovative knowledge base that several international destinations in the field of Tourism seek to develop.

3 The Carrying Capacity Assessment

The calculation of the tourist capacity is based on empirical criteria, which have been used in similar cases of other areas and specific regions (benchmarking). These criteria are related to a series of indicators which are internationally used [19]:

$$Tourist\ activity\ index = \frac{Number\ of\ beds \times 100}{Local\ population} \tag{1}$$

$$Tourist\ density\ index = \frac{Number\ of\ beds \times 100}{365 \times \left(km^2\ of\ Area\right)} \tag{2}$$

$$Overnight\ stay\ index = \frac{Number\ of\ overnights \times 100}{Total\ population} \tag{3}$$

$$Tourist\ intensity\ index = \frac{Arrivals \times 100}{Total\ population} \tag{4}$$

$$Tourist\ attractiveness\ index = \frac{Arrivals\ of\ foreigners \times 100}{Arrivals\ of\ nationals} \tag{5}$$

$$Tourist\ penetration\ index = \frac{Overnight\ stays\ for\ foreigners \times 100}{Local\ population \times 360} \tag{6}$$

3.1 Indicators per Region and Data Overview: Tourist Activity Index

The Tourist activity index has been calculated using the Eq. (1) from the previous paragraph (Fig. 1).

Studying the Crete case we can observe based on the respective index that the tourism is important but not the major sector of development in contrast to the regions of the Ionian Islands and South Aegean where the tourism seems to be the
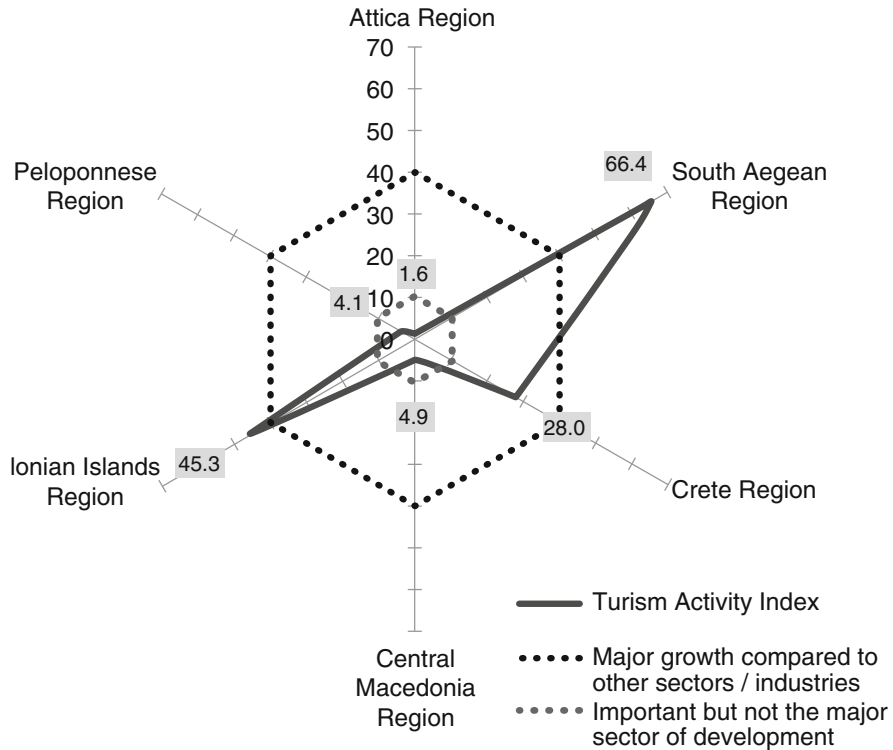
Fig. 1 Tourist activity index per region

major sector of growth. Central Macedonia and Peloponnese seem to be far behind in the tourism sector by looking at the objective (tourism activity) thresholds.

3.2 Indicators per Region and Data Overview: Tourism Density and Overnight Stay Indexes

The Tourism density and overnight stay indexes have been calculated using the Eqs. (2) and (3) respectively from the previous paragraph.

Based on the tourist density and overnight stay indexes (see Fig. 2), we can easily see that the Ionian islands and the islands of the South Aegean dominate with great difference compared to Central Macedonia and the Peloponnese. However, at least in the case of the Peloponnese, this may indicate a great deal of room for growth comparing with destinations where tourism tends to saturate as also referred in many researches before [19–21].
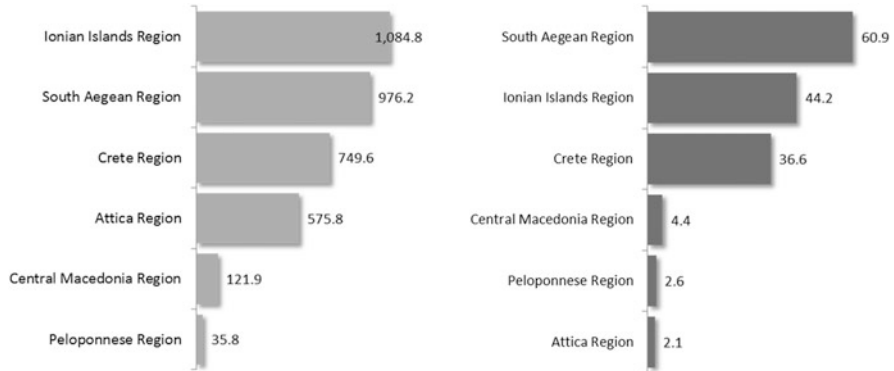
Fig. 2 Tourist activity index and overnight stay index respectively per region
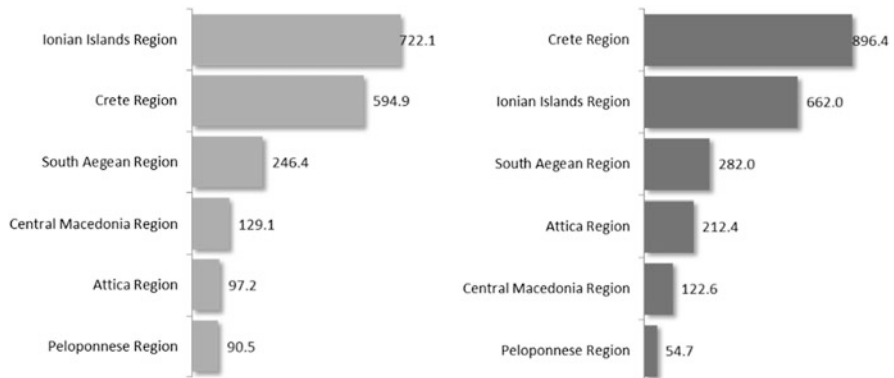
Fig. 3 Tourist activity index and overnight stay index respectively per region

3.3 Indicators per Region and Data Overview: Tourist Intensity and Tourist Attractiveness Indexes

The Tourist intensity and Tourist attractiveness indexes have been calculated using the Eqs. (4) and (5) respectively from the Sect. 3 (Fig. 3).

By examining the indicators of tourist intensity and attraction, we will again observe what we have seen already in the cases of previous measurements. Again, the Peloponnese is declining significantly compared to the other regions, hypothesis that probably implies the margins that may exist for further development in tourism.
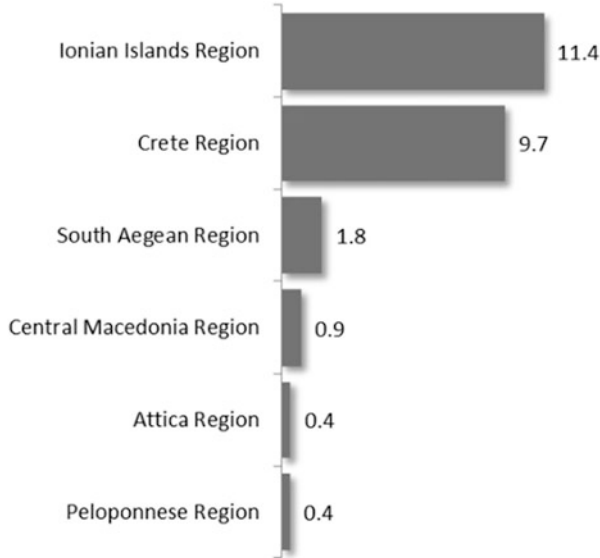
Fig. 4 Tourist penetration per region
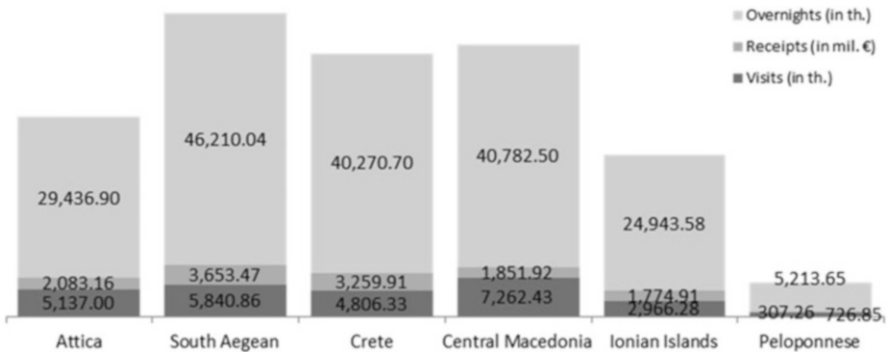
Fig. 5 Overnights, receipts (in euro) and visits per region

3.4 Indicators per Region and Data Overview: Tourist Penetration

Tourist penetration has been calculated using the Eq. (6) from Sect. 3 (Figs. 4, 5, and 6).

The indicators of tourist penetration advocate and strengthen the indicators that have already been preceded, as well as the conclusions accompanying them. On the other hand, many and good prospects for the Peloponnese are also projected from the individual measurements like (a) Expenditure per visit (b) Daily spend and (c) Length of Stay, comparing with the respective values from the other regions.
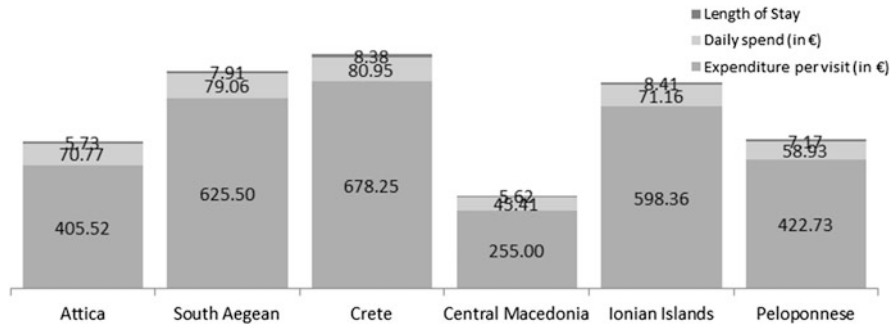
Fig. 6 Length of stay, daily spend and expenditure per visit (in euro) per region

4   Discussion and Conclusion

The results above illustrate that development of tourism infrastructures and especially accommodation, affects positively the tourism development and contribute the increase of inbound tourism both the extension of the tourism period and the positive economic results of the regions. The destination of the Peloponnese, which is 1 of Greece's 13 regions, was chosen for the field study compared with the five major tourism destination of Greece. Likewise, the data of the Peloponnese at quota level, as regards the indicator that analyzed at the current research, does variate much from those regions presented at country level. Five out of 13 regions in Greece accounted for the better part of tourism development, according to data released by the current research caring capacity assessment of the six regions. Which announced that it will from now issue regional breakdown of tourism indicators. Services differentiation and destination branding need to be taken into consideration for the areas and this should be promoted via social media [22–24]. The Peloponnese had remained in the periphery of the investment explosion for several years, in contrast to the other popular destinations, resulting in a limited number of small and medium-sized businesses. On the other hand, as already mentioned many and good prospects for the Peloponnese development are also projected through the current research that analyze the limits and prospects of tourism development. For the rest regions, if tourism development is not restricted and if sustainable management is not taken into consideration, they will face the overtourism issues.

References

1. Abernethy VD (2001) Carrying capacity: the tradition and policy implications of limits. Ethics Sci Environ Polit (ESEP) 23:9–18
2. Middleton VC, Hawkins R (1998) Sustainable tourism: a marketing perspective. Butterworth-Heinemann, Oxford

3. Ritchie JRB, Crouch GI (2000) The competitive destination: a sustainability perspective. Tour Manag 21:1–7
4. Apostolopoulos Y, Leivadi S, Yiannakis A (2013) The sociology of tourism: theoretical and empirical investigations, vol 1. Routledge, London
5. Cupul-Magana AL, Rodríguez-Troncoso AP (2017) Tourist carrying capacity at Islas Marietas National Park: an essential tool to protect the coral community. Appl Geogr 88:15–23
6. Graymore ML, Sipe NG, Rickson RE (2010) Sustaining human carrying capacity: a tool for regional sustainability assessment. Ecol Econ 69(3):459–468
7. Miller G (2001) The development of indicators for sustainable tourism: results of a Delphi survey of tourism researchers. Tour Manag 22:351–362
8. Nakajima E, Ortega A (2016) Carrying capacity using energy and a new calculation of the ecological footprint. J Ecol Indic 60:1200–1207
9. Papageorgiou K, Brotherton I (1999) A management planning framework based on ecological, perceptual and economic carrying capacity: the case study of Vikos-Aoos National Park, Greece. J Environ Manag 56:271–284
10. Liu H (2012) Comprehensive carrying capacity of the urban agglomeration in the Yangtze River Delta, China. Habitat Int 36:462–470
11. Fuchs M, Hopken W, Lexhagen M (2014) Big data analytics for knowledge generation in tourism destinations – a case from Sweden. J Destin Mark Manag 3:198–209
12. Haugland A, Bjørn-OveGrønseth H-A, Aarstad J (2011) Development of tourism destinations: an integrated multilevel perspective. Ann Tour Res 38:268–290
13. Wong SW, Tang B, van Horen B (2006) Strategic urban management in China: a case study of Guangzhou Development District. Habitat Int 30(3):645–667
14. Zhao S, Feng K, Gui S, Cai H, Jin W, Wu C (2013) The energy ecological footprint for small fish farm in China. Ecol Indic 29:62–67
15. Coccosis H, Mexa A (2004) The challenge of tourism carrying capacity assessment. Ashgate, Aldershot
16. Koutsouris A (2009) Social learning and sustainable tourism development – local quality conventions in tourism: a Greek case study. J Sustain Tour 17(5):567–581
17. Prokopiou DG, Tselentis BS, Mavridoglou G (2014) Prototype model of carrying capacity in tourism: the implementations for the island of Rhodes, 2nd Annual international interdisciplinary conference AIIC 2014. Ponta Delgada Azores, Portugal
18. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res Rev Tour Sci 18:121–131
19. Parpairis A (1993) The concept of carrying capacity. Ph.D. dissertation, Department of Environmental Studies, University of the Aegean, Mytilene
20. Varelas S, Georgopoulos N (2017) Competition as a critical factor of the strategic planning of hotel businesses. J Hotel Bus Manag 6:167
21. Varelas S (2016) Strategy and innovation for a new tourism environment outside competition. Int J Dev Res 06:10851–10855
22. Kavoura A, Tiago T (2016) Understanding online communities on social networks via the notion of imagined communities: the case of TripAdvisor. Int J Web Based Communities 12:238–261. https://doi.org/10.1504/IJWBC.2016.077759
23. Sophocleous H, Andreas Masouras A, Papademetriou C (2019) Brand as a strategic asset for cultural organisations - a proposal for the forthcoming cultural institution of pafos. In: Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism, 7th ICSIMAT
24. Kavoura A, Stavrianeas K (2015) The importance of social media on holiday Visitors' choices - the case of Athens, Greece. EUROMED J Bus 10:360–374. https://doi.org/10.1108/EMJB-03-2015-0016

YouTube Videos: A Destination Marketing Outlook

Flavio Tiago, Filipa Moreira, and Teresa Borges-Tiago

Abstract Maintaining a presence on social media has become unavoidable for tourism destinations around the world. With numerous delivery platforms available, the challenge is deciding what to use and what type of contents to promote therein. Video contents have proven to be more engaging as they are able to influence the potential tourist demand. This article explores the use of YouTube to promote a destination from the viewpoint of users, destination marketing organizations, and influencers. For this study, visual, audio, and textual contents—along with the characteristics—of 388 videos linked to a destination were analyzed. The findings highlight significant differences between professional-generated content, user-generated content, and influencer-generated content, causing different destination image projections. Influencer-generated content is mostly a combination of the other two but is presented according to a storytelling approach; thus, it is more similar to user-generated content.

Keywords YouTube · UGC · Content marketing · Destination marketing · Azores

1 Introduction

The ongoing development of modern communication technology, coupled with the increasingly high penetration rate of the Internet, wireless systems, and mobile communications, is promoting a technological emphasis among both firms and consumers. The advantages of using the Internet-efficiency, convenience, rich information, coverage over a wider spectrum, broader selections, competitive pricing, and diversity-are well-known [1].

Tourism is an information-intensive activity [2], and the Internet has enabled access to a huge and diverse range of information with a mere click [3]. The sector

F. Tiago · F. Moreira · T. Borges-Tiago (✉)
University of the Azores, Ponta Delgada, Portugal
e-mail: flavio.gb.tiago@uac.pt; maria.tp.tiago@uac.pt

has been able to adopt and adapt to these technological tools and social media channels to communicate with clients [4]. The widespread proliferation of emails, the Web, digital photography, social media, YouTube, websites, blogs, eBooks, Twitter, Facebook, Google+, text messages, and mobile phone usage has generated the creation and spread of huge amounts of data or content—coined as "big data" [5]. Being digitally active, especially on social media, seems to be a success formula for firms aiming to establish an interactive relationship with customers.

However, on the Web, a panoply of users can be found; they explore it in different ways by consuming, creating content, participating in discussions, sharing their vision with peers, or simply acquiring information shared by others [6–8]. Preferences for content formats vary, leading tourism and hospitality organizations to adopt multiple platform strategies.

Therefore, in the digital context, destination branding is a challenge. A destination's reputation is created by different agents, ranging from DMOs, to customers and including tourism and hospitality firms; all of these shapes the destination brand and use different digital media. Additionally, the contents created can project different images depending of the creator: tourists, social media celebrity, DMOs and tourism and hospitality firms [9]. The implications for brand theory of these images co-creation have been less attended in literature, perhaps because there is still not fully understanding of the role of all players on this new branding process. This paper addresses this gap in the literature, aiming to unveil the role of the different stakeholders on destination image projection. Acknowledging that destination images projected to potential tourists can influence the destination choice [10] and that videos are effective tools for capturing tourists' attention and projecting images [11], this article summarizes the findings of an analysis of 388 videos-created by different stakeholders-regarding the Azores (Portugal). The videos were shared on YouTube with the aim of unveiling the convergence of the brand image projected by a DMO with that conveyed through tourists' videos.

2   Background

With a more traditional marketing approach, standard products were produced and distributed in masse to anonymous consumers through a one-way communication model [12]. With technological advances, a more interactive and two-way communication model was adopted [13]. Thus, products are customized accordingly based on consumers' profiles.

Zeng and Gerritsen [14] pointed to the fact that the rapid rise of online marketing and social media in tourism follows a path similar to the one taken by other industries [15]. Mkono and Tribe [16] have discussed the rapid rise of digital marketing and social media in tourism, reporting that these changes reflect the distinctive types of experiences and behavior in cyberspace interactions. Sigala [17] reinforces the role of technology in tourism, pointing to its impacts not only on firms' processes, but also on tourism experiences and co-creation processes.

This seamless access to technology has changed the way people communicate and search for information, and tourists are no exception [18]. In this sense, a new generation, a new language, new consumption patterns (more informed and connected consumers), new uses of media, and alternative tools that replace traditional advertising methods have impelled tourism and hospitality firms to adopt a different posture. This posture is more interactive, current, ubiquitous, and customized to tourists' wants and needs. However, the paradigm shifts indicate that efforts to overcome challenges related to tools and platforms must be employed to keep up with tourists and their expectations [19].

Because of their popularity and widespread use, social media serve collectively as a platform for obtaining a competitive marketing advantage. Recent research on consumer behavior on social media found that (1) not all consumers are equally active online [20, 21], and (2) content is generated by a small number of users with specific motivations regarding concepts, products, or projects [22, 23].

In fact, there has been considerable discussion and research concerning social media and the corresponding implications for the tourism and hospitality industries [14, 24, 25]. A wide range of research explores how technology has changed the balance of power between organizations and their consumers, highlighting the inevitable loss of control from the marketer's perspective [26]. As Morgan, Pritchard and Pride [27] have suggested, all players in this industry agree that the control of DMOs in destination branding has diminished.

From a DMO perspective, several challenges must be met since (1) DMOs have little or no control of the products they are "trying to sell" [28], and (2) DMO communication must integrate private and public communications efforts to ensure unique destination storytelling [29]. Therefore, acknowledging and integrating the different marketing messages is a key task for a DMO; if neglected, it can generate a mix of confused messages. Lund et al. [29] highlighted that not only must DMOs consider the traditional sources, but also "the emergence of social media thus requires a fundamental rethink of marketing practices as brands are now co-created through informal conversations by authors largely outside marketers' control."

In this sense, the amount of information available on social media and other digital platforms not only serves as a repository for peers [30] but also communicates the brand image to appeal to a tourist's point of view. Brand management can suffer from the influence of contents created and shared by tourists and social media celebrities [22, 23]. Perceptions regarding experiences are unique; furthermore, they are affected by tourists and celebrities' personality traits.

Therefore, knowing "what" tourists and social media celebrities share on social media and how the content influences brand management is not well understood [24, 31]. Considering a brand represents all the tangible and intangible attributes associated with a brand name that can influence consumers' perceptions; accordingly, it seems relevant to consider the influence of celebrities and tourists' co-creation as an intangible attribute communicated in brand management [10, 32].

In 2012, Lim et al. [33] found evidence that social media allowed tourists to participate in the construction of a destination brand identity or image. Moreover,

their results pointed to differences between videos promoted by DMOs and other official organizations and those created by tourists, leading to questions about the possible loss of control by DMOs in destination branding, as has been chronicled by several authors [34, 35]. Similar conclusions were draw regarding bloggers, vloggers and instagrammers influence on public perception of brand images [20, 21, 36].

Mak [37] suggests that tourist-generated content (TGC) is a set of unsolicited information-not filtered and rich in tourist experiences. Duffy and Wissinger [36] noticed that social media personalities create content heavy reliant on image and video related to their passion projects, as a proxy for success and influence on other social media users. It comes in various forms. Several research studies have analyzed the different formats: textual contents as travel blogs [38, 39], website [9, 40] and social media reviews/comments [41–43]; photos [44] and videos [19].

Mak [37] emphasized that TGC reflects the "reality" perceived by tourists, whereas the DMOs strive to project desirable images and attributes of destinations online. Thus, the content is not necessarily the same.

Clearly, in light of the evolution and changes outlined above, DMOs need to keep up with users in social media [45] and integrate co-created content in destination branding [29, 46]. Lund et al. [29] stated that for DMOs, branding in social media is "not only about producing exciting stories." For DMOs to be successful, they also need to become social players. Thus, the challenge for DMOs is to identify co-creation experiences and integrate them with destination storytelling in their digital social networking spaces. Considering that in the literature the creation, reproduction, and dissemination of brand images or associations have mostly been analyzed from one-player stand of view, neglecting the combined effects of the contents, this paper addresses this gap, aiming to unveil the role of the different stakeholders on destination image projection.

3   Methodology and Results

In the tourism literature, there are many studies addressing the advantages of different content formats, but few have attempted to identify the most engaging and effective types of content. In the work of Faria et al. [47], video content was shown to be the most complete and engaging type used by all social network players. Reino and Hay [19] focused their analysis on YouTube videos, recalling that this platform allows tourists to access organic sources of information and share their own videos and experiences with third parties.

In this context and for the purpose of this study, videos were considered the most suitable format since they can combine textual content in titles, subtitles, and reviews with sound and image contents. With the aim of understanding how destination promotion videos and TGC on YouTube can promote and shape the image of a destination, the Azores destination was chosen as a case study. This work followed a five-stage approach, similar to that designed by Hou et al. [48]. In the initial phase (May 2018), a YouTube search was conducted using the most common keyword—

Table 1 Key dimensions communicated by the different stakeholders

(% on videos)	Marketing generated video		User generated video	
	DMO	Tourism and hospitality firms	Tourists	Vloggers
Sightseeing	100	88.73	96.4	94.69
Entertainment	100	67.61	54.59	66.37
Food	37.5	38.03	33.67	33.4
Transportation	25	30.7	63.31	71.68
Accommodation	0	12.68	13.27	23.01
Shopping	0	15.49	8.16	9.73

Azores—associated with the destination chosen for the purpose of this study. The search delivered 160,300 videos, from which YouTube allowed access to 941 videos. By applying a random sampling procedure, 388 videos were evaluated and identifying information was processed. The second phase involved an analysis of the videos' properties in terms of their popularity and creators; the third stage was a visual content analysis. The last two phases included an audio and textual content analysis of the videos, titles, subtitles, and comments associated with each video.

The longest-standing posting regarding the Azores as a destination was on YouTube. It first appeared in 2007 and has been managed by a tourism and hospitality firm. The most recent contributions were from tourists, accounting for more than half (51%) of the published video content related to the Azores as a destination; influencers (vloggers) uploaded 29% of the videos, whereas tourism and hospitality firms created 18% of them. Finally, DMOs were responsible for 2% of the videos related to the destination. The videos posted by vloggers accounted for 69.29% of the total video visualizations, followed by marketing-generated video from DMOs with 8.86% of visualizations. Vloggers' videos generated more reactions from the YouTube audience, accounting for 90.84% of the "likes" and generating 83.59% of the total comments. Interestingly, DMO videos provoked less reaction from the audience (Table 1).

When looking at the video contents, DMO-projected images were significantly different from those projected by other players. As in Hou et al. [48], the percentage of time given in the videos to "sightseeing" and "entertainment" held top values for those produced by DMOs, but changes regarding "sightseeing" and "transportation" were noted when tourists and influencers told their stories. "Shopping" came last, having the shortest duration or possibly not being featured at all. Most videos generated by tourists and influencers included voiceovers. In the case of marketing-generated videos, music was combined with pictures; sometimes, a voiceover was used to enhance the content of the message. Most comments were made in English and Portuguese regarding vloggers' and tourists' videos. In 28% of the comments, emojis were used; further, 86% had a positive tone.

4   Final Considerations

Maintaining a presence on social media has become unavoidable for destinations around the world. With numerous delivery platforms available, the challenge posted to DMOs is deciding what to use and what type of contents to promote on these platforms. More recently, the research discourse points to the need to rethink DMO activity since DMOs have lost control of destination branding with images projected online. Thus, they must consider and integrate UGC to guarantee more engaging and effective destination branding.

Of all content formats available, videos are the most complete and influential image creators. YouTube as a social media platform offers DMOs and tourism and hospitality firms an opportunity to present their brands and identity. However, it simultaneously gives spaces to tourists and influencers to co-create identity in their videos. By analyzing 388 videos regarding the Azores uploaded on YouTube, some interesting findings were retrieved that point to the increasing role of vloggers in defining a destination image and—to a somewhat less extent—exploring and exposing tourists' contributions. From the overall results, the following should be considered: not all content formats are adequate for stimulating and forming mental images; some players have a more active posture; and certain users and contents can be more engaging than others, even when employing the same format. Although this study is rich in descriptive data, some gaps allow for valuable input from future research in this field; thus, enlarging the study to include videos uploaded on other social networks would be useful.

References

1. Bengtsson MH, Boter VV (2007) Integrating the internet and marketing operations – a study of antecedents in firms of different size. Int Small Bus J 25:27–48. https://doi.org/10.1177/026624207071780
2. Pan B, Fesenmaier DR (2006) Online information search: vacation planning process. Ann Tour Res 33:809–832. https://doi.org/10.1016/j.annals.2006.03.006
3. Miah SJ et al (2017) A big data analytics method for tourist behaviour analysis. Inf Manag 54:771–785. https://doi.org/10.1016/j.im.2016.11.011
4. Gulbahar MO, Yildirim F (2015) Marketing efforts related to social media channels and mobile application usage in tourism: case study in Istanbul. Procedia Soc Behav Sci 195:453–462. https://doi.org/10.1016/j.sbspro.2015.06.489
5. Stemler SE (2015) Content analysis. In: Emerging trends in the social and behavioral sciences. Wiley, New York
6. Amaro S, Duarte P, Henriques C (2016) Travelers' use of social media: a clustering approach. Ann Tour Res 59:1–15. https://doi.org/10.1016/j.annals.2016.03.007

7. de Almeida MIS et al (2016) "Engage and attract me, then I'll share you": an analysis of the impact of post category on viral marketing in a social networking site. Rev Bras Gest Neg 18 (62):545–569. https://doi.org/10.7819/rbgn.v18i62.2620

8. Hosany S, Prayag G (2013) Patterns of tourists' emotional responses, satisfaction, and intention to recommend. J Bus Res 66(6):730–737. https://doi.org/10.1016/j.jbusres.2011.09.011

9. Choi S, Lehto XY, Morrison AM (2007) Destination image representation on the web: content analysis of Macau travel related websites. Tour Manag 28(1):118–129. https://doi.org/10.1016/j.tourman.2006.03.002

10. Kim J, Fesenmaier DR (2017) Sharing tourism experiences: the posttrip experience. J Trav Res 56(1):28–40. https://doi.org/10.1177/0047287515620491

11. Dinhopl A, Gretzel U (2016) Conceptualizing tourist videography. Inf Technol Tour 15 (4):395–410. https://doi.org/10.1007/s40558-015-0039-7

12. Lawton B, Gregor S (2003) Internet marketing communications: interactivity and integration. In: Seeking success in e-business: A multidisciplinary approach, vol 123. Springer, Boston, MA, pp 239–257

13. Kaplan AM, Haenlein M (2010) Users of the world, unite! the challenges and opportunities of social media. Bus Horiz 53(1):59–68

14. Zeng B, Gerritsen R (2014) What do we know about social media in tourism? a review. Tour Manag Perspect 10:27–36. https://doi.org/10.1016/j.tmp.2014.01.001

15. Tiago T, Veríssimo J (2014) Digital marketing and social media: why bother? Bus Horiz 57 (6):703–708. https://doi.org/10.1016/j.bushor.2014.07.002

16. Mkono M, Tribe J (2017) Beyond reviewing: uncovering the multiple roles of tourism social media users. J Trav Res 56(3):287–298. https://doi.org/10.1177/0047287516636236

17. Sigala M (2018) New technologies in tourism: from multi-disciplinary to anti-disciplinary advances and trajectories. Tour Manag Perspect 25:151–155. https://doi.org/10.1016/j.tmp.2017.12.003

18. Buhalis D, Foerste M (2015) SoCoMo marketing for travel and tourism: empowering co-creation of value. J Destin Mark Manag 4(3):151–161. https://doi.org/10.1016/j.jdmm.2015.04.001

19. Reino D, Hay B (2016) The use of YouTube as a tourism marketing tool. In: Tourism travel and research association: advancing tourism research globally, vol 69, pp 1–12

20. Correa T, Hinsley AW, De Zuniga HG (2010) Who interacts on the Web?: the intersection of users' personality and social media use. Comput Hum Behav 26(2):247–253. https://doi.org/10.1016/j.chb.2009.09.003

21. de Vries L et al (2017) Explaining consumer brand-related activities on social media: an investigation of the different roles of self-expression and socializing motivations. Comput Hum Behav 75:272–282. https://doi.org/10.1016/j.chb.2017.05.016

22. Naab TK, Sehl A (2017) Studies of user-generated content: a systematic review. Journalism 18 (10):1256–1273. https://doi.org/10.1177/1464884916673557

23. Crowston K, Fagnot I (2018) Stages of motivation for contributing user-generated content: a theory and empirical test. Int J Hum Comput Stud 109:89–101

24. Narangajavana Y et al (2017) The influence of social media in creating expectations. An empirical study for a tourist destination. Ann Tour Res 65:60–70. https://doi.org/10.1016/j.annals.2017.05.002

25. Mistilis N, Buhalis D, Gretzel U (2014) Future eDestination marketing: perspective of an Australian tourism stakeholder network. J Trav Res 53(6):778–790. https://doi.org/10.1177/0047287514522874

26. Pitt L et al (2002) The internet and the birth of real consumer power. Bus Horiz 45(4):7–14. https://doi.org/10.1016/S0007-6813(02)00220-3

27. Morgan N, Pritchard A, Pride R (2011) Destination brands: managing place reputation. Routledge, London

28. Anholt S (2009) Why national image matters. World Tourism Organization (WTO), Brussels

29. Lund NF, Cohen SA, Scarles C (2018) The power of social media storytelling in destination branding. J Destin Mark Manag 8:271–280. https://doi.org/10.1016/j.jdmm.2017.05.003

30. Varkaris E, Neuhofer B (2017) The influence of social media on the consumers' hotel decision journey. J Hosp Tour Technol 8(1):101–118. https://doi.org/10.1108/jhtt-09-2016-0058

31. Khan I, Rahman Z (2017) Brand experience anatomy in hotels: an interpretive structural modeling approach. Cornell Hosp Q 58(2):165–178. https://doi.org/10.1177/1938965516649055

32. Fernández-Blanco E, Díaz-Soloaga P, Mediavilla JC (2017) New brand management scenarios on the Spanish market. Cultura, Lenguaje y Representación/Cult, Lang Represent 18:67–81

33. Lim Y, Chung Y, Weaver P (2012) The impact of social media on destination branding: consumer-generated videos versus destination marketer-generated videos. J Vacat Mark 18 (3):197–206. https://doi.org/10.1177/1356766712449366

34. Oliveira E, Panyik E (2015) Content, context and co-creation: digital challenges in destination branding with references to Portugal as a tourist destination. J Vacat Mark 21(1):53–74. https://doi.org/10.1177/1356766714544235

35. Munro J, Richards B (2011) The digital challenge. In: Destination brands: managing place reputation. Butterworth-Heinemann, Oxford, pp 141–154

36. Duffy BE, Wissinger E (2017) Mythologies of creative work in the social media age: fun, free, and "just being me". Int J Commun 11:20

37. Mak A (2017) Online destination image: comparing national tourism organisation's and tourists' perspectives. Tour Manag 60:280–297. https://doi.org/10.1016/j.tourman.2016.12.012

38. Sun M, Ryan C, Pan S (2015) Using Chinese travel blogs to examine perceived destination image: the case of New Zealand. J Trav Res 54(4):543–555. https://doi.org/10.1177/0047287514522882

39. Tseng C et al (2015) Travel blogs on China as a destination image formation agent: a qualitative analysis using Leximancer. Tour Manag 46:347–358. https://doi.org/10.1016/j.tourman.2014.07.012

40. Koo C et al (2016) The impact of destination websites and cultural exposure: a comparison study of experienced and inexperienced travelers. Int J Tour Cities 2(1):1–16. https://doi.org/10.1108/ijtc-04-2015-0009

41. Gretzel U, Yoo KH (2008) Use and impact of online travel reviews. Information and communication technologies in tourism 2008. In: O'Connor P, Höpken W, Gretzel U (eds) Information and communication technologies in tourism 2008. Springer, Vienna, pp 35–46. https://doi.org/10.1007/978-3-211-77280-5_4

42. Marine-Roig E (2017) Measuring destination image through travel reviews in search engines. Sustainability 9(8):1425. https://doi.org/10.3390/su9081425

43. Sparks BA, Perkins HE, Buckley R (2013) Online travel reviews as persuasive communication: the effects of content type, source, and certification logos on consumer behavior. Tour Manag 39:1–9. https://doi.org/10.1016/j.tourman.2013.03.007

44. Stepchenkova S, Zhan FZ (2013) Visual destination images of Peru: comparative content analysis of DMO and user-generated photography. Tour Manag 36:590–601. https://doi.org/10.1016/j.tourman.2012.08.006

45. Hays S, Page SJ, Buhalis D (2013) Social media as a destination marketing tool: its use by national tourism organisations. Curr Issue Tour 16(3):211–239. https://doi.org/10.1080/13683500.2012.662215

46. Kladou S, Mavragani E (2015) Assessing destination image: an online marketing approach and the case of TripAdvisor. J Destin Mark Manag 4(3):187–193. https://doi.org/10.1016/j.jdmm.2015.04.003

47. Faria S, Tiago T, Tiago F, Couto JP (2017) Tourism events: The SATA Rallye Azores in Facebook and Twitter. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing. Springer proceedings in business and economics. Springer, Cham, pp 445–454. https://doi.org/10.1007/978-3-319-33865-1_55

48. Hou Z., et al. (2011) Exploratory study of promotional videos in the 10 major tourist destinations in China: a content analysis. In: 2011 TTRA International Conference. Travel and Tourism Research Association 42nd Annual Conference Proceedings, Ontario

Strategic Innovations in Tourism Enterprises Through Blockchain Technology

Sotirios Varelas, Panagiotis Georgitseas, Florin Nechita, and Alexandros Sahinidis

Abstract Over the last years blockchain technology continuously evolving. Blockchain is known as the technology behind Bitcoin, but beyond its use in the transactions improvement has also change the way in which data and information are used. Blockchain due to its characteristics of transparency, security and decentralization expanding to more and more fields of the industry. This study aims to present the blockchain technology and in a more detailed look the ways in which this technology benefits the tourism enterprises through its potential uses.

Keywords Blockchain · Smart contracts · Tourism · Strategic

1 Introduction

The creation of the first cryptocurrency in 2008 by Satoshi Nakamoto [1] provided a substantive solution to the problem of the double spending [2]. As a result it has been created a new decentralized payment system between peer-to-peer users who can now deal directly with each other without the need for a third-trusted member. This was made possible by the use of blockchain technology which initially functioned as a public, decentralized platform for recording Bitcoin's cryptographic transactions. Over time the capabilities presented by blockchain technology have led to its further evolution. This has resulted in the extension of its use not only to cryptocurrencies

S. Varelas (✉)
Neapolis University Pafos, Pafos, Cyprus
e-mail: s.varelas@nup.ac.cy

P. Georgitseas
Athens, Greece

F. Nechita
Transylvania University of Brasov, Brasov, Romania

A. Sahinidis
University of West Attica, Athens, Greece

transactions, but also in the handling of various other financial items such as contracts, stocks, property titles or voting results [3]. In particular, modifications to the software code may change the nature of the blocks in the chain thus creating different kinds of databases to perform and store.

2 Key Features of Blockchain

As already known, digital coins do not have a physical form but are reflected as digital information. We can imagine the blockchain network as the accounting books kept by a central bank to record all transactions, with the difference that the blockchain does not belong to any central authority but it is public and accessible to everyone. Everyone can have a "copy of this book" at any time while the user's personal information is not obvious but encrypted.

In other words, the blockchain network can be described as a digital platform in which the entire transaction history is validated and stored between network users [4]. To put in another way blockchain is a shared and distributed database which uses cryptographic methods to store information which cannot be reversed [5].

In the blockchain network everyone can make entries but in order for a block to be added to the chain it need to be validated by the other users. Therefore, group consensus of users is required to validate a transaction [2]. When the transaction is added to the block there is neither the possibility to modify it nor to delete it [6]. The only way to correct a wrong transaction and be recovered, is by returning it to the payee to re-execute it correctly [7]. This irreversibility of transactions is another important feature of this technology [7]. Every transaction after being validated locked into a block. Each block is cryptographically associated with the previous blocks of validated transactions, creating a chain. The same procedure will make the connection for the remaining future blocks. In fact, the blockchain is a logging technology [8] as this sequence creates a validated and sustained history of transactions [9] while the fixation of block records enables network users to verify an event at any time [5]. "Anyone can check the database but cannot modify it" [10].

In recent literature blockchain technology is also referred as Distributed Ledger Technology. This technology has the ability to distribute data as the blockchain database is not stored on a website but to all nodes participating the network. Since one piece of information is stored to all nodes at the same time, it is unlikely that a hacker will change any of the stored data because it will have to be changed at the same time to all computers in the network. This gives blockchain great security features. Moreover, blockchain is a technology that has the feature of decentralization. This implies that, unlike most sites belonging to one central server, the blockchain network is distributed among each single node of the network. Peer-to-peer access means that all nodes participating in the network have equal rights and obligations. As a result, no one is required as a guarantor because since the information is publicly displayed and validated throughout the network, there is the transparency that is needed to eliminate any need for trust.

A Blockchain platform may be public, private [11] or consortium [12]. On a public platform, everyone can participate in the consensus mechanism and is therefore decentralized. On a private platform, the right to change the block belongs to specific individuals or groups of people [7], for this reason is characterized as fully centralized. Finally, a blockchain syndication environment is partially centralized as it is usually created by several organizations that enable nodes to engage in the consensus process [12].

3 Blockchain 2.0

3.1 The Ethereum Platform

While blockchain technology has been established as a decentralized trading platform in cryptocurrencies, blockchain 2.0 technology offers the extra ability to exchange values [10]. Furthermore, the applications run on the platform just as they are planned, without being interrupted or interfered but are automatically executed while proving property ownership [10]. In simple terms, this technology gives people the ability when make a deal to record this agreement in a safe and verifiable way [5].

The above mentioned development came in 2014 when the Ethereum platform was created as a public and open source application based on blockchain technology. Ethereum network does not considered just a payment system like Bitcoin but a platform designed to allow the development of any decentralized application [13]. We could say that Ethereum's platform is not a copy of Bitcoin's platform but its evolution.

The Ethereum platform has created its own cryptocurrency called Ether and covers a wide range of applications in areas such as Governance, crowdfunding or financial derivatives. The Ethereum platform uses blockchain technology, with the exception that its blocks in addition to cash registers can be registered and scheduled commands. This is its great innovation that came from the creation of the so-called smart contracts.

3.2 Smart Contracts

Smart contracts are an idea of Szabo who had described them as "computer protocols that executes the terms of a contract". This idea eventually took place 20 years later on the Ethereum's platform. Unlike Bitcoin's platform, that of Ethereum allows the execution of smart contracts due to the fact that it is an open source platform [10].

Smart contracts are legal provisions that have been standardized in a computer code in such a way that when they executed, automatically apply agreement [5]. In

other words, smart contracts have the potential to perform, enforce and verify the implementation conditions of a contract [14].

The terms of delivery or purchase of a contract are entered into a form of computational commands and executed through blockchain technology. When the terms of the contract are fulfilled, the contract can be executed automatically without intervening intermediaries.

The fact that smart contracts are executed through blockchain technology means in principle that they cannot be violated by anyone, and in addition to that, each contract is recorded in the distributed database [10]. Smart contracts provide objectivity which reduces the chances of disagreement, but even in case of changes in the agreement there is the possibility to integrate into contract mechanism for their resolution [14].

According to recent report [5], smart contracts can be evolved in the future to perform more functions such as automated employees' payrolls or to complete automated complex securitisations without the need to interfere with custodians. Additionally, smart contracts have the potential to replace even the escrows provided by banks in asset transfer contracts [6].

4 Strategic Innovations Through Blockchain

4.1 Potential Uses of Blockchain Technology

Although blockchain technology is mainly used in the financial sector, more and more applications have begun to be tested in a number of other areas. According to that, the blockchain network could significantly help in the management and analysis of the Big Data domain, as it can ensure the storage, the security and the data distribution in a faster, easier and more efficient way [12]. In addition, the authenticity of data provided through this technology may be useful in the health sector. For example, blockchain could be useful to store patient histories so that they cannot be falsified while keeping medical confidentiality [12]. It is also believed that this technology could be used by regulators to automatically tax the transactions that take place, as each transaction in a blockchain environment will be publicly visible [4]. Another interesting use of this technology is in voting [3, 4] as it allows citizens to vote anonymously while ensuring non-falsification of the outcome while at the same time reducing the public cost resulting from the conduct of the elections. Also important is the prospect of blockchain application for hotel bookings, which could be done automatically using smart contracts without human intervention [2].

4.2 How Can Blockchain Benefit the Travel and Tourism Industry?

It is a fact that Online Travel Services presents some drawbacks that may be encountered in issues such as: the double bookings, the unfair foreign exchange rates (especially when traveling internationally) or the security risk, since your money and your privacy rely on the payment service provider. Furthermore, the use of credit cards incurs high charge commissions and transaction fees. In addition, agencies between the customer and the operator works with a high-profit margin which may causes the price to increase up to 15–40%. Also important is the fact that, the customer usually spend a lot of time navigating to a lot of websites in order to find the best deals for hotels and flights.

At the level of strategic innovation planning [15–17] and in order to solve the above mentioned problems, many start-up companies, using the blockchain and its applications to make innovative projects with some of which to stand out for the following features:

- Re-booking feature for hotel rooms when rates are lowered. Customer receives price drop notification and the difference is credited back to the users account [18]
- No Double Booking: Using smart contract system and blockchain transparency, potential double booking or double spending will be eliminated [19]
- Real Time Booking: Through blockchain's innovative projects solution, travelers will have bookings confirmed in realtime [20, 21]
- Blockchain platform apps allows users to resell their tickets via a peer to peer secondary market [21, 22].
- Cheapest package deals through the integration of all major travel mediums in a single platform.

5 Conclusion

To conclude, Blockchain is a technology that can create "future innovations" [23] so many compare their evolution with that of the Internet. There is no doubt that blockchain technology can bring significant strategic innovations to the tourism sector but also in other sectors [24–27]. However, we must not ignore the fact that the innovations brought by blockchain technology raise several legal and regulatory issues related to risk, privacy and security. This is due to the fact that the existing regulatory framework is neither fixed nor straightforward. For this reason, blockchain technology often characterized as a "double-edged knife". The features of decentralization, security and transparency in some cases may help to combat fraud and corruption, but if the proper infrastructure does not exist, it can lead to a distortion of the market structure. This means that there must be specific policies that will help maximize blockchain's benefits without affecting negatively other areas.

References

1. Nakamoto S (2009) Bitcoin: a peer-to-peer electronic cash system. https://bitcoin.org/bitcoin
2. Leon Z, Fan S, Jiaqi Y (2016) Overview of business innovations and research opportunities in blockchain and introduction to the special issue. Finance Innov 2:28. https://doi.org/10.1186/s40854-016-0049-2
3. Scott B (2016) How can cryptocurrency and blockchain technology play a role in building social and solidarity finance? Working paper 2016-1, United Nations Research Institute for Social Development
4. Kakavand H, Sevres K, Chilton B (2017) The blockchain revolution: an analysis of regulation and technology related to distributed ledger technologies. https://doi.org/10.2139/ssrn.2849251
5. Wright A, Primavera F (2015) Decentralized blockchain technology and the rise of Lex Cryptographia. SSRN Electron J. https://doi.org/10.2139/ssrn.2580664
6. Crosby M, Pattanayak P, Verma S, Kalyanaraman V (2016) Blockchain technology: beyond bitcoin. Appl Innov Rev 2:6–10. Sutardja Center for Entrepreneurship & Technology Report, Berkeley University. http://scet.berkeley.edu/wp-content/uploads/AIR-2016-Blockchain.pdf
7. Jaag C, Bach C (2017) Blockchain technology and cryptocurrencies: opportunities for postal financial services. In: Crew M, Parcu P, Brennan T (eds) The changing postal and delivery sector. Topics in regulatory economics and policy. Springer, Cham
8. Cai Y, Zhu D (2016) Fraud detections for online businesses: a perspective from blockchain technology. Springer, Berlin. https://doi.org/10.1186/s40854-016-0039-4
9. Condos J, William HS, Donegan S (2016) Blockchain technology: opportunities and risks. Montpellier, Vermont
10. De Caria R (2017) A digital revolution in international trade? The international legal framework for blockchain technologies, virtual currencies and smart contracts: challenges and opportunities. In: Modernizing international trade law to support innovation and sustainable development. UNCITRAL 50th anniversary congress, Vienna, 4–6 July 2017
11. Kibum K, Taewon K (2017) Does technology against corruption always lead to benefit? The potential risks and challenges of the blockchain technology. OECD Global Anti-Corruption & Integrity Forum, Paris
12. Zheng Z, Shaoan D, Hong-Ning C, Xiangping W (2017) An overview of blockchain technology: architecture, consensus, and future trends. https://doi.org/10.1109/BigDataCongress.2017.85
13. Niforos M, Ramachandran V, Rehermann T (2017) Block chain: opportunities for private enterprises in emerging market. International Finance Corporation, Washington, DC. https://openknowledge.worldbank.org/handle/10986/28962. License: CC BY-NC-ND 3.0 IGO
14. Hegadekatti K (2016) Analysis of contracts in various formats of blockchain. Contracts Comm Law eJ 18:12
15. Varelas S (2016) Strategy and innovation for a new tourism environment out-side competition. Int J Dev Res 06(12):10851–10855
16. Varelas S, Georgopoulos N (2017) Competition as a critical factor of the stra-tegic planning of hotel businesses. J Hotel Bus Manag 6:167
17. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector? The case of a Greek tourism destination. J Tour Res, Rev Tour Sci 18:121–131
18. GOeureka: next-gen solution shaping the future of online hotel booking (2017) https://goeureka.io/static/files/GOeureka-rev.pdf
19. Tribit ICO – whitepaper The All-In-One Travel Solution (2018.) https://www.tripbit.info/
20. Airsave travel: a decentralized platform (2018) https://www.airsavetravel.com
21. Further: autonomous smart travel ecosystem (2017) https://further.network/whitepaper/whitepaper-latest-en.pdf
22. Decentralized booking platform: holiday coin (2018) https://hldycoin.com/

23. Catalini C, Joshua SGa (2016) Some simple economics of the blockchain. MIT Sloan Research Paper No. 5191-16
24. Tziogas C, Tsolakis N (2019) The dawn of GDPR: implications for the digital business landscape. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
25. Ferrag MA, Leandros Maglaras L, Helge Janicke H (2019) Blockchain and its role in the internet of things. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
26. Coita CD, Abrudan MM, Constanta Matei MC (2019) Effects of the blockchain technology on human resources and marketing. An exploratory study. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer
27. Kavoura A (2016) How can mobile accounting reporting benefit from the imagined communities? Int J Mobile Comput Multimedia Commun 7:36–52. https://doi.org/10.4018/IJMCMC.2016040103

Understanding Tourist Diaspora: An Interdisciplinary Mixed Mode Design Documenting Greek Tourist Diaspora

Despina A. Karayanni, Siva Ram Vemuri, and Vasilis Ieronymakis

Abstract Even though diaspora tourists are significant contributors to the economies of people's origins they are largely inconspicuous in tourism marketing deliberations. This is despite three growing trends challenging conventional tourism deliberations. First, diaspora tourists are increasingly becoming visible as 'silent' contributors to the national economies. Second, their contributions are recognized as benefiting the 'informal' sector. Third, they are growing in numbers due to increased migrations. Such conspicuous silence calls for a need to innovate thinking to harness the growing diaspora tourist contributions. This paper calls for recognizing the tourist diaspora as an emerging market and espouses the benefits of making the tourist diaspora visible. It is premised on a belief that understanding diaspora tourist and their traits would provide the basis for developing novel approaches to marketing, and for examining the role of use of innovative technologies for linking diaspora tourism and their economic contributions in a sustained manner. Work reported in this paper is an extension of earlier work by the authors [Vemuri et al. (Greek diaspora and economic recovery, 2015); Vemuri et al. (Perspectives on Hellenic Diaspora. Charles Darwin University Press, 2018)] and is based on the results from a mixed mode survey of aggregate tourist behavior based on 147 responses. The paper suggests the relevance of applying an interdisciplinary framework for tourism marketing activities associated with identified behavioral traits of Greek diaspora tourists.

Keywords Tourism-marketing strategies · Diaspora Value Capitals · Greek tourist diaspora

D. A. Karayanni (✉)
University of Patras, Patras, Greece
e-mail: karayani@upatras.gr

S. R. Vemuri
Charles Darwin University, Casuarina, NT, Australia

V. Ieronymakis
Athens University of Economics & Business, Athens, Greece

1 Introduction to Diaspora Tourism and Marketing

A Google scholar search using the terms 'diaspora tourism and marketing' yields over 20,000 references. However, in the main, there are three broad groupings that emerge from analyzing these. First, the diaspora tourist is characterized as a nostalgic individual traversing the memory of the homeland in search/reconnecting to the roots. The implications for the marketing firm are about the communication of historical experiences. Second, the diaspora tourist is categorized as a visitor of family and friends (the VFR) constituting a marginal tourism segment "entrenched in many aspects of individuals' lives and communities' development" [1]. Third, those inspired by postcolonial discourses [2–5] highlight the complexities faced by tourism researchers arising from "the full dimensions of the fluidity, dynamism and interstitiality that define diasporic groups" [6]. There is thus in the tourism mainstream journals conspicuous silence of the growing diaspora tourist market with a follow-on effect of a prevalence of a lacuna to conduct a comprehensive assessment of contemporary tourism markets.

The conspicuous silence engulfs the economic contribution of the diaspora [7] in three main ways. First, most contributions go unnoticed and unrecognized by public institutions as they are channeled through the informal sector of the economy. The conventional wisdom of the inherent nature of the informal sector is one of a conceptual stigma reflecting badly on governments' capability to enforce compliance.

Second, frameworks used to link marketing and tourism are based on availability of information whereby evidence based decision-making drives policies. As the contribution of the diaspora is largely informal, real time data does not exist for use by conventional methods of mainstream economic investigation [8]. Third, a framework that simultaneously incorporates different conceptions inter-temporally and inter-spatially for tourism marketing deliberations does not yet exist.

Diasporic tourism engagements with home and host countries are very dynamic and fluid in nature over space and time to provide a workable framework for marketing. This paper attempts to understand the tourism diaspora engagements with the home countries to suggest a way forward to link diaspora tourism with marketing.

Diaspora tourist experiences are neither isolated in time nor space. They are unique and are not easily generalizable. As a result, the only way to link the diaspora tourist to marketing is through understanding of a definitive diasporic group. In the context of this paper we examine the Greek Diaspora.

The paper focuses on the Greek tourist diaspora. Following suggestions made by [1] of 'using primary data collection . . . to explain missed opportunities for practitioners', we provide a comprehensive understanding of the Greek tourists' diaspora. We use a mixed mode survey design to document aggregate tourist behavior based on 147 responses. We also suggest the relevance of applying an inter-disciplinary framework involving economic, psychological and sociological factors for tourism marketing activities associated with identified behavioral traits of Greek diaspora

tourists. The paper concludes with implications for the use of digital marketing for harnessing the contributions of Greek tourist diaspora to the Greek economy.

1.1 Diaspora Engagements

Involvement of public sector and government institutions to strategically attract diaspora investments for economic development in the home countries has been the primary focus of recent research on Diaspora engagements. However, this paper is concerned with understanding diaspora engagements through their tourist expenditures and therefore calls for a broader interpretation of diaspora investments to include diaspora tourism expenditures. It is therefore imperative to examine two related concepts namely the diaspora and the process of engagement.

The dominant contemporary diaspora discourse emphasized the multitude of meanings in 'semantic, conceptual and disciplinary space' [9] to such an extent that this paper considers diaspora as 'category of practice, project, claim and stance, rather than as a bounded group' [9]. The primary reason for such a stance is that we regard diaspora as a process rather than a product. It is widely recognized that individuals elect to become migrants in the first place because of push and pull factors. Having decided to migrate some choose to become members of diasporas. The reasons for their choice is relatively under researched in business and commerce. The push and the pull factors of migration and the subsequent reengagement with forces of re-push and re-pull factors is what makes individuals in the diaspora visible or invisible. What then one observes are effects of choices made by individuals in response to national, regional and international layers of influences [10].

Diaspora engagements, therefore, can best be considered as value propositions for the individuals involved in making decisions to engage with their places of origin. The notion of value often crops up in decision-making. As individuals decide to become diaspora and as diaspora decide to visit their places of origins, the emphasis is on understanding the diaspora tourist. It is essential to recognize that diaspora tourist does not exist in isolation of time and space. Nor is the tourist unconnected to the context of the individual circumstances. Vemuri [11] identified nine different capitals—historical, human, cultural, financial, political, economic, social, natural and administrative—that need to be considered to provide a necessary framework for understanding the decisions made by the diaspora. Individuals are initially endowed with these capitals and as they make their choices, for realizing values, these stocks of capital become flows of investments. Diaspora engagements therefore in the context of this paper are considered a value creation process.

1.2   Process of Value Co-creation by the Diaspora Tourist

The concept of value creation in the tourism literature is not new. Many researchers highlight the role of creation and co-creation of value. For instance, Cabiddu, Lui, and Piccoli [12] in a seminal article provide an excellent summary of the main definitions of value creation and value appropriation/capture. They describe these as outcomes of 'two fundamental processes' one involving the customer value and another that appropriates value in the market place. As visits made by the tourists takes many forms and involves multiplicity of motivational factors influenced by the diaspora capitals this paper regards diaspora tourist expenditures as 'tourist resources' and 'a value-adding element in tourist experiences' [13].

To analyze the process of value co-creation by the diaspora tourist, this paper takes heed from [5] and attempts to traverse the 'conceptual crevasses' and provide deeper sensitivity to an emerging and growing Diaspora tourism market. The paper analyses tourist expenditures as their revealed preferences for creating and co-creating values. At the same time the paper is cognizant that diaspora tourism activities take place in conjunction with other associated structures and agencies as well as competes with other diasporas and non-diasporas for resources, attractions, amenities and services [6]. However, such holistic analysis of tourism expenditures can result in a conceptual trap of analyzing tourism expenditures for determining allocation of state and other institutional marketing resources on the grounds of competitive advantage. In contrast, this paper analyzes diaspora tourist expenditures by examining capital formations and investment flows for understanding diaspora tourist behaviors.

The underlying methodology adopted to conduct such an analysis is largely dictated by the research propositions.

2   Research Hypotheses

Essentially, most of the tourism expenditure data is categorized as VFR (visiting families and relatives) data. Conventionally, the VFR tourism segment was "considered to represent minimal impact into the local economy" and found to inject negligible value in the commercial accommodation sector, there has been little championing of the VFR travel [1, 14–22].

The paucity of data about Greek diaspora expenditure and lack of resultant expenditure multipliers needs to be redressed if one were to investigate the economic contribution of the ever-growing engagement of diaspora populations. Prior to conducting the study, the authors proposed the following five hypotheses as part of a larger study. Hypothesis 1: The value and volume of Greek diaspora expenditure is very substantial. Hypothesis 2: Greek diaspora expenditures at VPO (visiting places of origin) is also very substantial. Hypothesis 3: Social, Cultural, Nostos and Self-Identification Diaspora Value Capitals are related to the Greek Diaspora

Tourism Expenditures. Hypothesis 4: Greek Diaspora's activities while visiting Greece, i.e., tourism activities, being with the family in Greece, being with friends and relatives, or spending time on business issues, are all perceived by the Greek as Greek Diaspora Tourism Expenditures. And, Hypothesis 5: Greek Diaspora Tourism Expenditure is related to family income, age and frequency of visit.

In this paper we extend on our previous work [7, 23] and report on the findings of 147 responses collected through an online survey between November 2017 and April 2018.

3   Methodology and Findings

The authors developed a research instrument, which included both quantitative as well as one open-ended question soliciting what did Greece mean to the respondents. Data was collected through an online survey, that was addressed to the Greek Diaspora between the November 2017 and April 2018, using the online interactive Greek Diaspora associations map list, as the research field. 200 responded of which only 148 were deemed suitable for analysis, due to extensive missing data.

The open-ended question provided a way to determine a quantitative multi-item scale of the diaspora Greek value measures. The authors developed the multi-item scale measure based on the qualitative answers to what Greece meant to the respondents.

The qualitative answers were then coded and transformed into quantitative descriptive measures and were categorized into 18 value capitals as presented in Table 1.

To examine the 18 analytic diaspora values in detail a multidimensional scaling analysis, of our categorical data was performed. Figure 1 presents the derived configuration of our binary data applying a multi-dimensional scaling (ALSCAL-Euclidean distance among dimensions).

Specifically, the multidimensional scaling analysis segments the diaspora capital values to two perceptual dimensions indicating four major diaspora capital values clusters (quadrants), based on the proximities of each cultural value to the others. According to the multidimensional chart, we defined the two dimensions as individual vs. social ties orientation, for the horizontal axis dimension, and low cultural-heritage vs. high cultural-heritage orientation for the vertical axis dimension.

Thus, the four stimulus configurations constitute four value capital clusters. They are: (1) Social-hospitality (high social ties orientation—low cultural/heritage orientation), (2) Nostos (high individual orientation—low cultural/heritage orientation), (3) Cultural-philosophical (high social ties orientation—high cultural/heritage orientation) and (4) Self-identity (high individual orientation—high cultural/heritage orientation).

The composition of these value clusters is as follows. Social-hospitality capital cluster includes social capital, tourism-hospitality capital, environmental capital, climate capital and cuisine capital. Culture-language capital cluster consists of a

Table 1 Hellenic diaspora emotions on "what Greece means to you" (Diaspora Value Capitals)

Diaspora value capital dimensions	Frequ.	Perc.
1. Nostos capital: Greece is my home, wish to return, Ithaca	55	37.4
2. Social capital: Family and friends ties	53	36.1
3. Tourism hospitality capital: Tourism and hospitable-friendly country	25	17.0
4. Environmental capital: Agriculture possibilities, sea, beauty of country	23	15.6
5. Cultural/language capital	19	12.9
6. Climate capital: Climate, sunny weather	17	11.6
7. Identity capital: Greece is everything to me, it defines me as a person	13	8.8
8. Memories capital: Childhood and other life time memories	12	8.2
9. Historical capital: Ancient and glorious history	11	7.5
10. Cuisine capital: Food, cafes and restaurants	11	7.5
11. Freedom tranquillity comfort: Sense of freedom, relaxation, comfort	10	6.8
12. Love capital: Love for Greece, a dream, the most beautiful country	9	6.1
13. National capital: National pride, national flag	8	5.4
14. Philosophical capital & scientific origins capital	4	2.7
15. Spiritual capital: Religion	2	1.4
16. Heritage capital: Strong heritage	2	1.4
17. Enjoyment of life	1	0.7
18. Country of opportunities	1	0.7
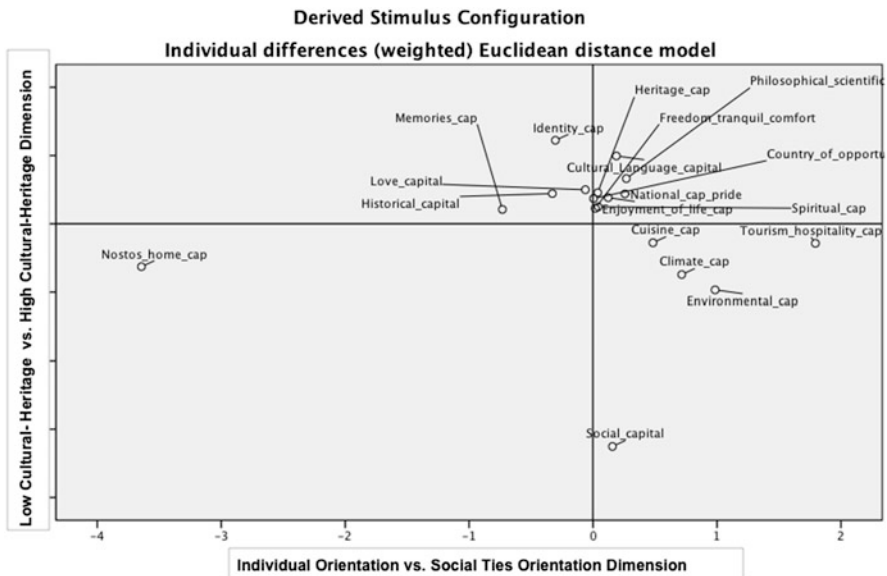
Fig. 1 Derived diaspora capital values configuration

Table 2 Diaspora value capital clusters

Value capital clusters	Frequ.	Perc.
Social-hospitality capital	71	48.3
Nostos capital	55	37.4
Cultural-philosophical capital	52	35.4
Self-identification capital	39	26.5

combination of culture-language capital, philosophical-scientific capital, heritage capital, national pride capital, spiritual capital, enjoyment of life capital, freedom-comfort-tranquility capital. Self-identification capital is a cluster comprising of identity capital, historical capital, memories capital and love capital. Finally, Nostos is a standalone value-capital cluster representing an amalgamation of epistemological, phenological, philosophical, historical, sociological, cultural and theological aspects of the Greek DNA. Table 2, below, presents the frequency of the value capital clusters.

A cross-tabulation analysis of the four capital value clusters and demographic data (gender, age, marital status) and income indicated homogeneity of the sample data. Thus, the sample was interpreted as homogenous data for further interpretations.

The questionnaire data was also used to link the Greek Diaspora tourist behavior to Greek tourist expenditures thorough length of stay (LOS), frequency of visit, time allocated to various activities in recent and prior visits, and tourism expenditures measured by activity, as well as total.

In turn, we performed a series of cross-tabs analyses in order to examine relationships among the aforementioned Greek Diaspora tourist behavior measures. As a matter of fact, significant relationships (chi-square < 0.001) ware found between the following sets of measures: (1) Total tourism expenditure and LOS; (2) Total tourism expenditure and frequency of visit; (3) Total tourism expenditure and respondent income; (4) Respondent income and LOS; (5) Respondent income and frequency of visit and (6) LOS and frequency of visit. Thus, the cross tabs analyses findings indicated consistency of data in respect to tourist behavior measure responses.

4   Discussion and Recommendations for General and Digital Marketing

Expenditure by the diaspora tourist is too significant to be ignored. Diaspora tourist is a segment that generates significant income in the tourism sector. Moreover, the diaspora value capital clusters provide significant information for providing a market focus. The State must build the marketing campaigns focusing on the Diaspora Value Capitals. This requires a shift in the mind set and recognize the critical importance and contribution of Diaspora tourist to Tourism income.

Also, one can no longer restrict and ignore Greek Diaspora visitors to the VFR segment and erroneously restrict the diaspora tourist to the close ties they have with their families and relatives. As depicted by the relationship of the Social Value Capital with Tourism income, when considered jointly, a tourism strategy should aim at other criteria than Social Value Capital. The later seems to be the glue that holds families and people relationships coherent. However, it appears that spending much time with families, don't accrue high spending.

The appeal of Cultural Value Capital seems to be a worthwhile axis for basing the marketing communication strategy. Cultural value appears to be following, while Self-identification and Nostos, need to be treated using psychological drivers in marketing communication campaign. For instance, how a visit in Greece may better embed one's attitude within the framework of how to behave according to the prototype of pure Greek character, e.g. "phelotemon" is the pursuing of "virtue", etc. "Nostos", after all, may be moderated if the subject drops by from time to time, as a returning trip to Ithaca.

Indeed, Nostos is a concept deeply entrenched in the DNA of almost all Greek Diaspora. It is the concept of craving to return to the homeland, the Ithaca, even once in a lifetime, as some of the respondents have stated: "coming back is the goal of a life-time". This concept might be very valuable to the marketing planners, as they should make the objective of coming back more affordable by providing realistic tourist packages and communication messages stressing that Diasporas can make this trip not only once in a life-time, but rather, several times, by creating visits as a desirable behavior. Marketing communication strategy must promote such a mindset.

The meaning assigned to who the tourist is, is dictated by interpreting multitude of meanings rather than artificial dichotomies [24]. The implications for strategic digital marketing begins with cross matching and matching profiles of the Greek Diaspora tourist and appropriate the eight dimensions of tourism (product/service; promotion; price; place/access; people; process; physical evidence; partners) to a multitude of meanings assigned to ethnic authenticity [8] and its role in understanding tourism market mixes for comprehensive capturing of vertical and horizontal value co-creation.

References

1. Griffin T (2013) Research note: a content analysis of articles on visiting friends and relatives tourism 1990–2010. J Hosp Market Manag 22:781–802. https://doi.org/10.1080/19368623.2012.708960
2. Braziel E, Mannur AH (2003) Theorizing diaspora: a reader. Blackwell, Oxford
3. Hollinshead K (1996) Ontological craft in tourism studies. The productive mapping of identity and image in tourism settings. In: Goodson L, Phillimore J (eds) Qualitative research in tourism, ontologies, epistemologies and methodologies. Routledge, London
4. Hollinshead K (1998) Tourism, hybridity, and ambiguity: the relevance of Bhabha's 'third space' cultures. J Leisure Res 30:121–156. https://doi.org/10.1080/00222216.1998.11949822

5. Hollinshead K (2004) A primer in ontological craft, the creative capture of people and places through qualitative research. In: Goodson L, Phillimore J (eds) Qualitative research in tourism, ontologies, epistemologies and methodologies. Routledge, London
6. Coles T, Timothy DJ (2002) Tourism, diasporas and space. Taylor & Francis
7. Vemuri S, Karayanni D, Kyprianou G, Ieronymakis V (2015) Greek diaspora and economic recovery. I.CO.D.ECON. 1st international conference of development and economy, Kalamata, Greece, 2–4 October
8. Vemuri SR (2018) Vignette. In: Pires G, Stanton J (eds) Ethnic marketing practice and entrepreneurship. Routledge, London
9. Brubaker R (2005) The 'diaspora' diaspora. Ethn Racial Stud 28:19. https://doi.org/10.1080/0141987042000289997
10. Aure M, Flemmen AB, Golebiowska K (2011) Transitional links at the edge. In: Carson D, Rasmussen R, Huskey L, Ensign P, Taylor A (eds) Democracy at the edge: remote human populations in developed nations. Ashgate, Farnham, pp 125–143
11. Vemuri SR (2014). Formation of diaspora entrepreneurs. ZenTra working paper in transnational studies 11:4
12. Cabiddu F, Lui TW, Piccoli G (2013) Managing value co-creation in the tourism industry. Ann Tour Res 42:86–107
13. Prebensen N, Vitterson J, Dahl T (2013) Value co-creation significance of tourist resources. Ann Tour Res 42:240–261. https://doi.org/10.1016/j.annals.2013.01.012
14. Bull A (1995) The economics of travel and tourism. Pitman, Melbourne
15. Lehto XY, Morrison AM, O'Leary JT (2001) Does the visiting friends and relatives' typology make a difference? a study of the international VFR market to the United States. J Trav Res 40:201–212
16. Morrison AM, Hsieh S, O'Leary JT (1995) Segmenting the visiting friends and relatives market by holiday activity participation. J Tour Stud 6:48–63
17. Seaton AV (1994) Tourism: the state of the art. Wiley, New York
18. Seaton AV, Palmer C (1997) Understanding VFR tourism behavior: the first five years of the United Kingdom tourism survey. Tour Manag 18:345–355
19. Braunlich CG, Nadkarni N (1995) The importance of the VFR – visiting friends and relatives – market to the hotel industry. J Tour Stud 6:38–47
20. Denman R (1988) A response to the VFR market. In: A report to the English tourist board and regional tourist boards. British Tourist Authority/English Tourist Board, London
21. Hay B (1996) An insight into the European experience: a case study on domestic VFR tourism within the UK. In: Yaman H (ed) VFR tourism: issues and implications. Victoria University of Technology, Melbourne, pp 52–66
22. Williams AM, Hall CM (2002) Tourism, migration, circulation and mobility. In: Hall CM, Williams AM (eds) Tourism and migration: new relationships between production and consumption. Kluwer, Dordrecht, pp 1–52
23. Vemuri S, Karayanni D, Ieronymakis V (2018) The role of the Greek diaspora in the Greek economy. In: Frazis G (ed) Perspectives on Hellenic diaspora. Charles Darwin University Press, Australia
24. Pocock N, McIntosh A (2013) Long-term travellers return 'home'? Ann Tour Res 42:402–424

Adventure Tourism-Examining Cases of How It Can Contribute on Rural Development in Greece

Dimitrios Belias

Abstract The purpose of this research is to present adventure tourism as a tourist concept related with sustainable tourism and to explore whether it can contribute to the tourism development of a destination. The paper has examined a number of cases in Greece, which indicate that adventure tourism can be a vehicle of development for the rural areas of Greece. Indeed, Greece is a country which has lot of opportunities, including climbing tourism, hiking, mountain skiing and other modes of alternative adventure tourism. However, there is a belief that there is still a need for much further research on this field. Despite of the fact that Greece has many opportunities on adventure tourism we still do not know the profile of the potential tourists nor the views of the people who are working on adventure tourism. The information retrieved from this paper can be used from marketing managers and public agents associated with the promotion of a place may incorporate in their campaigns such information, while it is general accepted that adventure tourism is become very popular among tourists. For this reason there is a need to extract further knowledge based in a primary research.

Keywords Adventure tourism · Greece · Alternative tourism · Sustainable development

1 Introduction

Adventure tourism refers to the provision of outdoor leisure activities either free of charge or for a fee. Adventure tourism is a rising type of tourism in a global scale, as revenue from this type of tourism increased by 17% between 2009 and 2011, with the market share being 26% in 2010, while 63% of tour operators in tourism revenue growth of 17.3% in 2010 [1]. Adventure tourism can provide new economic

D. Belias (✉)
Technological Educational Institute of Thessaly, Larissa, Greece
e-mail: dbelias@pe.uth.gr

opportunities in the host country, create new jobs, contribute to the preservation of the environment and overall encourage sustainable tourism practices, contributing significantly to the development of the local economy and society [2].

The purpose of this research is to present adventure tourism and explore whether it can contribute to the tourism development of a place. For this reason, it will evaluate how it can contribute on the development of rural areas in Greece. This is a literature review and it will rely on the existing papers but also on case studies with material which will derive from the online resources. The expected outcome is to present how adventure tourism can contribute in the development of tourism in rural areas of Greece.

2 Methodology

The methodology that was used in this paper is the critical review of the current literature. Relevant literature selection was derived from popular online bibliographic databases, like Science Direct, Emerald, EBSCO host and scientific search engines like Google Scholar. The types of bibliographic sources included in the research are articles published on scientific journals, books, conference proceedings, company papers and studies, white papers, online sites and online journals. The selection criteria of these literature sources were based on the relevance to the topic of the paper and this research is not exhaustive.

3 Literature Review

3.1 Adventure Tourism

According to [3], adventure tourism is used to declare guided shopping trips where the main attraction is an outdoor activity based on nature features that requires specialized athletic or similar equipment and is exciting for tourists. Adventure tourism can therefore be defined as an outdoor recreational activity, which takes place in an unusual, exotic, remote, or deserted destination and includes adventurous activities of a physica.

Adventure tourism, along with ecotourism and cultural tourism, constitute an alternative to the model of mass tourism, based on a different lifestyle [4, 5]. However, accidents occurring occasionally in adventure tourism activities are not insignificant, as, in addition to the safety of tourists, they also affect the reception area adventure tourist destination [4–6]. However, it is argued that the risk involved in several adventure tourism activities can be an incentive to attract tourists [4, 7].

3.2   Profile of Adventure Tourists

With regard to the profile of travelers choosing adventure tourism, the following features are recognized [8–10], such as that the tourist is aged 25–55 years old, adventure tourists are mostly men attracted by more tedious and intense activities, they have a high level of education and are mostly graduates of tertiary education, they have high income, while most are freelancers, they live in urban areas and they are engaged in activities such as camping, cycling, canoeing, rafting, hiking, wildlife observation, educational trips. They choose this type of tourism more to engage with the natural environment, to move away from culture and crowds, to experience adventure and personal development through education and activities that challenge. Furthermore, adventure tourists choose the tourist destination mainly based on the presence of specific natural elements such as lakes and rivers, or the opportunity given to new experiences, they are quite energetic and like outdoor activities and activities related to physical activity and finally they seek to experience experiences of varying degrees of risk and intensity [11].

Through surveys conducted to tourists in Queenstown, it was found that tourists involved in adventure tourism activities are asking for fear and the perceived risk of commercial adventurous activities; and not the real risk and an uncertain outcome [12]. Therefore, tourists of this type expect to experience different levels of risk, intensity and serenity and be tested on a personal level [13].

While tourists pay money for the aforementioned activities, those responsible for these activities are trying to minimize the risk arising from them. This paradox means that those responsible for adventurous activities offer tourists a sense of danger without actually putting them at risk [14]. Therefore, as Buckley [14] claims, what is actually motivating tourists is what he calls "rush", a particular type of risk that governs tourist-oriented adventure tourists and which is the simultaneous experience of emotion and flow (thrill & flow). In addition, it is interesting to mention how tourists choosing adventure tourism are preparing for their trip. As we can see from the table below, the majority is doing research on the internet but also consulting family/friends. Also, the first social media tool used by those who choose adventure tourism is Facebook, followed by YouTube, Google+ and Twitter [15].

4   Discussion: How Adventure Tourism Can Contribute in the Development in Rural Areas of Greece

4.1   Cases from Abroad

Taylor et al. [16] argue that there are no precise figures for the tourist market of adventure tourism, as it is a new and complex aspect of tourism [3, 16]. As a result, the various available statistics are not publicized, while they are not comparable

[16]. However, what we can observe is that adventure tourism is developed in a number of countries and is developing rapidly, forming a major part of tourism [17]. For example, in the United Kingdom around 4% of domestic tourism is adventure tourism, while 10% of total tourism includes some adventure tourism activity such as paragliding/paragliding, hiking/climbing, canoeing/kayaking, wind-surfing/Windsurfing/kite surfing, diving and adventure parks. Adventure tourism is particularly developed in Scotland and Wales as well as other areas of the UK such as LakeDistrict, PeakDistrict, Yorkshire and the Southwest. Adventure tourism activities in the United Kingdom are also associated with maritime activities are mostly done during the summer. Also, climbing and adrenaline sports are not so distinct from seasonality, despite the fact that winter visits are above average. The most popular adventure tourism activities in the UK are mountain biking, hiking, and non-motorized water sports, especially canoeing, surfing, windsurfing and sailing [18].

In New Zealand, in 2008 38% of international tourists (849,200 tourists over the age of 15) participated in at least one activity adventure tourism. Also, international tourists who participated in at least one adventure tourism activity spent about $3 billion on their trip to New Zealand, which is about half of the corresponding global travel expense that hit $5.9 billion [12].

In general, adventure tourism was developed in the 1990s, it grew up after 2005 while in the following years (till 2022) is expected to grow further [18] as tourists increasingly choose a healthier lifestyle accompanied by physical activity, but also a form of tourism combining learning, physical exercise, outdoor activities, ecotourism, intense experiences, contact with nature such as adventure tourism [5, 9].

4.2 Adventure Tourism Activities in Greece: Case Studies

Although Greece is a country which is made from mountains (80% of the mainland), it has not managed to take advantage of this. Based on top ten countries, as Ranked by 2016 ATDI report scores, Greece is not included although there are many places that offer the opportunity so that adventure tourism develops [19]. What should be noted is that the development of adventure tourism in Greece is still in a not too advanced stage, as in the examples of countries mentioned earlier. Some efforts are being made by individual agencies such as specialized companies engaged in adventure tourism (e.g. Trekking Hellas). One element that supports this finding is the lack of any statistical data from tourism operators and the statistical service on adventure tourism in Greece. Another factor is the lack of studies on incentives, aspirations and moods of tourists visiting a destination to engage in adventure tourism activities. To this end, studies need to be carried out both by private bodies such as adventure tours offices and by public bodies, and these studies will seek to identify the incentives of tourists visiting a tourist destination for adventure tourism, whether their initial expectations of the tourist destination have been met, as far as adventure tourism is concerned, what were the factors impressed by them, were

those elements that did not please them. Also, through these studies, potential tourist suggestions can be recorded to enhance the visibility of adventure tourism to the destinations in question as well as the adventure tourism in general in Greece as well as to improve existing promotional efforts and infrastructures. This means that there are many opportunities for further development for adventure tourism in Greece.

4.3   Mountain Games

Olympus Marathon takes place in Mount Olympus, the mythical "mountain of gods" on the last Sunday of June. The course of the struggle follows the holy course of the faithful of antiquity, who ascended from the worshiping city of Dion at the summits of Mount Olympus in the beginning of summer to sacrifice to the supreme god, Zeus and to put down their tributes. Athletes start the race from the archaeological site of Dion at just 3 m above sea level and reach up to 2780 m, passing in front of the "Throne of Zeus", one of the highest and steepest peaks of the mountain after crossing 21 km in exceptional natural beauty paths of Olympus [20]. The climb, almost uninterrupted and laborious from the start of the race to the highest point of the route, covers 21 km over 2900 m of climb. The race, which has a total length of 44 km, is completed in the town of Litohoro, one of the most important traditional resorts in northern Greece, located at an altitude of 300 m and 5 km from the shores of Thermaikos Gulf. The course of the race crosses the entire eastern side of the mountain and the view of the athletes as they struggle is breathtaking, at its highest points. Olympus Marathon brings together athletes from all over the world who arrive in the mythical mountain to take part in an international racing match and enjoy a mountain that besides the National Park has been declared by UNESCO as a "World Natural Heritage Monument" [19].

In Anilio of Ioannina there are the "Ursa Trail" and the "Bears of the Bear". In these struggles, the aim is to design the route to bring the athlete through the bear's habitat and to sensitize him to environmental and brown bear issues. The route passes through old paths that have been cleaned with much volunteer work and can now be used not only by athletes on the day of the race but also by anyone wishing to walk or mountaineering. The total length of the race "Ursa Trail" is 40 km with 2700 m height difference and the race "In the footsteps of the bear" 18 km with 940 m. It passes through historic paths and of particular aesthetic and natural value monuments of the area, with the first part of the Ultra Trail being located east of Arachthos in the area of Anilio and the second part that is also the route of the small race west of Arachthos in the area of Metsovo. In 2015, the number of people who participated in the above matches amounted to 292 [21].

4.4 Climbing

According to the Lonely Planet website, some of the top Greek hiking destinations are in Crete, including the Samaria Gorge which one of the most popular mountaineering destinations in Europe, combining the wild natural beauty of the landscape with that of endemic plants and animals. Nisyros is a volcanic island that offers hikes to the volcano crater in Mount Polyboti, Paxos for escapes through paths that cross ancient olive groves and stone walls, Ithaca, Samos, Hydra and Alonissos [22].

4.5 Speleological (Cave) Tourism

The capabilities of our country for the development of cave tourism are not at all accidental, as there are more than 8500 caves, more than 100 have been declared internationally and require extensive geological, biological and paleontological research. It is no accident that the 14th World Congress of Speleology took place in Athens in August 2005. A typical example is Crete, where about 5200 caves have been discovered and efforts are being made to develop speleological tourism.

Many caves have also been linked to the religious tradition, such as the Great Cave in Kalavryta in the Peloponnese and of course the famous Cave of Revelation in Patmos. At the same time, small caves, which have always been holy places, have been converted into orthodox churches, such as Agios Konstantinos in Pelinon of the Peloponnese [23].

5 Conclusions and Recommendations

To this end, studies need to be carried out by both private bodies, such as, for example, offices hosting excursions centered on adventure tourism, and public institutions, these studies will try to identify the incentives of tourists visiting a tourist destination for adventure tourism, whether their initial expectations of the tourist destination have been met, as far as adventure tourism is concerned, who were those factors that impressed them, but also what were those elements that did not satisfy them. Also, through these studies, potential tourist suggestions can be recorded to enhance the visibility of adventure tourism to the destinations in question as well as the adventure tourism in general in Greece as well as to improve existing promotional efforts and infrastructures [24].

Another element contributing to the development of adventure tourism in Greece is the creation of networks with private and public agencies [25] of adventure tourism abroad. A competitive advantage of a destination can be the cooperation of different agents rather than the competition [26, 27]. These networks will offer know-how, good practices from overseas countries that have developed adventure

tourism, and the possibility of expanding the base of tourists visiting tourist destinations for adventure tourism. In this effort, new technologies can make a major contribution on information and communication, as well as social media [28, 29]. Using these tools can lead to the further promotion and promotion of areas in Greece where adventure tourism is favored. Lastly, it should be mentioned that in this context, plans should be developed to promote and develop those areas which can accommodate adventure tourism activities in conjunction with environmental studies to maintain the balance of the ecosystem and that there should be no alterations of the natural environment from human activity. Positive signposting in paths in mountainous regions [30] as well as the development of geographic information systems can also contribute positively. As it is understood from the above analyzed case studies, there are lot of opportunities for future research on this topic. For this reason, there is a need for a future research which will examine the view of adventure tourists but also of the organizers of such trips.

References

1. ADTI (2012) Adventure tourism development index. 2011 report. http://www.adventureindex.travel/docs/atdi_2011_
2. Williams P, Soutar G, Ashill NJ, Naumann E (2017) Value drivers and adventure tourism: a comparative analysis of Japanese and Western consumers. J Serv Theory Pract 27:102–122
3. Buckley R (2006) Adventure tourism. CAB International, London
4. Cater CI (2006) Playing with risk? Participant perceptions of risk and management implications in adventure tourism. Tour Manag 27:317–325
5. Beedie P, Hudson S (2003) Emergence of mountain-based adventure tourism. Ann Tour Res 30:625–643
6. Bentley TA, Page SJ, Laird IS (2000) Safety in New Zealand's adventure tourism industry: the client accident experience of adventure tourism operators. J Travel Med 7:239–245
7. Bentley TA, Page SJ, Laird IS (2001) Accidents in the New Zealand adventure tourism industry. Saf Sci 38:31–48
8. Kalahari Management Inc. Tourism opportunity analysis adventure/extreme adventure tourism in the Grande Cache region. http://www.kalahari-online.com/wp-content/uploads/2012/01/Kalahari-ReportGrande-Cache.pdf. Accessed 25 June 2018
9. The Economic Planning Group of Canada (2005) A guide to starting and operating an adventure tourism business in Nova Scotia. http://novascotiatourismagency.ca/sites/default/files/page_documents/adventure_guide.pdf
10. Buckley R, McDonald K, Duan L, Sun L, Chen LX (2014) Chinese model for mass adventure tourism. Tour Manag 44:5–13
11. Buckley R (2017) Perceived resource quality as a framework to analyze impacts of climate change on adventure tourism: snow, surf, wind, and whitewater. Tour Rev Int 21:241–254
12. New Zealand's Department of Labor. Review of risk management and safety in the adventure and outdoor commercial sectors in New Zealand 2009/10. http://www.business.govt.nz/worksafe/about/what-we-do/adventureactivities/images-files-documents/review-risk-management-safety-inadventure-outdoor-commercial-sectors-nz-final-report.pdf
13. Carnicelli-Filho S, Schwartz GM, Tahara AK (2010) Fear and adventure tourism in Brazil. Tour Manag 31:953–956
14. Buckley R (2012) Rush as a key motivation in skilled adventure tourism: Resolving the risk recreation paradox. Tour Manag 33:961–970

15. Peacock S, Brymer E, Davids K, Dillon M (2017) An ecological dynamics perspective on adventure tourism. Tour Rev Int 21:307–316
16. Taylor S, Varley P, Johnston T (2013) Adventure tourism. Meanings, experience and learning. Routledge, London
17. Williams P, Soutar GN (2009) Value, satisfaction and behavioral intentions in an adventure tourism context. Ann Tour Res 36:413–438
18. European Commission (2014) Tourism industry sub-sectors. Country Report, UK. http://ec. europa.eu/enterprise/sectors/tourism/tourism-businessportal/documents/business/ internationalisation/united_kingdom_country_report.pdf
19. ADTI. An adventure travel scorecard. http://www.adventureindex.travel/docs/ATDI16-web. pdf
20. Velissariou E, Belias D, Amoiradis C (2017) Trends and prospect of mountain tourism in Greece. IMIC 2017. Tourism: trends, prospects and implications for enterprises and destinations, Santorini, Petros M. Nomikos Conference Center, 19–21 October 2017
21. http://www.olympus-marathon.com/index.php?name=Content&page=intro
22. http://e-travelnews.blogspot.gr/2010/01/blog-post_6161.html
23. http://www.patrisnews.com/neaenimerosi/hobby/oi-10-koryfaioi-proorismoi-gia-oreivasia-stin-ellada
24. http://www.visitgreece.gr/el/touring
25. Kavoura A, Katsoni V (2013) From E-business to C-commerce: collaboration and network creation for an e-marketing tourism strategy. Tourismos 8:113–128
26. Varelas S, Georgopoulos N (2017a) Porter's competitive forces in the modern globalized hospitality sector-the case of a Greek tourism destination. J Tour Res 18:121–131
27. Varelas S, Georgopoulos N (2017b) Competition as a critical factor of the strategic planning of hotel businesses. Strategic Manag Q 5:16–21. https://doi.org/10.15640/smq.v5n1-2a3
28. Tapar AV, Dhaigude AS, Jawed MS (2017) Customer experience-based satisfaction and behavioural intention in adventure tourism: exploring the mediating role of commitment. Tour Recreat Res 42:344–355
29. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for southeastern rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66
30. Bitsani E, Kavoura A (2012) Accessibility versus advertising for mountain tourism: the case of Nafpaktia. Tourismos 7:217–235

Responsibilities and Ethics of the Greek Businesses on Tourism Industry: An Explanatory Quantitative Research

Despina A. Karayanni and Efthimios Dragotis

Abstract Despite the severe economic recession, there are indications that the focus on ethical values is on the spotlight of the business world. The current research is conducted in Greece, focusing on tourism industry that plays a significant role for the economic growth of the country, while an intense recession dominates the business environment. We aimed to evaluate the priorities of the tourism businesses using the model of Carroll's Pyramid (Bus Horiz 34:39–48, 1991), a model that expresses the business environment priorities, based on the admission that the rational business prioritizes profit, as the base of the Pyramid, followed by a legal way of operating, followed by ethical and philanthropic responsibilities. However, the existence of a growing interest on the ethical issues may question the model. Baden (Int J Corporate Soc Responsibility 1:8, 2016) has developed a critical evaluation, showing that the business priorities have changed. In order to examine Carroll's Pyramid in the Greek tourism industry context, thus, to evaluate the priorities of Greek businesses that operate on industry and have CSR issues on their agenda, we employed a research study, through quantitative research instrument. Data were collected through personal interviews. Totally 233 business executives responded from respective tourist businesses sparse throughout Greece, yielding 30% response rate. Above the 62% of the respondents cited to work on businesses with more than 50 employees. The results showed that despite the recession, the economic responsibilities are not the first priority. On the contrary, legal responsibilities were perceived as the most significant part for the businesses operating in the tourism industry of Greece. On the whole, research findings showed that the legal and ethical priorities ranked higher than economic and philanthropic counterparts of the CSR strategy. Moreover, the business size found to have a significant role on the marketing managers' decision making for applying ethical and legal facets of CSR strategy.

D. A. Karayanni (✉) · E. Dragotis
University of Patras, Patras, Greece
e-mail: karayani@upatras.gr

1   Introduction

Academics and researchers all over the world use a wide number of models and classifications in order to evaluate different aspects of CSR. One of the most influential models of Corporate Social Responsibility research is the "Carroll's Pyramid of CSR", stated by Carroll [1] in order to argue how the organizations should meet their responsibilities. The responsibilities of the organizations are classified into four dimensions: the economic, the legal, the ethical and the philanthropic responsibilities. The key principals of the model are that every organization that operates in a rational environment in the business world will prioritize profit, will comply with the legislation and will respect the ethical issues of the society. The four types of responsibilities are allocated in a Pyramid model that explains the priorities of organizations within the business environment. According to Carroll's theory [1], the priority of all responsibilities is the economic ones, since every rational organization has profit as purpose of existence. This is the reason that economic responsibilities are placed on the bottom of the Pyramid, as the most important. The legal obligations are perceived as the next more significant responsibilities, including a variety of legal, lawful and regulatory responses that the organization has towards its stakeholder groups, such as the labor legislation, the safety and standards for the products, the workforce and the facilities. The third significant group of responsibilities after the economical and the legal are the ethical responses of the company. They include a variety of business ethics and moral standards, mostly policies and issues that the society demands from the company, above the economic and legal expectations. Such issues are often not included in the law, regulatory and legal system, however they are complementary to them. The least important responsibilities compared to the rest, are the philanthropic. They are placed on the top of the Pyramid, depicting the last step of the company responses towards the society and its stakeholders. These mostly concern actions that include donations to charities and causes, helping the community and the local society they operate. Early 90s, when Carroll developed the CSR Pyramid theory, were a period that CSR concept was both undeveloped in business world and understudied in academic world. However, the CSR concept has developed until nowadays and academics have presented a variety of models that evaluate the CSR activity of a business. Authors also present theories about how the CSR actions that a business applies in daily basis can be classified in fields of CSR application. Such models usually classify the CSR activities in more than four fields that Carroll [1] defined, because businesses nowadays apply CSR in a variety of fields. However, since then, no model has ever been developed and commonly accepted that prioritizes the most and less significant responsibilities of CSR application. Nowadays that CSR has become something more than a policy and a set of certain actions, the issue of whether profit still comes before legal and ethical responsibilities, is open to question. At the same time, to our knowledge, it appears that relatively low research

piece of evidence has been published about the CSR implementation, in Greece. The current study attempts to scan the above issue, in the relatively under-researched Greek tourism business environment context. We target our study especially to tourism as this is traditionally regarded as the economic locomotive of Greece.

2 CSR Decision Making in Recessionary Economy Contexts

Since the last decade, a variety of authors have focused on how CSR can be applied on recession periods. The worldwide research on the current field has shown contradictive results on the relationship between CSR and financial performance, in the context of economic recession. Specifically, the bulk of the literature evaluates the effect that the recession has on the CSR application as significant, either in a positive, or negative way. Jothi [2] believes in environments of economic recession, the application of CSR has a positive relationship with financial performance and at the same time, he cites that 44% of the experts believe that the recession can drive companies to apply CSR policies and practices. The positive relationship is further supported by Skapinker's [3] findings showing that large companies such as Mars, Cadbury and Wal-Mart invested more heavily in CSR application and fair-trade, than their smaller counterparts. Notwithstanding, other relevant pieces of research lead to controversial results. Indeed, Ellis and Bastin [4] suggested that during the recession that had afflicted the UK, CSR implementation was not affected, instead, it continued to be effective, just as before the economic crisis. On the other hand, in a similar business environment setting, in France, who had suffered from a period of uncertainty, Ducassy [5] found that the Social Performance and Financial Performance showed a significant relationship, only on the beginning of the period. When the recession continued, the significant relationship seemed to disappear. Thus, the same researcher argued that businesses that apply CSR may have a strong social performance, however they may not end up with a strong financial performance, as well, in economic recession environments. Along similar lines, Placier [6] reports that CSR implementation had stopped resulting in competitive advantage and higher profits, during recession periods. This might stem from the fact that the economic crisis had led companies to financial losses, and, in a way, had afflicted CSR implementation, in a variety of fields. Moreover, in recession periods, the relationship between CSR and financial performance can become even more superficial, where CSR application is only expressed via philanthropic actions such as donations. Shergold [7] reports that, during the economic recession, 70% of businesses in Singapore had a socially responsible profile, carried out just through philanthropic campaigns and donations, and this may be the reason why this strategy did not resulted in enhanced financial performance. Even if the above findings are controversial, the economic recession seems to play a significant role on how CSR is applied and, hence, on the financial performance of the company. In this context, the case of Greek environment presents a special interest, since economic recession seems to have afflicted businesses in Greece more severely and long term than the

Table 1 Key tourism measures in Greece

Year	Arrivals[a]	GDP contribution	Income[b]
2018 (prediction)	38	–	–
2017	31	19.7%	14.6
2016	25	18.6%	12.7
2015	23.6	18.5%	13.6
2014	22	17.3%	13
2013	17.9	16.3%	11.7
2012	15.5	16.4%	10.02
2011	16.4	15.8%	10.5

[a]In million arrivals
[b]In billion euros

aforementioned business examples, which refer to more stable national economic environments. However, as far as the Greek tourism industry is concerned, it appears that this sector incurred minimal loss from the economic recession, steadily contributing to many of the economic growth indices. Indeed, the Greek economy growth model traditionally leans on the services sector and especially on the tourism industry, which remained intact during the recession. The following table shows three economic indices that depict the tourism significance for Greece. The second column shows the international arrivals from air and roads to Greece, in millions of tourists. The third shows the tourism contribution to GDP of Greece and the fourth shows the total income of the tourist sector, annually, in billion euros (Table 1).

Taking into consideration the above data [8], the economic impact for the touristic interest businesses in Greece is massive. Businesses that operate in the tourism sector provide transportation, accommodation, entertainment and other supporting services to people who are on holidays [9]. In such a competitive business environment, the research on managerial decision making for applying a Corporate Social Responsibility strategy seems to be worthwhile.

3 Methodology of the Study

3.1 Measures Operationalization

In order to test our research hypothesis, we draw from the academic literature regarding the CSR measurement to formulate our basic research variables. Specifically Carroll has operationalized the concept of CSR through a four dimensional construct, namely. Our research has been based on the four types of responsibilities, according to Carroll. The research tool of the study has been used in the past for academic research [10] and was taken under the permission of the author. Through the research, we aimed to assess how the respondents ranked the four different responsibilities of the company, according to their perceived significance. In order to achieve our aim, we used several examples within business world, for the better

understanding of the measures. Five such examples were entered at each section of responsibility. The examples of each section referred to daily routine business issues. All our variables were based on 5-point Likert scales where the respondent had to appoint the perceived significance of the statement.

3.2 Sampling

Our research frame was the Greek, or multinational, companies operating in Greece, in the tourism industry, which declared to have a CSR department, CSR activities or policies. The research took place from March to July 2018 and resulted in 233 responses from various regions of Greece, yielding a 30% response rate, which compares favorably with other similar researches with business executives subjects. The convenient sampling method has been deployed. The research participants cited to serve at various positions in the organizational hierarchy ranking.

3.3 Measures and Construct Reliability

The CSR measures were adopted by Caroll's theory literature [1] and the Baden's model [10] and were operationalize to capture philanthropic, economical, legal and ethical dimensions of the subject matter, using five items and measured over multipoint scales. We also examined the role of environment in CSR practice. The measure was adopted by the Kohli and Jarwoski scale [11]. As a next step we performed reliability analysis among both the items of each one CSR responsibility dimension and the environmental measures, in order to access reliability of the research constructs. The most common index used in the academic world is the Cronbach's alpha (α), which measures the consistency of the responses to a set of questions. The alpha fluctuates at a scale between 0 and 1, where the highest values represent a most reliable scale. The results from the analysis in our research indicate reliable scales in the four dimensions of the responsibilities. All the results are above 0.7 that is the acceptable results for the analysis [12] (Table 2).

Table 2 Reliability of construct scales

Dimension	Items	Alpha
Philanthropic responsibilities	5	0.755
Ethical responsibilities	5	0.769
Legal responsibilities	5	0.761
Economical responsibilities	5	0.766

4 Findings

4.1 Demographic Characteristics

Males and females are represented by 54% and 46% respectively in the sample. In respect to age, 49.5% of the participants are between 18 and 35 years old, 19% cited to be between 36 and 45 years of age, whereas, the rest 31.5% was over 46 years old. In regard to the company hierarchy position, the majority of the respondents were subordinates, accounting to the 51% of the sample. Another 33% had a position in the management hierarchy, as they declared to be managers, supervisors, directors and CEOs, whereas, the rest 16% cited to be self-employed, or company-owners. Reliability analysis between early and late respondents or among the demographics showed no significant results, thus indicating that our sample was homogeneous (Table 3).

4.2 Corporate Social Responsibilities Ranking

The first findings of the research concern the perceived priorities of responsibilities. The perceived significance results are counted as the mean scores of responsibilities. According to Carroll's theory, the economic responsibilities are perceived as the most important, followed by the legal, then the ethical and finally the philanthropic responsibilities. However, our research evaluates that the perceived priority of the responsibilities is different in our case: Legal responsibilities are rated as the most important. The second most important responsibilities are the ethical, followed by the economic, followed by the philanthropic. Comparing our research with Carroll's theory, we see major differences at the three first most important responsibilities. The Table 4 shows the mean scores of perceived significance.

The findings of current research are similar to the findings of Baden [10] and have a main difference compared to the Carroll's Pyramid: legal and ethical responsibilities are perceived as more important than economic ones, while philanthropic

Table 3 Sample demographics

Gender		Age group		Business role	
Male	54%	18–35	49.5%	Owners	16%
Female	46%	36–45	19%	Managers	33%
		46+	31.5%	Employees	51%

Table 4 Mean ranking of responsibilities

Responsibilities	Mean	SD
Legal responsibilities	4.192	0.714
Ethical responsibilities	4.120	0.719
Economic responsibilities	4.112	0.696
Philanthropic responsibilities	3.540	0.803

Table 5 Perceived importance according to business size

Importance/business size	Small		Medium		Large	
	Mean	SD	Mean	SD	Mean	SD
Economical responsibilities	4.54	0.66	4.44	042	4.51	0.30
Ethical responsibilities	4.62	0.39	**3.96**	0.59	4.58	0.45
Legal responsibilities	4.37	0.49	4.07	0.63	**4.68**	0.50
Philanthropic responsibilities	3.77	0.86	3.49	0.95	3.77	0.77

responsibilities are remained on the top of the Pyramid. The above findings concern the whole sample, while the analysis that is hereby presented is conducted in order to evaluate potential differences at the perceived priority between business characteristics and between demographics.

4.3 Business Size

Considering the business size of the company, a few significant differences were found. Specifically, the respondents, who worked in large companies, with more than 50 employees, tend to assess legal responsibilities as significantly more important, than their smaller sized counterparts. Additionally, the respondents who worked in medium size companies, between 10 and 50 employees, tend to score ethical responsibilities lowest than all the rest counterparts. Table 5 shows the CSR ranking according to the business size. As seen on this table, most of the respondents tend to regard philanthropic responsibilities as the least important of all four.

4.4 Position in the Business Hierarchy

Considering the position in the business hierarchy, a few significant differences were observed regarding the corporate social responsibilities ranking. The three sub-groups access the philanthropic responsibilities as less important. The following table depicts the most and the least important responsibilities, according to the business role and position in the business hierarchy. The findings reflect that each sub-group has differentiated priorities considering the responsibilities; however these differences are minor and not statistically significant (Table 6).

Table 6 Perceived importance according to business role

Importance/business size	Owners		Managers		Employees	
	Mean	SD	Mean	SD	Mean	SD
Legal responsibilities	4.30	0.74	4.30	0.70	4.08	0.71
Ethical responsibilities	4.32	0.60	4.15	0.66	4.04	0.77
Economical responsibilities	4.12	0.74	4.20	0.66	4.04	0.70
Philanthropic responsibilities	3.62	0.74	3.56	0.75	3.5	0.86

5 Discussion

The above results lead to specific conclusions. One of the outcomes is the high homogeneity level of the sample that gives the researchers the chance to draw generic conclusions, since no significant differences are observed. The statistically significant deviations may be due to the business size, as larger businesses tend to evaluate the legal responsibilities significantly highest than their rest counterparts. This stems from the fact that usually the legal responsibilities are much more important for a large business than the smaller ones. Furthermore, respondents who worked in medium-size businesses evaluate the ethical responsibilities significantly lowest than the rest. It appears that respondents who work on smaller businesses appreciate ethical issues to a higher extent, as these may play a significant role on their corporate image. The research findings concerning the Carroll's Pyramid place additional evidence on the Baden's [10] findings on the theory of Carroll for the twenty-first century. The two studies evaluated that the Pyramid of responsibilities has nowadays been shaped, even in recession periods. The legal and the ethical issues found to be evaluated as more significant than the economic responsibilities of the company, in a business environment that suffers from an economic crisis. However, the question that stems from the above findings is whether the businesses have shaped their responsibilities' priorities for real, or whether the CSR has become a necessity for the society that demands from businesses to act in a socially responsible manner. Shaping the priorities, the economic responsibilities of the businesses follow the legal and the ethical ones. This finding partly supports that the economic recession does not have a significant role in influencing the business priorities. Furthermore, the finding that ethical issues come before the economic responsibilities appears to contradict the argument that the economic crisis entails a crisis in values and humanitarian crisis, as well. The study' results seems to place additional evidence on the findings of Baden's research [10] and on the academic literature that supports the CSR application may be increasing in the times of an economic recession. The twenty-first century is an era where the boundaries among CSR, moral and ethical principles seem to fade, in the business context. This may be an opportunity for those who tend to consider CSR just as a marketing tool with no discrimination between social and financial performance. Corporate Social Responsibility may have many more important long-term benefits than the short-term fiscal financial turnover. Furthermore, social benefits may have also an impact on the business objectives, together with the tangible benefits. Nowadays, the reformation

of Carroll's Pyramid is depicting the ever-growing consumers' demand for businesses to act at a socially responsible way that will place the ethical and law-abiding goals before their rational short-term gains. Such behavior may have multiplier effects on the long run, which will be beneficiary for the sustainable financial performance, as well. In this way, a social contract between businesses and the society may be established that will bring mutual benefits.

References

1. Carroll AB (1991) The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. Bus Horiz 34:39–48
2. Jothi M (2010) CSR . . . in the era of global economic meltdown. Global Manag Rev 4:93–97
3. Skapinker M (2009) Why corporate responsibility is a survivor. Financial Times. http://www.ft.com/intl/cms/s/0/95559246-2b45-11de-b806-00144feabdc0.html#axzz2tf6zSkuY
4. Ellis L, Bastin C (2011) Corporate social responsibility in times of recession: changing discourses and implications for policy and practice. Corp Soc Respon Environ Manag 18:294–305. https://doi.org/10.1002/csr.254
5. Ducassy I (2013) Does corporate social responsibility pay off in times of crisis? An alternative perspective on the relationship between financial and corporate social performance. Corp Soc Respon Environ Manag 20:157–167
6. Placier K (2011) The impact of recession on the implementation of corporate social responsibility in companies. J Competitiveness Issue 2:83–98
7. Shergold P (2009) Economic recession and corporate social responsibility (CSR) in Singapore. Soc Space:48–53
8. SETE Statistics (2018) http://sete.gr/el/statistika-vivliothiki/statistika/
9. Cambridge Business English Dictionary (2011) Cambridge University Press, Cambridge
10. Baden D (2016) A reconstruction of Carroll's pyramid of corporate social responsibility for the 21st century. Int J Corporate Soc Responsibility 1:8
11. Jaworski B, Kohli A (1993) Market orientation: antecedents and consequences. J Mark 52:53–70
12. DeVellis RF (1991) Scale development. Sage, Newbury Park, NJ

Culinary Innovation: The Path to Michelin Stars

Magda Peistikou and Natasha Iliopoulou

Abstract A growing interest in the chef's occupation has been noted in the Greek market. Especially in the turbulent years of the Greek economy, the chefs' occupation has increased in popularity due to the high levels of employment [Bogdanou (No crisis for the chefs' occupation. Rodiaki, 2017)]. What is more, it is considered to be one of the most prestigious professional choices for young adults [Giannarou (The chef's profession has prestige. Kathimerini, 2016)]. However, this trend is not new to the international market as the first signs were identified in the 1970s. During that period the first celebrity chefs appeared in the media and the cooking programs became a popular routine [Johnston and Baumann (Foodies: democracy and distinction in the Gourmet foodscape. Routledge, 2010)]. Nowadays, chefs' role in the society has broadened with themselves becoming food experts, innovators, managers, advertisers or personalities [Roosipold and Loogma (Prof Professional 4:1–18, 2014)]. In this context, both in the world and in Greece, there is growing awareness for fine dining which is mainly attributed to the fact that consumers are more healthy-eating oriented. What is more, the percentage of consumers who express an interest in healthy lifestyle and the belief that carnivorous cuisine has a negative impact on the environment is constantly increasing [Campbell (Vegetarians gain more options for fine dining with 50% rise in foodie eateries. The Guardian, 2010)]. Fine dining has made a strong entrance in the culinary scene worldwide and chefs who represent this type of cuisine are becoming representatives of innovation due to the unique dining experience they tend to offer [Antonopoulos (Fine dining internationally and in Greece. Xrysoi Skoufoi Publishing, 2018)]. Fine dining restaurants are all different but share similar characteristics: attention to detail, perfect execution, and exceptional service. The establishments that succeed in demonstrating their strong commitment to these areas are usually the ones that are awarded a Michelin star (one, two or three stars). Even though extensive bibliography on the innovation development process that Michelin restaurant chefs follow worldwide [Ottebancher and Harrington (Int J Contemp Hosp Manag 19:444–460, 2007)] exists; no similar research has been conducted for Greek restaurants. This

M. Peistikou (✉) · N. Iliopoulou
Athens, Greece

article aims to examine the development process Michelin star chefs in local restaurants follow and compare it with the existing literature.

Keywords New product development · Culinary product · Michelin chefs

1 Background

Numerous researchers have explored the field of new product development (NPD) [1, 2]. In most cases literature focuses on the development of different types of industrial products. Also, there is some research identified in the field of food product development which is mostly focusing on retail items (i.e. potato chips, a soda, etc.) [3]. However, discussion on NPD has evolved and New Service Development (NSD) is introduced in literature. Literature provides sufficient justification for this differentiation based on the key characteristics of the services (intangibility, inseparability, perishability, heterogeneous) [4]. Besides, developing a new service is far more difficult than a tangible new product [3].

As far as the culinary sector is concerned, limited research has been conducted in the NSD field. In the vast majority, findings are related to new product development models and culinary innovation literature. There is no doubt, that innovation is an important aspect of new service development, especially in the high end of the culinary world [5]. There is no surprise that authors provide various definitions on innovation and make special reference to service innovation as well [6]. Oke [7] relates service innovation to variations in product delivery or add-on services establishing the service experience for the customer.

With this in mind, the food product haute cuisine establishments' offer is a combination of physical elements (the dish, the raw materials or the wine) and intangible features (the atmosphere, the service, the music, etc.). Therefore, this could be considered as a culinary experience and its development process to be compared and contrasted with new service development models.

2 Methodology

Various models on NSD have been identified in literature. An interesting outcome from the literature review was that NSD models are usually developed solely on the basis of studies in a single country or sector (i.e. financial services, telecom services, or healthcare) [8]. The research plan utilized semi structured interviews with Michelin-starred chefs in Greece aiming at understanding the process they follow when they create new recipes.

The qualitative method enabled the researchers to ask additional questions to the participants and explain further key concepts when required. Interviews lasted

2 hours in one case whereas in the other two participants final responses were sent by e-mail due to the chefs' heavy business schedule. One participant was met with the researcher for a preliminary discussion and then he decided to respond the questionnaire in written as he would travel abroad for 2 months. The number of restaurants that have been included in the Michelin Guide for 2018 are five from which three have been awarded one Michelin star. The remaining two restaurants received two Michelin stars. All five restaurant chefs' have been contacted for interviews and agreed to participate in the research. However, their limited availability due to professional obligations during summer season did not permit them all to contribute. All of the interviewed chefs were male, ranged from 40 to 65 years of age and they were all familiar with the concepts of service development and innovation.

The questionnaire was divided in four sections, based on the four stages the NSD model of Scheuing and Johnson [9] involves as following:

• Stage 1: Direction

In this stage, the formulation of new service objectives and strategy, idea generation and idea screening are included. In several cases firms jump into idea generation. Better to start with a precise formulation of the objectives and strategy. These assembled raw ideas have to be subjected to a first and relatively crude sorting procedure that separates the more promising from the less meritorious ideas. Although this preliminary idea screening tends to be largely judgmental in nature care should be taken not to reject an idea out of hand because it is unusual.

• Stage 2: Design

In this stage, seven steps are involved. After the concept's development, testing follows and then service is designed in full. Based on theory, when service design is completed marketing design takes place and personnel is trained on the product. In concept development the surviving ideas are expanded into full fledged concepts with the help of input from prospects and the company's own customer contact personnel.

• Stage 3: Testing

Service testing is used to determine potential customers' acceptance of new service while a pilot run ensures its smooth functioning. This step builds on knowledge and insights gained during the concept testing step earlier in the development process. The goal is to make any necessary refinements to the service and its marketing mix as a result of customers' reactions to the service offer.

• Stage 4: Introduction

With the delivery system and marketing program in place the company now initiates the full scale launch of the new service, introducing it to its entire market area. This step is followed by a post launch review aimed at determining whether the new service objectives are being achieved or whether adjustments are called for. Even after all aspects of the new service and its marketing mix are carefully tested market conditions may require further modifications.

3   Results

Due to the small number of responses and the open nature of questions, statistical data processing was not applicable. All three respondents seem to follow several steps of the four stages that Scheuing and Johnson [9] NSD model dictates. More specifically the findings are presented below:

- Stage 1: Direction

As mentioned in literature, several establishments move directly to the idea generation without first formulating their objectives and strategy [10]. All three respondents answered that the first step in idea generation is the ingredient with no reference made to company's strategy or objectives. The factor that motivates them all to start considering a new recipe is the seasonal availability of an ingredient. Also, they all pointed out the importance of the seasonal nature of the ingredients as this guarantees the quality of the flavors in their dishes. Another important aspect identified in this first stage of the process, was inspiration. As respondent A explained: "Inspiration is the first step in the creation of the idea. Our source of inspiration may be a trip, a painting, a memory or elements of our tradition".

- Stage 2: Design

In general, the design of a dish may last from few weeks to 2 or even 3 years according to the desired result. In this stage, chefs explained that testing is the first and most important action they perform. Respondent B mentions that he and his team test the recipe and they make the amendments they believe are required in order to improve the texture, the flavor or the design of the dish. With this in mind, the researchers pose the chefs an additional question concerning the cost control of this process. The respondents stated that there is no limit in the trials of one recipe. Consequently, the cost factor appeared crucial for the restaurant's viability. None of the participants in the research expressed a concern on the issue as they were all interested only in the final outcome. One of them actually noted that "If the result meets our standards, food cost is not of our concern". What is more, chefs pointed out that even in cases of increased food costs; they incorporate the dish in their menus providing that they are content with the result. However, restaurants of this type include in their budget a section for these costs (approximately 30% of their annual spending) or they integrate it in the final price of the dish.

- Stage 3: Testing

In the restaurants' case, testing is conducted in the aid of the personnel and not the customers. During this process, waiters taste the dish in the aid of the restaurant manager who is also playing the role of the trainer (in terms of how to promote the dish). A second source of information, as chefs mentioned, is usually a small group of friends or regular customers. The selection of these people is based on the fact that the chefs value the opinion of those who are familiar with their cooking philosophy. As a final step, the wine pairing is taking place in the aid of sommeliers. What should

also be noted is that during this stage (and the previous stage as well), no market research or competitors' analysis is being conducted. All three chefs explained that there is no need to perform market research as they offer unique experiences in their customers. What is more, they believe that their differentiation point is clearly stated in the mind of the customers.

With a focus on quality, these Michelin star restaurants, elaborate on training their staff before the launching of the new dish. So, the personnel is being trained not only the wine pairing of the dish but also on the appropriate cutlery, the cooking techniques applied and the various ingredients used. Last but not least during this stage the waiters are being taught on the story telling of the dish and the alternatives recommendations for guests with specific diet requirements.

- Stage 4: Introduction

According to Scheuing and Johnson [9], after the completion of stage 3, the service is ready to be launched in the market. In this case the dish is being introduced in the restaurant. Based on NSD model, this step is followed by a review that in an attempt to define possible ameliorations of the product. The process all three chefs follow during this stage is to receive instant feedback from their customers. As one of the chefs mentioned, "we are trying to interpret the customer's reaction while he is tasting the dish". Apart from that, they are also collecting feedback from the customers with the help of their waiters.

4 Discussion-Conclusions

For modern chefs, small parts of innovation could lead in a major culinary change [11]. "Fine dining is an art form characterised by incremental and collective innovation" Three of the world's most innovative chefs in their manifesto mention that they embrace innovation but built on the bedrock of tradition [12]. So far reseach on the process Michelin star chefs follow in the development of new products is either compared with new product development models or innovation theories [13]. In this research we investigated the development process chefs of this category follow in order to create a new recipe. Our first conclusion was that during stage one chefs move directly to idea generation with no previous research or discussion on company's objectives. In addition, chefs do not formulate corporate strategy in order to match its objectives with the potential product [9]. Our research confirms previous findings that identify as crucial factor in the development process the quality [13] of the ingredients as well as their seasonal nature. In this stage an interesting outcome was the fact that all three chefs refered to inspiration. As they all pointed out the source of inspiration is the key element for the product development.

Another interesting conclusion was the fact that none of the chefs take into consideration the financial aspect of the process. None of them use official financial measurements during the launch of their product (i.e. number of dishes sold). What is more, as they explained, the result is evaluated with the help of the customers'

comments and not based on specific questionnaires or other customer satisfaction methods. Moreover, our research confirmed that chefs train their waiters before the launching of the dish. The aspects of training invlove wine pairing, the use of appropriate cutlery and the methods that were used for cooking the dish [13]. What our research revealed in this part was the fact that chefs train the waiters in storytelling as well. One key limitation of our research was the fact that during the time of the interviews most chefs were not available or easy to reach due to their restaurants openings for summer season. Another limitation was the few Michelin star chefs that exist in Greece. So from the five chefs in total, three managed to answer our interviews. A suggestion for future research could be to explore and compare the development process that Michelin star chefs and toque d'or chefs follow.

References

1. Bhuiyan N (2011) A framework for successful new product development. J Ind Eng Manag 4:746–770
2. Kumar S, Phrommathed P (2005) New product development: an empirical approach to study of the effects of innovation strategy, organisations learning and market conditions. Springer, New York
3. Cooper RG, Edgett SJ (1999) Product development for the service sector. Perseus, Cambridge, MA
4. De Brentani U (1995) New industrial service development: scenarios for success and failure. J Bus Res 32(2):93–103
5. Rothkopf M (2009) Innovation in commoditized service industries: an empirical case. Lit Verlag, Berlin
6. Hauschild S (2007) Innovations management. Vahlens Handbücher der Wirtschafts- und Sozialwissenschaften. Vahlen, München
7. Oke A (2007) Innovation types and innovation management practices in service companies. Int J Oper Prod Manag 27:564–587. https://doi.org/10.1108/01443570710750268
8. Jaakkola E, Meiren T, Witell L, Edvardsson B, Schäfer A, Reynoso J, Sebastiani R, Weitlaner D (2017) Does one size fit all? New service development across different types of services. J Serv Manag 28:329–347
9. Scheuing EE, Johnson EM (1989) A proposed model for new service development. J Serv Mark 3:25–34. https://doi.org/10.1108/EUM0000000002484
10. Bogdanou V (2017) No crisis for the chefs' occupation. Rodiaki. https://www.rodiaki.gr/article/359407/mageiras-to-epaggelma-poy-den-gnwrizei-krish
11. Opazo M (2016) Appetite for innovation: creativity and change at elBulli. Columbia University Press, New York
12. Raustiala K, Springman C (2012) The knockoff economy: how imitation Sparks innovation. Oxford University Press, Oxford
13. Ottebancher M, Harrington RJ (2007) The culinary innovation process: a study of Michelin-starred chefs. J Culinary Sci Technol 5:9–28. http://jcst.hawonhpress.com. https://doi.org/10.1300/J385v05n04_02

Hotel Revenue Management Techniques and Successful Applications in the Greek Resort Hotels Sector

Maria Douvrou

Abstract Revenue management is a complex mechanism of commercial decision making that is used to increase a company's profit by matching supply and demand. This is achieved by utilizing a set of pricing and non-pricing strategies to allocate the right product to the right customer at the right price at the right time. Revenue management requires the application of analytics that predicts consumer behaviour at the micro-market level to optimise product availability and price to maximise revenue growth. In this paper we will distinguish between pricing and non-pricing related tools and present a number of revenue management techniques such as: allotment distribution, roomtype variations and rates, yield management and overbooking. We will then take an empirical approach and present a few real-life cases from resort hotels on Greek islands that applied these techniques and achieved a substantial revenue increase year-on-year over and above the annual market increase, for summer seasons 2017–2018. The selection of these hotels was made as they were appropriate examples to showcase how the various revenue management tools can be combined.

Keywords Hotel revenue · Revenue management · Yield management · Overbooking

1 Introduction

The revenue management function brings together various aspects of marketing management (segmentation, pricing, distribution, etc.) and other issues (turnover optimization, capacity and sales volume management, budget analysis, etc.) The revenue manager's operational approach consists of data management, forecasting and decision making regarding capacity allocation and optimization [1].

M. Douvrou (✉)
Cielotel, London, UK
e-mail: mdouvrou@cielotel.com

927

Revenue or yield management was developed in the 1980s. The term yield refers to a return on effort or investment. The development of revenue management began with the evolution of the airline industry in the United States. The Airline deregulation Act released in 1978 opened the market for multiple new airlines which consequently created tough competition. As the competition stiffened the airlines resorted to price cutting which led to a price war. This strategy of price cutting proved to be very destructive on the long-term for most airlines. This realization resulted in the creation of yield management as airlines began to offer only a limited amount of low-priced seats while maintaining higher fares to the remaining seats.

The focus was shifted to the optimization of the revenue generated rather than trying to fill the plane no matter what the cost. The Global Distribution System was developed during the same period which facilitated the use of yield management techniques [2].

Revenue management can be applied in other industries also. These however need to have the following characteristics:

- fixed capacity,
- a perishable product,
- fluctuating demand,
- possibility for price segmentation and
- product segmentation.

Revenue management can be profitably applied in airlines, hotels, restaurants, golf courses, shopping malls, telephone operators, conference centres and other companies. This has triggered significant theoretical research in its fundamentals and its application in various industries including tourism and hospitality that deal with big volumes of sales [3].

While revenue management is very well developed both as a theoretical framework and a business practice in the airline industry, it has not received enough attention in the field of hospitality. Research in hotel revenue management, in particular, is fragmented and lags significantly behind the revenue management practice in the field [4].

In this regard, the aim of the current paper is to connect the gaps in research literature and provide directions for future research. To do so, not only this paper revises some of the existing research but it offers a number of successful cases on which the author has worked extensively. These were selected based on the applicability of multiple revenue management tools and the positive result yielded.

2 Revenue Management Techniques

The application of revenue management requires a lot of data regarding different metrics such as average daily rate (ADR), revenue per available room (RevPAR), gross operating profit per available room (GOPPAR), occupancy, yield, net profit per available room, etc. Additionally, the revenue manager requires information

Table 1 Revenue
management tools

Pricing tools	Non-pricing tools
Dynamic pricing	Room types
Price fence	Selective stop-sales
Price discrimination	Overbooking

about the hotel's future bookings on a daily basis (what types and how many rooms), sale of additional services in the other revenue centres, competitors' rates and strategies, information regarding changes in legislation, special events to take place in the destination and any other data/information that relates to the demand, supply, revenues and financial results of the hotel [5]. Effective pricing is the foundation of successful revenue management. Its strategic importance has grown considerably in recent years. Pricing has both tactical and strategic aspects. Tactical pricing deals with short-term decisions such as daily or weekly pricing decisions. Strategic pricing takes into account the long-term aspects of rate management with an objective of increasing revenue by gaining a bigger market share [6].

Revenue management however includes a number of pricing and non-pricing tools that are commonly used, as indicated below in Table 1 although the list is not exhaustive [7].

2.1 Dynamic Pricing

One of the integral concepts of pricing nowadays is dynamic pricing. It allows hotels to maximize the RevPAR and yield by offering a price that reflects the current level of demand and occupancy and amend it according to changes in demand and occupancy rate. By virtue of this, customers frequently pay different prices even when they have one and the same booking details (period of stay, board basis, number and type of rooms) depending on the moment of reservation.

2.2 Price Fence

Hotel price fences are used to variate the rate according to a different set of conditions of the booking. These could include day of the week, duration of stay, guest characteristics, cancellation terms (free or not), amendment and payment terms, lead period and more.

2.3   Price Discrimination

Price discrimination means that the hotel charges its customers different prices for the same rooms and the economic rationale for this are the differences in price sensitiveness of hotels' market segments (e.g. business travellers are less price-sensitive compared to leisure travellers and could afford to pay higher prices).

2.4   Room Types

The hotel recognises that rooms with different characteristics will attract a different rate. The characteristics could involve room size and aesthetics but also its view type and location in the hotel building. The revenue management function should promote cheaper room type rates in low demand environment even if the guest actually gets allocated a premium room type. On the other hand, during high demand, the hotel should aim to push sales of higher rate room types.

2.5   Selective Stop Sales

At certain occupancy levels the hotel should ensure that the cheapest room types are on stop-sales, in order to take advantage of the high demand and 'force' sales of more expensive room types.

Other form of stop sales can be used across different contracts, if these do not adhere to the rate parity rule.

2.6   Overbooking

This revenue management technique is based on the assumption that some of the customers that have booked rooms will not appear for check-in (so called "no show"), others will cancel or amend their bookings last minute, while third will prematurely break their stay in the hotel (due to illness, personal reasons, traffic, bad weather, force majeure or other reasons). In order to protect itself from losses the hotel confirms more rooms than its available capacity with the expectation that the number of overbooked rooms will match the number of no shows, last minute cancellations and amendments. This requires careful planning of the optimal level of overbookings [8].

Overbooking for hotels is the revenue management strategy that helps to maximize the total capacity in order to reach 100% occupancy. It is important to note that there exists a closed form solution to guarantee the optimal number of overbooking,

depending on the cost of walking customers to other hotels, the cost of unsold rooms and cancellation distribution observed in the past [9].

Having identified and described a number of key revenue management tools, it is interesting to comment on their applicability. A presentation of few real life success cases follows, so as to highlight the difference in hotel performance when such tools apply.

3 Real-Life Success Stories

Tranter et al. identify eight distinctive steps in revenue management process [10]:

1. customer knowledge,
2. market segmentation and selection,
3. internal assessment,
4. competitive analysis,
5. demand forecasting,
6. channel analysis and selection,
7. dynamic value-based pricing, and
8. channel and inventory management.

It is evident that the implementation of the taken decisions requires that the staff be trained to apply numerous sales techniques in order to close a sale at a higher rate or reject a booking for a shorter stay with the expectation to sell the room for a longer one and achieve the revenue management goals.

Having practiced revenue management successfully for a number of years, we present few examples of real-life cases where a combination of tools was utilised and yielded excellent results for the hotels.

3.1 Fixing Pricing and Distribution for a 4* Hotel in Zakynthos Island, Greece

Identified Issue The seasonal market was healthy; however, Avalon Hotel [11] was suffering from very low occupancy during full season months, which are the most profitable months of the operation. In mid-June, the Booking Position for July only indicated 37% of confirmed bookings. At the time, the distribution of the hotel was done predominantly off-line via tour operator contracts.

Revenue Management Tools Used The classic example of wrongly priced peak season together with weak distribution had to be addressed. We went to very quickly identify which of the tour operators that had contracted with the hotel had available seats on their July arrivals. Once this list was established, we gave a special offer for

a short period and selective arrivals where the hotel needed the extra occupancy the most.

At the same time, we opened sales on all on-line B2C channels with adequate allotment and a slight discount to arrive at a competitive rate in relation to the hotel's immediate competitors in the destination.

Outcome of Offered Solution The outcome of this combination of rate management and distribution was actual July occupancy of 84% for that year. As yield activities continued for this hotel for the rest of the season, and while the market increase of the year was approximately 5%, the total turnover increase achieved at the hotel was 10.4% year-on-year. This is a clear market outperformance and a success story for revenue management.

3.2 Fixing Room-Types Mix and Rate Parity for a 3* Hotel in Rhodes Island, Greece

Identified Issue In this case, this small hotel Rodos Blue Resort [12] was suffering lower than average occupancy and revenue. It was selling all hotel rooms under the same roomtype, without any differentiation and opportunity to up-sell. At the same time, the hotel did not observe rate parity across its contracts, having succumbed during negotiations with some agents. As a result, some contracts were disadvantaged and unable to push sales even when they had demand for the product.

Revenue Management Tools Used Going very carefully through the hotel's inventory and identifying certain differences in the hardware, we created one additional room type relating to the view. This room type naturally attracted a higher rate and was introduced to all existing contracts, at the same rate.

Next we identified the periods that the basic room type was physically sold-out, we applied stop sales and allowed the new, premium room type to sell. Having observed rate parity through all channels, the sales came a lot easier and at a healthier ADR.

Outcome of Offered Solution The outcome of this exercise was a circa 14% occupancy increase year-on-year and a 18% y-o-y increase in revenue.

3.3 Fixing Erratic Occupancy and Underutilised Room Types for a 4* Hotel in Corfu Island, Greece

Identified Issue Ariti Grand Hotel [13] had a more complex distribution network as it had many characteristics of a city hotel, albeit on a holiday destination. As such, it experienced high demand from very short stay groups, often occupying a high number of the hotel rooms. These groups would create a spike on occupancy levels,

such that the hotel often applied stop-sales for one or two nights, thus disrupting the sale flow.

In addition, in order to secure these group bookings, the hotel was offering the most competitive rate at its basic room type. This was often oversold, and guests would receive a free upgrade to a more premium room type.

Revenue Management Tools Used The immediate remedy was to discontinue the stop-sales mentality at the hotel and allow careful overbooking. In most cases this would resolve last minute as not all rooms under the group bookings materialised. However, even in cases were more than 100% of the capacity was sold, we would carefully move some low rate bookings to neighborhood hotels, which would match our low rate as a last-minute yield management decision.

Furthermore, we applied rate discrimination in group bookings coming in at high occupancy dates. There was rate inflation for these, in order to compensate for their short stay nature.

Finally, we would be a lot more diligent in applying stop-sales in the basic room type to the regular distribution channels, shifting sales to more premium rooms at times where market demand permitted. This enabled us to offer adequate allotment for the group bookings.

Outcome of Offered Solution The hotel recorded improved and smoother occupancy levels together with a substantial ADR increase year-on-year, resulting to a turnover increase of 20%.

4 Conclusion

Revenue management is a concept that not only maximises revenue in high period demand, it helps stimulating demand in low periods while avoiding pricing cannibalism. Revenue management takes all revenue and its underlying profitability into consideration, can sell low rates even in high demand period and is long term strategic. In the services sector, case studies have illustrated how the hospitality sector behaves in order to be competitive [14]. The tools used are both pricing and non-pricing related and they are normally combined to achieve the best result of the revenue management goals.

References

1. Fyall A, Legohérel P, Poutier E (2013) Revenue management for hospitality & tourism. Goodfellow Publishers, Woodeaton, Oxford
2. Himanka M (2014) Rate Parity's role in hotel revenue management. Bachelor's Thesis HAAGA HELIA – University of Applied Science: Degree Programme in Hotel, Restaurant and Tourism Management

3. Avinal EA (2006) Revenue management in hotels. J Foodserv Bus Res 7:1–57. https://doi.org/10.1300/J369v07n04_02
4. Ivanov S, Zhechev V (2011) Hotel revenue management – a critical literature review. SSRN Electron J. https://doi.org/10.2139/ssrn.1977467
5. Barth JE (2002) Yield management: opportunities for private club managers. Int J Contemp Hosp Manag 14:136–141. https://doi.org/10.1108/09596110210424493
6. Forgacs G (2010) Revenue management. Maximizing revenue in hospitality operations book. AHLEI American Hotel & Lodging Educational Institute
7. Palmer A, Mc-Mahon-Beattie U (2008) Variable pricing through revenue management: a critical evaluation of affective outcomes. Manag Res News 31:189–199
8. Hadjinicola GC, Panayi C (1997) The overbooking problem in hotels with multiple tour-operators. Int J Oper Prod Manag 17:874–885. https://doi.org/10.1108/01443579710171208
9. Naragain P, Panaratch M (2014) Optimal overbooking decision for hotel rooms revenue management. J Hosp Tour Technol 5:261–277. https://doi.org/10.1108/JHTT-03-2014-0006
10. Tranter KA, Stuart-Hill T, Parker J (2008) Introduction to revenue management for the hospitality industry. Pearson Prentice Hall, Harlow
11. www.avalon-palace.com
12. www.rodosblueresort.com
13. www.aritihotel.com
14. Belias D, Velissariou E, Roditis A, Chondrogiannis M, Katsios S, Kyriakou D, Varsanis K, Koustelios A (2019) The unethical practice of hotel review ghost-writers. In: Papathanassis A, Katsios S, Dinu N (eds) Yellow tourism. Tourism, hospitality & event management. Springer, Cham. https://doi.org/10.1007/978-3-319-94664-1_10

To Be or Not to Be? Which Is the Case with Robots in the Hotel Industry?

Dimitrios Belias and Sotiris Varelas

Abstract Recognizing that in the future robots will play an important role in the operation of tourist units, there is a need for a first record of existing research and bibliography. The ultimate aim of this bibliographic study is to record the current situation and then make proposals for future research due to a lack of relevant primary data. It should be noted that the relevant literature is particularly limited, with references being mainly from 2017 to 2018, focusing on Ivanov's research, but with limited empirical data and the lack of publications in high-quality scientific journals. For this reason, this study proposes two research cases to be explored in a future survey. The first concerns the potential increase in customer satisfaction from the use of robots and the second the effect of using robots on job satisfaction of hotel workers.

Keywords Robots · Hotels · Job satisfaction · Quality of service · Customer satisfaction

1 Introduction

Robotics is called the science and technology of robots, which deals with their design, development, construction and application. According to ISO [1], robots are defined as "*automatically controlled, reprogrammable, multipurpose manipulator, programmable in three or more axes, which can be either fixed in place or mobile for use in industrial automation applications.*" Robotics engineers usually study electronics, engineering and software engineering. Their story begins in 1961 when the Ultimate robot was put into operation. His job was to lift hot metal objects from a

D. Belias (✉)
Technological Educational Institute of Thessaly, Larissa, Greece
e-mail: dbelias@pe.uth.gr

S. Varelas
Neapolis University Pafos, Pafos, Cyprus

935

paint pool and put them in a stack [2]. Today industrial and commercial robots have flooded the market. They are mainly used for jobs done in dirty environments as well as for dangerous jobs and carry out scheduled tasks at less cost and more accurately than people. The term came from the Czech word robota. Oxford's dictionary tells us that the word robotics was first used by Isaac Asimov in the science fiction story "Liar!" In 1941. But Asimov did not know that already the Czech author Karel Capek had used the word in 1921 in Rossum's Universal Robots in 1921 [3].

Robotics has many different applications in production—for example automation of production lines—and in services disasters [3, 4]. One particular point of view is whether robots can replace humans in the provision of services, in the case of tourism services. At present, the application of robotics to tourism is very limited [5], while at the academic level there has begun to have a relative interest [6]. Recognizing that the question of whether the robots will replace employees in tourism is an issue that will concern the tourism industry in the future, coupled with a lack of research on this issue, they create the need for research as to whether robotics may affect the operation of tourist units and as a higher level it can replace human resources. For this reason, this study will proceed to a first record of existing research and literature. The ultimate goal is to record the current situation and then to make proposals for future research.

2 Methodology

The methodology that was used in this paper is the critical review of the cur-rent literature. Relevant literature selection was derived from popular online bibliographic databases, like Science Direct, Emerald, EBSCO host and scientific search engines like Google Scholar. The types of bibliographic sources included in the research are articles published on scientific journals, books, conference proceedings, company papers and studies, white papers, online sites and online journals. The selection criteria of these literature sources were based on the relevance to the topic of the paper and this research is not exhaustive.

3 Literature Review

3.1 Robot Operation

Robots usually consist of mechanical and electronic parts. The computer parts and the software that they need (flash memory) are implemented in the electronic parts. All robots that make sense in this thesis have sensors, actuators, motion systems, communication systems, and a tiny size-sized, processor, memory, I/O, peripheral device and memory operating system. Robots are modeled into three component components: Sensors, Emotions and Behaviors. Their logical connection and

operation is similar to that of intermediaries. Sensors are the electronic devices used to convert signals from the real world into computer language. Examples are:

- cameras,
- infrared rays,
- GPS,
- vibration systems,
- mercury contacts,
- microphones [7].

The behaviors essentially correspond to the input of the sensors to the effectors after they process the input signal. Behaviors as mentioned above are simple, superior and emerging when many (homogeneous or heterogeneous) robots coexist.

3.2 Applications of Robotics in Tourism

The tourism industry is one of the places where new technologies, such as virtual reality and artificial intelligence, are already emerging, with significant prospects for the future, as experts believe that it could be, more than any other field, the industry in which all the latest state-of-the-art technologies are applied to offer smarter, smarter, more automated, personalized and prophetic processes.

Chestler [2], refers to the use of artificial intelligence applications in hotels that may be the following:

Robot: Already Marriott has the Mario robot welcoming guests, Hilton Connie, InterContinental Dash carrying objects. Robots are the smile of customers, and, especially for Mario, can help in checking, talking, supervising the rooms, discussing the menu, and making presentations.

It should be noted that although the use of robots in hotels is at an experimental stage, there are cases where robots are used by hotels. This implies that artificial intelligence and robotics are a reality and will continue to evolve rapidly in the tourism industry, replacing tasks that until recently required human presence. One of the advantages of the robots is that they will provide tourism professionals with data on the use of services made by travelers. Some examples are the following:

- The first example, the Fairfield Inn & Suites in San Marcos, California, opened last May, has a Savioke employee robot Hubert. Hubert is very fond of visitors and has increased their level of satisfaction, tripling sales prospects in stores, diminishing the need for trades and delivering security at night. It also moves comfortably around the hotel, even entering the elevator to reach the guest rooms.
- Maidbot developed a robot for cleanliness, Rosie, and Hilton has Connie at the reception.
- Also, the use of a cobot robot in the cleanliness of the hotel reduces the cleaning time of the rooms and rests the workers in cleanliness [8].

According to Nobre [7] the use of robots in hotels is a practice that is mainly found in two hotel groups. One group is in hotels that are in countries with state-of-the-art technologies in the use of artificial intelligence and robotics with countries such as South Korea and Japan dominating and related applications, while a second group is the large hotels luxury who have the necessary funds to invest in this new innovation. Although the use of robots is a new trend, there should be a discussion of what is in the relevant literature. This will be done in the next section, focusing on whether the use of robots affects hotel workers but also the impact on service quality.

4 Discussion

At this point it should be mentioned that research on this issue is limited while there is a significant lack of empirical studies and studies that examine the impact of the use of robots on particular variables such as customer satisfaction and the impact on work employee satisfaction.

One particular point is to look at what are the attitudes and perceptions of consumers and how many are ready to welcome robots to hotels. The study by [9], refers to the fact that the more and more frequent use of robots in hotels may encounter barriers to the resistance of both clients and hotel workers. The survey by [10] was conducted in Russia and showed that consumers who seem to have a positive perception of the use of robots in the tourism sector are mostly young men, men, living in urban centers and having a positive attitude for the use of new technologies. Also, research has shown that consumers have a more positive attitude towards the use of robots in terms of informing visitors and less having main roles in service such as housekeeping or services of particular importance. This means that based on the study by [9, 10], consumers would prefer robots to have a supportive role in services of minor importance. The study of [11], was made to tourists from Britain and America. The survey showed that tourists have particular concerns about the use of robots in hotels, although this is how they are satisfied with these services. The particular elements that will positively influence consumer perception of the experience they have with their interaction with the robots within a hotel is to have the robot human characteristics and behaviors. The second element is security. The tourist wants to have a guarantee that the robot will do the right thing to do without endangering the safety of the visitors, a factor which may affect also the level of adoption from tourist companies [12]. Another application noted from [13], is that robots on hotels can have a secondary role which is to entertain the guests, especially the younger ones, such as to have robots imitating pets, something which will entertain the guests but also the hotel's management will not have to use pets hence to violate ethical rules, or they can use robots to welcome their guests [14], while there is also some tendency of using robots on dark tourism [15].

The study by [16] refers to the fact that the automation of hotel services with the use of robots is aimed at reducing operating costs and the assignment of some services such as cleaning or welcoming to robot entry that theoretically does not

may be wrong or affected by some particular factors that affect the employee delivering the service such as fatigue, dissatisfaction with his work, or some momentary inattention that will lead to error. These are elements that can be avoided by the use of robots and consequently to increase the level of services offered by hotels, but also to make better use of human resources. At this point [17], points out that this is a very delicate point and certainly the data will constantly change as more robots grow in hotels and the public becomes more and more familiar, so the reluctance will be reduced and evaluations will be based on real experiences and events, and not on the basis of a relative bias that exists for the use of robots.

Another parameter is the effect on job satisfaction. Since the use of robots is limited, it is expected that research will also be limited. Lee and Baker [18], refer to the fact that the use of robots in hotels can scare a part of the employees, but on the other hand, workers are familiar with new technologies and accept that part of their work can be done by some robot. Indeed, in many cases workers see positively that some routine procedures can be automated, such as welcoming customers. Ivanov and Webster [9], mentions that the use of robots in hotels should be treated like any organizational change. This means that staff should be informed and involved in the whole process. Also, proper staff training will help to work harmoniously with robots and to redefine jobs. So, hotel management should give the same attention to both customers and workers [19, 20]. It should be noted that while this trend may endanger employment for many workers in the sector, it will not lead to a massive employment problem. It may have a positive impact on unit earnings as capital costs replace labor costs, and at the same time, may require employee training to acquire new skills. Moreover, the overall effect of mechanization in the past was the creation of new jobs and, above all, the improvement of existing jobs.

Overall, from a critical point of view, robots are related with innovative and the attempts made from hotel and other tourist companies to differentiate [21]. Indeed, robots can provide an advantage in a functional level—from improving the efficiency of the services [22, 23], up to providing a greater depth of augmented services and overall improving the service experience. Surely, the current research is pretty limited so to make an insight on the use of robots. What it can be drawn from the existing literature is that many hotels are trying to figure out how they will utilize them. However, a crucial insight is whether the customers will accept robots and if robots will improve the overall customer experience, while they can have a significant impact on the efficiency of the hotels.

5   Conclusions and Proposals

Robotics is now considered cutting-edge technology. He has been recognized by industry for the last thirty years to increase quality and performance. It is currently at the point where its horizons are changing dramatically. The twenty-first century robots will be used in every field, from surgical operations, space explorations and

access to dangerous areas, to home helpers and toys, while they can have many operations in the tourist industry [4].

The work examined the impact that the use of robots in tourist units may have. The more general picture is that it is a chapter that has not yet been explored and there is certainly room for more research. For this reason, two fields should be explored with the corresponding research cases.

The first field is the potential increase in customer satisfaction from the use of robots. The research case may be "The effect of using robots on levels of customer satisfaction is positive." At this point it will be examined whether replacing people with machines affects the performance of services to the positive one and if this has an impact on the levels of customer satisfaction.

The second field is the effect of using robots on job satisfaction. The research case is that "The use of robots does not adversely affect the job satisfaction of hotel workers". At this point, it will be examined whether the use of the robes affects the workers' satisfaction.

References

1. ISO definitions of robots. https://ifr.org/standardisation. Accessed 10 Aug 2018
2. Kaivo-Oja J, Roth S, Westerlund L (2017) Futures of robotics. Human work in digital transformation. Int J Technol Manag 73:176–205
3. Dirican C (2015) The impacts of robotics, artificial intelligence on business and economics. Procedia Soc Behav Sci 195:564–573
4. Thomas MK (2017) The rise of technology and its influence on labor market outcomes. Gettysburg Econ Rev 10:3
5. Ivanov S, Webster C (2017) Adoption of robots, artificial intelligence and service automation by travel, tourism and hospitality companies – a cost-benefit analysis. In: International Scientific Conference "Contemporary tourism – traditions and innovations"
6. Ivanov SH (2018) The European journal of tourism research: a personal journey. Eur J Tour Res 18:5–12
7. Nobre GF (2018) Automata Economicus: machines that create value and the artificial creative economy. Índice, 10
8. Toronews.gr (2017) Tourism: the era of artificial intelligence and robots from http://www.tornosnews.gr/permalink/25824.html
9. Ivanov S, Webster C (2017) Designing robot-friendly hospitality facilities. In: Proceedings of the scientific conference Tourism. Innovations. Strategies, 13–14 Oct 2017, Bourgas, pp 74–81
10. Ivanov S, Webster C, Garenko A (2018) Young Russian adults' attitudes towards the potential use of robots in hotels. Technol Soc (in press)
11. Tussyadiah IP, Park S (2018) Consumer evaluation of hotel service robots. In: Stangl B, Pesonen J (eds) Information and communication technologies in tourism 2018. Springer, Cham, pp 308–320
12. Ivanov S, Webster C, Berezina K (2017) Adoption of robots and service automation by tourism and hospitality companies. Rev Turismo Desenvolvimento 1(27/28):1501–1517
13. Ivanov S (2018) Tourism beyond humans – robots, pets and teddy bears. Paper presented at the international scientific conference "tourism and innovations", College of Tourism – Varna, Varna, 14–15 Sept 2018. SSRN. https://ssrn.com/abstract=3215437
14. Pan Y, Okada H, Uchiyama T, Suzuki K (2015) On the reaction to robot's speech in a hotel public space. Int J Soc Robot 7:911–920

15. Yeoman I, Mars M (2012) Robots, men and sex tourism. Futures 44:365–371
16. Stringam BB, Gerdes JH (2017) The automation of service in the hotel industry. In: Global conference on services management (GLOSERV 2017), Volterra, p 293
17. Murphy J, Hofacker C, Gretzel U (2017) Dawning of the age of robots in hospitality and tourism: challenges for teaching and research. Eur J Tour Res 15:104–111
18. Lee M, Baker MA (2017) Technology, customer satisfaction and service excellence. In: Koc E (ed) Service failures and recovery in tourism and hospitality: a practical manual. CABI, Wallingford, p 83
19. Kazandjieva VI, Filipova HP (2018) Customer's perception assessment of tech-related innovations in tourism. Izvestiya 62(1):5–20
20. Chestler D (2016) How robots are storming the travel industry. https://insights.ehotelier.com/insights/2016/11/15/robots-storming-travel-industry/
21. Kuo C-M, Chen L-C, Tseng C-Y (2017) Investigating an innovative service with hospitality robots. Int J Contemp Hosp Manag 29(5):1305–1321
22. Pinillos R, Marcos S, Feliz R, Zalama E, Gómez-García-Bermejo J (2016) Long-term assessment of a service robot in a hotel environment. Robot Auton Syst 79:40–57
23. VWS T, Law R (2017) The potential for tourism and hospitality experience research in human-robot interactions. Int J Contemp Hosp Manag 29:2498–2513

Exploratory Study: How Social Networks Effect the Purchasing Intentions of Moroccan Consumers?

M. Chouaib Dakouan and M. Redouane Benabdelouahed

Abstract This article aims to explain the effect of content broadcast on social networks on the purchasing intentions of Moroccan consumers. To do so, the authors conducted a survey on 500 social networks users in Morocco in 2018. Results show that there's a huge impact of shared content on the purchasing decisions. This study will also help to determine the factors that influence the decisions of Moroccan consumers on social media channels. Due to the current economic situation in Morocco caused by the stop of purchase of some products by the customers, this study can help the professionals find some measures to take into account for their future communication campaigns.

Keywords Social networks · Content · Communities · Media

1 Introduction

Since the beginnings of the internet, consumer behavior has changed completely. The advent of technologies and innovations has led to the emergence of new forms of marketing. Global connectivity has challenged many theories specifically about consumer management; it has also changed the way companies respond to competition and customers. Today, competition and co-creation with customers are essential. Connectivity has accelerated market dynamics to the point where it is impossible for a company to remain isolated and rely on these internal resources to succeed. A company must realize that to win, it must collaborate with outside partners and even engage consumers [1].

To this end, companies have to open up to their environment, to take advantage of new technologies and to gain a place in the digital economy. Among the most relevant tools of digital transformation, we cite social media.

M. Chouaib Dakouan (✉) · M. Redouane Benabdelouahed
Hassan II University, Casablanca, Morocco

The rise of these social media has profoundly changed the modes of communication and companies can no longer ignore their use. With the ever-growing popularity of these social media in the use of the internet, several companies have created pages in these media to communicate with their target audience. However, just being present is not enough to benefit from these new socialization tools. In the digital economy, customers socially connect to each other in community networks. Today, these communities are the new segments. Unlike traditional segments, consumers self-form communities with the boundaries they define themselves. The client communities are thus safe from spamming and irrelevant advertising. Worse, they will reject any attempt by a company to break through a network of relationships [1].

Given these barriers, companies have to find new strategies that will allow them to break into these community networks. In fact, our study aims to analyze content broadcast via social networks and its impact on consumers purchasing intentions. To do this, we propose to develop in the first part a theoretical anchoring that will allow us to appreciate the notions of "digital social networks" and the factors that can influence the behavior of purchase of the consumer on the internet. In a second part, we will analyze the results gathered during a survey gathered in Morocco in 2018 that we conducted among young Moroccan Internet users. The purpose of the second part is to highlight the importance of content in the purchasing decisions of Internet users.

2   Theoretical Approaches and Research Hypotheses

Social networks have experienced a very significant acceleration in recent years. Today, they are present all over the world, especially Facebook, Twitter and Instagram, which have become one of the most important means of communication and news sources. They have reached such a scale that forced us to ask the same traditional question: if it is only a fad or if they have a real and strong utility, of a professional type, for individuals and even for brands.

Moroccan Internet users also benefits from this digital revolution, which offered them unprecedented opportunities for exchange with the different Internet users of the world. With the advent of new community sites on the Internet, the dialogue between brands and consumers is moving more and more towards social media: blogs, discussion forums and social networks, etc.

To take advantage of this digital revolution, companies have opted for a content-oriented marketing strategy. That said content marketing represent the future of advertising and the digital economy. In this sense, social media has changed the way content is distributed, today consumers have credible content created by other consumers in the same community as by the companies themselves.

2.1 Social Networks

The notion of the social or social networking network appeared in the mid-nineteenth century and made its first appearance in an article by the British anthropologist John A. Barnes (1954). It refers to a set of individuals and the relationships they maintain with each other.

A social network is also a community of individuals linked together by origins, interests, needs, similar or different points of view. In a broader sense, the term itself refers to the set of interactions established within one of these communities (friends, neighbors, colleagues, family, etc.).

Boyd and Nicole (2007) defines social networks as web services that allow individuals to create a public or semi-public profile, articulate a list of users with whom they are in contact, view and browse the list of their contact and that of other users. The profile could relate to a virtual identity card of the individual user [2].

Moreover, Lenhart (2009) defines social networks as an effective way and a powerful channel through which consumers create a personal profile, build a personal network, and publicly display interpersonal comments [3].

Graham and Havlena (2007) have stated that social networks allow consumers to exchange quickly and easily opinions and product information with their contact without any temporal or geographical constraints [4].

In order to get benefits from this social networks, companies must get in touch with their customers with the most accurate content.

Many people create content every day to share news, share information, answer questions or even express their feelings. However, several theories have been developed around the meaning of the content, we quote the YWN theory.

2.2 The Factors of Influence on the Canvas

In the digital world, when it comes to defending a brand or a product, not all consumers react in the same way. Some attribute a personal character, others a neutral judgment. In order to determine the attributes that determine the influence of buying intentions, we decided to focus on the YWN segment, that is, young people, women and cyber-citizens.

The Role of Young People on Social Networks All marketers have agreed on the importance of young people in the marketing strategy of a company, especially on social networks. These young people now represent the largest part of the connected population. Even marketers whose products and services do not primarily target younger customers should be interested in this segment.

Kotler et al. (2017) claim that the influence of young people on the rest of the market is titanic, they represent the pioneers and the first-time adopters. Young people still tend to try something new, and test new products and services that other consumers find too risky. That is why companies need this segment to launch their

new products. Not only do they try themselves, but they also push adults to change their minds and try out these novelties. They are also adaptive, young people adapt quickly to changes including globalization and technological progress [1].

Social networks have started with young people. Moreover, they will continue with this segment. Therefore, companies need to consider their importance. These roles of first-time adopters, forerunners and rule-changers lead to considering young people as essential for any brand that wants to succeed on social networks.

The Influence of Women on Social Networks The intrinsic differences between men and women are a subject of study for both psychology and marketing. Many experts have expressed their point of view on women's marketing. As a result, many products, services and marketing campaigns commercialized specifically for women [1].

Generally, women play three roles. First, they are collectors of information, the customer journey of women completely different from men. While men opt for the short course, women always go back and forth. They tend to gather as much information as possible about the product or brand, or they can spend hours analyzing all the possible attributes to get the best deal. In social networks, women react in the same way, they search everywhere for any kind of information, then integrate and reassess if the next step is the right choice to make. Kotler et al. (2017) distinguish women as great dialogues; they do not hesitate to ask the opinions of their friends, their families and are often open-minded to receive the help of others. Social networks provide the perfect place for this process. The girls' groups that now exist on social networks are typical for sharing information and experiences about brands and products [1].

Finally, women are actually household managers. Most household purchases follow women's agreement, in the sense that they care about the purchases and expenses of their homes. Now, with the appearance of Marketplace on social networks, many women have opted for this option in view of the low price and variety that this market provides them.

The Integration of Cyber Citizens Hauben (1992) is the first to define the term cyber citizens, which is derived from the Anglo-Saxon term Netizen, which is composed of Net (Internet) and Citizens (Citizens). According to the United Nations, the world's population comprises 3.4 billion Internet users, or 45% of the total population. That said, not everyone is a cyber citizen.

According to the research of F.S.T (Forrester's Social Technographic). There are a variety of social media users, including the inactive, viewers (those who watch and read online content), collectors (those who add tags to web pages and use RSS feeds), followers (those who connect and visit social media), critics (those who post reviews and comments online), and creators (those who create and publish content online). The types of people who deserve cyber-citizen status are collectors, critics and creators.

Cyber citizens can be very protective of a brand, which they are emotionally committed. They are very active on social media and do not hesitate to recommend

brands and products that prefer. Cyber citizens are also editors of content, we call them citizens of the internet for the fact that they contribute to the development of it.

2.3   The Research Hypotheses

The literature review allowed us to explain the comments made at the level of the general introduction. In fact, consumer behavior has changed over the years, thanks to the continuous development of new information and communication technologies, notably the web and the advent of social networks. This development has pushed companies to change their visions and therefore their strategies.

Social networks are a real lever for companies. The daily use of these platforms by the consumers pushes the companies to develop dedicated strategies in this direction. The theories developed around this term affirm the importance of these social networks for the digital strategy of an organization. Which pushes us to develop our first hypothesis:

H1 Social networks can change consumer ratings on a brand.

Content marketing represent the future of advertising and communication in the world. The interest is not only to improve the image of a brand, but also to create content that will serve consumers in the first place. However, this strategy, just like any marketing strategy, targets earnings interests for businesses. Our second hypothesis is:

H2 Beyond its principle of serving the consumer, content marketing can be useful and push the consumer to try a brand or a product.

Content shared on social networks can take many forms, but its informative purpose remains ignored. Notices, comments and brand notes can influence consumer-purchasing decisions. So our third hypothesis is:

H3 Content developed on social networks can influence consumers' future purchasing intentions.

3   Research Methodology

3.1   Data Collection

We received the data through a survey conducted in Morocco between the period of February 2018 and April 2018 on a sample of 500 people via social networks. We conducted a questionnaire that is part of the quantitative studies. Then, we administered this questionnaire online on the Google Forms software.

Our sample consists of youths whom we randomly selected on social networks, where we created a public event designed specifically for the purpose of our survey, and we used the viral marketing recommendation technique to disseminate the questionnaire to the public. This operation generated 28 erroneous observations due to the incompleteness and incompatibility of the responses. Therefore, we analyzed 472 operational responses representing a response rate of 94.4%.

We evaluated the responses using the SPSS 21.0 statistical software. We measured most of the variables on a nominal scale. We applied the simple frequency calculation for the data description and the KHI-2 test for hypothesis verification.

The resulats show that Womens represent 73.3% against 26.7% of men. As for age, youth represent the large percentage of our sample, followed by teens who represent 6.8%, then adults with 2%. For the level of education, people with a Bac + 5 represents 36.7% of our sample, followed by people with a Bac + 3 with 36.7%, then Bac + 2 with 11.9% and after people with more than Bac + 5 with 10%.

3.2 The Design of the Questionnaire

We opted for closed questions to target the answers. The questionnaire answers the logic and the sequence of the hypotheses. We divided our questionnaire into seven themes, each of which dealt with a separate component:

The consultation of social networks: in this part, we tried to determine the most used social networks, the frequency of use of these social networks as well as the time devoted to their uses.

Influence of comments and opinions: In this section, we explained the relevance of online notices; the time spent reading these notices and the frequency of notices.

Confidence in opinions: in this theme, we have shown the interest given to the opinions and comments as well as the perceived usefulness of these opinions.

Notices boost the act of purchase: in this part, we explained the role of the internet in purchasing, the influence of the opinions for purchases and the role of engines and social networks in the choice of products.

Purchase online through an online publication on social networks: in this part, we asked about purchases via social networks including publications.

Buy on Facebook: Since Facebook is the most well-known and used social network, we asked ourselves directly whether consumers buy from this network, and if the Facebook products attract them.

General information: This section deals with information concerning sex, level of education and age group.

3.3 The Choice of Khi 2 Method

In the context of the bi-varied analysis, the choice of the method depends on the nature of the variables. In our case, we have two qualitative variables. Therefore, we will adopt the Khi-2 method which is the most accurate to explain these variables.

4 Results and Analysis

The results of our study express the comments made at the theoretical level. We based on two types of studies; we first tried to evaluate some variables by a simple calculation of average. In a second time, we tried to cross some variables whose character is nominal with the test Khi 2.

4.1 Trust in Opinions Conveyed on Social Networks

Eighty-three percent of respondents trust and take into account the opinions conveyed in the form of content on social networks, against a minority of 17% who deny taking into account these opinions and comments.

More than 75% claim to have purchased a product following publications on social networks, against 25% who deny having bought even after the broadcast of the content. Before making a purchase, Internet users learn online, by consulting the opinions of other consumers on social networks, blogs, or forums. Thus, for any brand or company, it is essential to monitor what consumers say about it on the Internet and social networks. Because in the case of criticism by customers, a quick and intelligent brand response to customers who complain will often reduce the scope and "extinguish the fire" that could have developed.

A large proportion of Internet users consider social media advisories to be more and more useful to learn about a product or to help them in their purchase decision. Thus, companies need to take into account the opinions and comments. These opinions can represent a threat or an opportunity for any brand. Consumers do not hesitate to ask the help of other Internet users about a brand or a product. On social networks, consumers feel united and helped.

Other user opinions influences responders regarding their purchase decisions. Internet users pay close attention to ratings and reviews. These opinions or comments can have a significant impact on the turnover, customer loyalty and e-reputation of any business.

Thus, positive and negative opinions are of interest. Indeed, some consumers may forego a purchase after reading a negative opinion, as they can buy after reading a positive comment. Social networks have completely changed the nature of interactions between brands and consumers, thus having a direct impact on its current

decision-making process. Indeed, the study found that social networks could change consumers' views of a brand or product. Therefore, we accept hypothesis one that social networks can change consumer ratings on a brand.

4.2   Intention to Buy and Trust Online Reviews

Trust is central to any exchange relationship. On the Internet, it becomes even more important because of the impersonal nature of the seller, the lack of face-to-face and the novelty of the means of transactions. The intention to purchase is primarily conditioned by trust in the seller and, in particular, the perception of his integrity and competence. To measure trust in an online seller, the number of likes, advertisements, or comments could be good indicators.

The study found that trust in online reviews is a direct determinant of purchase intent. The test is very significant (meaning <0.01). The observed Khi-2 (31.154) is superior to the theoretical Khi-2 for a theoretical ddl of one Khi 2 given by the table is (3.84). An average relationship according to Cramer's V (V = 0.257) also reaffirmed with the juxtaposed sticks which confirms that the intention of purchase depends on the consumer's trust in the published opinions.

In sum, the favorable attitude towards published opinions influences consumers' online buying intentions. For this reason, notices and comments may encourage consumers to make new purchases. Therefore, we accept hypothesis 2 that beyond its principle of serving the consumer, content marketing can be useful and push the consumer to try a brand or a product.

4.3   Intention to Purchase in the Future and the Opinions of Users

The study found that the opinions of Internet users represent a vector of purchase decision of some consumers. The test is significant (meaning <0.05). The observed Khi-2 (24.805) is superior to the theoretical Khi-2 for a ddl of one theoretical Khi 2 given by the table is 3.84. An average relationship according to the Cramer V (V = 0.229) also reaffirmed with the juxtaposed sticks which confirms that the intention to buy online in the future depends on the consumer's confidence in the published opinions. From this effect, we accept hypothesis 3 that content developed on social networks can influence consumers' future purchasing intentions.

4.4 Summary of Results

Beyond the theoretical aspects developed, the field survey conducted among Internet users, as well as the quantitative analysis of the data that we have collected, has shown that social networks can represent a new way for Moroccan companies to reach new consumers and understand their needs. Thus to achieve gains and profits, which directly leads to better performance. Customer reviews that gather customer comments posted on social networks are an important issue for brands that can represent a powerful business lever for them. Consumer opinions influence the purchase decision. Indeed, the customer relies on comments from other customers. In other words, customer reviews can encourage him to buy an item he had not considered at all. Alternatively, on the contrary, dissuade him from making the purchase. While a product received a majority of positive reviews, nearly two-thirds of new customers had a positive impression of the product, as revealed by several statistical surveys. Ultimately, the results obtained, even preliminary and limited, allow considering with some optimism the role of content marketing for any company. The inclusion of social media by companies as a marketing tool or means of creation with the customer is mandatory. The real-time dialogue with customers that social media provides is a source of competitiveness. This dialogue offers an additional channel of interaction between the consumer and the brand in the same way as the point of sale, the call center, the mail etc. In the end, social networks have become increasingly important in the communication strategy of companies. They represent the perfect answer to this need for discussion and exchange that consumers are experiencing.

5 Conclusion and Future Research

More than two and half billion of Internet users uses social networks in 2018 [5] a reality that companies must take into account, because this is a powerful vehicle for communication, collaboration and value creation [6, 7]. If Facebook and Twitter have become unavoidable, new players like Google+, Foursquare or Pinterest are also making their way.

Internet and social networks have profoundly changed the way companies perceive their environment. Information has never been so accessible and fast: data about customers or suppliers, the competitive or legal environment, calls for tenders or product comments ... everything is at hand, provided to know and master the tools to collect, disseminate and use information. The advent of Web 2.0 forces companies to change their attitude towards consumers. It is no longer enough to launch a major advertising campaign to give a brand image, we must prove to consumers the value of this brand and it is not a simple thing to do. As a result, content marketing has proven effective in terms of reaching consumers and

spreading the right message at the right time. Social networks are the world's leading content providers, a reality that companies need to understand and benefit from.

Arming yourself to manage the community can have a number of important benefits for a business. First, it helps to make the brand more human and therefore more accessible to the target, by developing a real relationship between the company and the individual. Secondly, this shortens the response time to the messages, since the company is better prepared to receive them, which results in less frustration for people who encountered the company and increase the capital of the company. Sympathy towards this one. Ultimately, this will help to engage and retain its target and will have a long-term profit on the company's revenues.

Confronted with a massive adoption of social networks by consumers, Moroccan companies must use web and customer relationship specialists to implement social response strategies on social networks, these specialists or web advisors will be the spokespeople for the brand on the web. Although our research is part of the ongoing work that seeks to apply the analysis of social networks to management sciences, and more particularly to Marketing, we have focused our attention on a still little explored point namely the importance of content marketing in the era of social media. However, Moroccan companies must exploit the social media that offer them new prospecting options, to directly contact a multitude of people and create or federate a community around its products or brands. Indeed, while the consequences of networks have led to much research, little work seeks to analyze what determines the characteristics of the network of individuals. Our research has highlighted a number of explanatory points about content marketing and influencing factors on the internet. However, future research can focus on new strategies such as inbound marketing, which is part of web marketing strategies. This concept has caused many anchors lately including its application on social networks. Ultimately, inbound marketing can replace all the existing web strategies, giving way to new avenues of research.

References

1. Kotler P, Kartajaya H, Setiawan I, Vandercammen M (2017) Marketing 4.0, Edition nouveaux horizons
2. Boyd Danah M, Nicole B (2007) Social network sites: definition, history, and scholarship. J Comput-Mediat Commun 13(1):210–230
3. Lenhart A (2009) Adults and social network websites. Pew Research Center, Report
4. Graham J, Havlena W (2007) Finding the 'missing link': advertising's impact on word of mouth, web searches, and site visits. J Advert Res 47:427–435
5. Statista (2018) Number of social media users worldwide from 2010 to 2021 (in billions). Statista – The statistic portal
6. Masouras A, Papademetriou C (2018) Digital consumer behaviour in Cyprus: from uses and gratifications theory to 4c's online shopping approach. J Advert Public Relat 1:32–42

7. Antoniadis I, Saprikis V, Poltitis K (2014) Investigating internet users' perceptions towards online shopping: an empirical study on Greek university students. In: Proceedings of the international conference on contemporary marketing issues (ICCMI), Athens, pp 873–879
8. Barnes JA (1954) Class and committees in a Norwegian Island Parish. Hum Relat 7:39–58
9. Hauben M (1992) The net and netizens: the impact the net has on people's lives

Spatial Design as a Significant Marketing Tool: A Semiological Analysis of the Rejuvenating Process of a Hospitality Environment Case Study

Anna Efstathiou, Olga Efstathiou, and Lina Psychopoulou

Abstract The hospitality industry faces globally a variety of critical challenges and hoteliers search continuously for the best combination of actions to stand out from their competitors. The paper argues that spatial design is among the strongest marketing tools as it can define identity, status, target group, target group satisfaction, personnel attitude, customer behaviour and loyalty. However, spatial design in the hospitality industry is not to be seen as a simple practical process. The whole spatial design process embodies a set of actions that work in parallel to a strategic/ marketing plan. Facts and parameters, external and internal factors affecting clientele decisions and the existing situation of the hotel have to be analyzed and investigated. Thus, in an attempt to explore the elements of a successful spatial design process, the presentation illustrates a particular case study of a hotel in Chalkidiki, Greece, as a canvas to explore ways that architectural and interior formal manipulations can be inspired by the reinterpretation of intangible values. A semiological investigation of immaterial issues, such as values, feelings, ideas are expressed by formal manipulations and are connected to the creation of a holistic successful spatial reconfiguration. The present paper analyses the spatial design process based on documentation provided by the hotel and the architectural practice in relation to the planning procedure and its outcome.

Keywords Hospitality design · Semiology · Design process

A. Efstathiou (✉)
University of Nicosia, Nicosia, Cyprus
e-mail: efstathiou.a@unic.ac.cy

O. Efstathiou · L. Psychopoulou
Archigraph, Thessaloniki, Greece

955

1 The Context of an Effective Spatial Design

A full understanding of the user's needs, the sociocultural context and the characteristics of the natural and built environment is the fundamental base for the development and implementation of a successful spatial design. Either designing a health care project, a public retail space, a museum, or a hospitality project, the creative team has to analyse all intersecting factors and parameters that affect and are affected by design. The changing characteristics of society, economy and technology create the background where a designed environment is developed and define the external factors that shape any human creation. Therefore, any creative action is inseparably bonded to its context and expresses the unique intangible values of its time. Among the many faces of creative production is spatial design.

The spatial design process consists of three phases: the analysis and research phase, the concept development phase and the implementation phase [1]. The analysis and research phase sets the outline for any sequent action. All external and internal factors and all parameters have to be thoroughly analysed. From climatic conditions to orientation, from social context to company identity and target group, from natural environment to building materiality, all peculiarities, characteristics and problems have to be firstly clarified, recorded and analysed. This process is the outcome of team work and it is based on collaboration. The design production is never an individual expression. The closer and appreciated the collaboration between the involved members, the better and more effective the outcome that will occur [2]. The more clear the directions of the analysis phase, the easier and better the design work will be. The client and the marketing team have to work together with the spatial designer or architect.

This phase is followed by the concept development. There the agreed guidelines that result from the analysis start to take a form in the designer's mind. The educational background and the experience of a successful designer provide him with a unique interpretation tool that transforms immaterial issues such as values, meanings and feelings into formal manipulations, that is material substances that have volume, shape, form, colour, texture or pattern. This process is never successful and complete if it is done arbitrarily, because the difference between an amateur designer and a skilled one is the existence of a procedure plan. The expert designer knows when and how to implement the design decisions, their priority and who has to work on them to achieve the desired outcome. However, the design process is never a linear one. From the very first moment of designing, a back and forth reference is inevitable. This is because the design process always reveals issues to be discussed, reconsidered and altered. So, the collaboration between the involved members and teams has to be continued. Alternative solutions have to be evaluated until all parameters from cost to aesthetics, from functional efficiency to sustainability reach their best balance. At that time the final design proposal is formulated and then it is up to the skills of the architect and the designer to represent all agreed matters to the visual coding system of drawings in such a way that they are readable by the implementation group, the contractors, or subcontractors.

The implementation phase is of equal importance to the two previous ones. Even here the reconsideration of discussed or decided issues, or newly occurring ones, intervenes with the process and the designers may refer back to the previous phases. At this stage more people, mainly from the market, enter the collaborative procedure. The role of the designer at this stage is to supervise the variety of works and their construction quality, to collaborate with the contractor and the client and to coordinate the design input that continues to provide designed solutions for technical details or unexpected situations.

In the years to come one extremely important issue to deal with is the implementation of smart technology to the Hospitality industry [3]. Advanced technologies in their multifaceted forms (speak-to-order, augmented reality, biometric authentication) become more and more incorporated in any industry and services [4]. Airports, chain restaurants, museums and exhibition spaces show a radically increased use of new technologies. They could become an apparent tool to success in the hospitality services because the public is attracted by them and appreciates when they are offered. The hoteliers and their marketing teams would benefit from their use both as part of their marketing plan and as part of their amenities. Therefore, the spatial designers should promote this use by adjusting spaces, concept ideas and organizing layout and circulation accordingly. Hotel rooms have to adjust also in relation to their design when advanced technologies, or smart home effects are applied.

The aim of this paper is to illustrate that a well investigated and programmed spatial design plan for the hospitality industry is an essential priority. It has to be approached and applied by specialised architects and interior designers who will analyse all market forces and trends in close collaboration with the hotelier and the marketing team in order to produce the most appropriate environment.

2 Spatial Design as a Major Marketing Tool: The Ammon Zeus Case Study

Spatial design is of great significance among all the other parameters of a marketing plan for the improvement of a touristic business. When the hotelier and the marketing team decide and figure out who their target group is, or desired to be, and discover their interests, they should provide to the architectural and design team the key notions, values and meanings they want to promote, so the spatial designers will interpret this into interior environments and architectural forms. These issues are going to be discussed here over the case study of Ammon Zeus hotel in Halkidiki, Greece, as a representative example of a successful collaboration between the involved teams that improved significantly the hotel's ranking in the market and consequently the economic revenue. The hotel after its rejuvenating process by the "Archigraph" architectural practice witnessed an increase in booking demand, increased clients' satisfaction and very positive financial input. Moreover and according to the hotelier's archive records [5] the ranking of the hotel based on

reviews in the "Booking.com" platform rose from 6.7 in 2016, which is the year before the beginning of renovation, to 9.1 in 2018 when the renovation process was over. According to the "tripadvisor" platform a raise from 3.5 to 4.5 presents similar improvement. The effect on the financial parameters was also very significant as the turnover increase reached the 100%. Referring to some more statistic results to support the effectiveness of the actions, one could add that the average room price managed to rise to 30% with a parallel fully booked status raised also for a 30% in relation to the before-the-renovation era. Further, one could mention the positive reaction of the western European and American tourists, who traditionally appreciate the "value for money" service and tend to spend more in lateral expenses during their stay.

Successful Hospitality Design, as it is tested in the present case study, encompasses not only the aesthetic upheaval of the built environment, but also the improvement of functionality, that influences directly the effectiveness of the personnel and attracts better qualified employees. In turn, the satisfaction of the customers is higher and the company is thriving.

This case proves that the marketing team of hotels and other hospitality related environments can rely to a great extent on spatial design to promote their product in the market and therefore they should build their plan collaborating with the architectural practice. The Ammon Zeus hotel promoted very successfully not only its main strong point that is the exceptional location, but also the quality of interiors and outdoor spaces, and feeling of space, as a major competitive advantage to support the marketing plan and ensure a holistic travel experience to potential clients. In the specific case the hotelier and the marketing team decided to apply a few changes at a time during a period of 2 years, implementing part by part the completed spatial design proposal [6]. They took this decision in order to measure safely the effect and changes in preferences and booking rates, and apply the width of the rejuvenating process in collaboration with the architectural practice that developed and coordinated the whole architectural design. The variety of the social channels and the "likes" or review comments provided a valuable interactive content that was used to lead the designing team.

3   A Semiological Analysis of the Ammon Zeus Renovation Project

The architectural project of the Ammon Zeus hotel and the new designed environment led to a success story. This was not an accidental, or random coincidence, but the outcome of a well prepared study and a fruitful collaboration between the involved members.

A concise semiological analysis can be presented here attempting to clarify the connections between concepts and forms as conceived by the architectural team. One of the demands of the hotelier was the strengthening of an identity which would

be somehow different from the noisy and lively, non-expensive and youth-attracting urban context where the hotel is built. According to one of the local online travel-guides the village of Kallithea in Halkidiki "is the most popular village in Halkidiki . . . and the ultimate place to choose if you are a fan of clubbing . . . as in the beach of Kallithea you will find beach bars where wild parties take place all day long" [7].

This identity is not the desired one for the specific hotel that wants to differentiate from the noisy tourism and address the quiet, family, exclusive, but affordable one. Interpreting this, a protecting building skin was proposed to create a shield and a barrier, sending a message of privacy. The natural curve of the landscape that was used even by the initial architectural form built in the late 60s, was a positive input in the contemporary interpretation. In the 60s the calm and less intruding touristic wave supported the visual language of late modernism, where in search of honesty the structure was apparent and an almost naked architectural skin was favouring social contact. The international style was calling for social contact and openness. Balconies were open bridges for transparency, to see and be seen. Later on, in the 80s and early 90s an attempt to acquire a local identity and some vernacular characteristics and picturesque image, the façade of the building changed again with additions of a ceramic tile roof and a repetition of arched partitions on the front part of the balconies. The idea was to blend better with the environment and attract the tourists who changed their preferences looking for a local flavor. These changes of the late 80s early 90s were applied on the one hand because the aesthetic and the desired message to the clients changed, but also because the minimalism and the simplicity of the previous modernistic approach ignored some functional issues: the water-proofing and thermal insulation of the terrace and the south penetrating summer sun that was entering the rooms was creating discomfort and energy waste issues (Fig. 1).

The simple, neat and organized exterior forms of the contemporary renovation signify the importance for a quiet environment without extremes and loudness. The exterior wooden panels that are used on the façades and the partitions of the balconies express even more a homey environment. They seem to hug in a protective way and hold together the whole structure. Their non-transparent materiality and the

Fig. 1 Sea view façade of Ammon Zeus hotel in the 70s and early 90s (Photography source F. Psychopoulou)

Fig. 2 Renovation 2017–2018. Sea view façade of Ammon Zeus hotel and pool bar (Photography source F. Psychopoulou)

Fig. 3 Balcony rail/sunshade system, "Archigraph" design (Photography source F. Psychopoulou)

use of wood balance the neutrality of the white elements and add a cozy feeling of warmth and privacy (Fig. 2).

The arched elements of the façade and the indifferent rails were substituted by a vertical extended rail system that acts both as rail for the balcony and also as shading system for the lower floor balcony. The visual lightness refers to cruise or yacht design and the same is achieved by the sail shaped shades of the outdoor spaces. The new designed system works in favour of protection and privacy but is not underestimating either the aesthetic or the functionality. The elaborated design does not block the sea breeze, not even the view from inside the balcony and the wavy form, which works in favour of the aesthetics, is also very functional as the density of the vertical rails is adjusted to the need for sun protection. The smooth repetition of the sea waves on the rail system denotes also the significance of regularity and calmness (Fig. 3).

The rooms although small in size, according to the specifications of the 60s and the required equipment of that time, were redesigned now to signify specific values: a homey environment and a flexible neutral space that can be adjusted to any potential customer need. A zoning system for storage of neutral white colour encompasses the larger number of facilities with the less possible volume to keep an efficient proportion to what is called negative space, which is the space in between

Fig. 4 Room interior and bathroom of Ammon Zeus hotel after renovation (Photography source F. Psychopoulou)

the furniture objects in the room. The cupboard system is designed as an open system to avoid the use of oversized elements in the room. Visual lightness adds to the actual size of the room. The use of space by the personal objects of a visitor in open view and access makes the space more personalized. The white background projects the personal objects instead of the furniture and creates a blank canvas. The textile choice refers to the initial period of the hotel design of the late 60s early 70s. This reference to vintage characteristics such as furniture, patterns and textiles has a sentimental value for the old generation of tourists and personnel who share a common past with the hotel and past memories. They denote respect for the past times and appreciation for the hotel's history that is positively regarded both by staff and guests (Fig. 4).

The bathroom design is an important issue for the satisfaction of the client. The summer use of the hotel adds to its significance and especially the comfort feeling in the shower/bath. The use of glass partitions, although they make more difficult the cleaning maintenance in the room add space and signify informality. So the bathroom becomes less private and more casual.

The lobby areas are designed in such a way that they signify an intimate interior. The use of objects like soft sofas and contemporary design, fabric and wood as dominating materials with soft and smooth textures predispose for a calming comfortable context that relaxes body and mind. The colour ranges of light neutral colours and the access of the natural sunlight create a lighthearted environment. The provision of many small scale lounges create a feeling of a home size environment and at the same time provide privacy to a large number of users who feel that acquire a personal space of their own (Fig. 5).

The colours of the sand and pebbles on furniture and objects are chosen in such a way so to repeat the landscape and purposefully bring the outside inside. The patterns of the perforated lighting devices guide the mind to the foliage patterns of the trees of the landscape or the sun penetrating the straw beach umbrellas. Besides what one can sense with the sight, the feeling of hearing is of major importance. The lounge music and the sea sounds that enter from the large transparent openings create a calming atmosphere. The small falling water installation in front of the entrance aims to subconsciously help visitors to realise that they have to experience the

Fig. 5 Lobby and restaurant of Ammon Zeus hotel after renovation (Photography source F. Psychopoulou)

hosting environment with all their senses. Besides this, the sense of smell is also of importance. Flowers and the sea smell blend together with the pleasant food and drink sensory signs.

The experience of space becomes a major element to enhance the feeling of comfort, familiarity and completeness that together with the warm human support of the personnel and the strong hospitality infrastructure blend into an unbeatable recipe.

4   Conclusions

The design process is part of any design project and has to be complete to lead to a successful result. Hospitality Design is one of the broadest subjects for architects and designers because it deals with a variety of issues. It has to do with private and public space, with open and enclosed areas, with quiet and noisy moments, with entertainment, retail and recreation, body care and rest of mind. It is the epitome of experience-driven design, because unique experience is the main expectation of the hospitality target group.

As such spatial design can be seen as a major marketing tool that actively supports the identity and the success of any hospitality project. It can upgrade any methodically planned strategy. The specialized spatial design team is a valuable collaborator that should be included in all stages of the marketing plan and especially in the implementation of the strategy. On their turn spatial designers should inform the hoteliers and the marketing group on their interpretation of values and feelings into formal manipulations so that they support and complete a highly successful and profitable project.

References

1. Tangaz T (2006) The interior design course: principles, practices and techniques for the aspiring designer. Thames & Hudson, London
2. Gibbs J (2010) Interior design, 2nd edn. Laurence King Publishing, London
3. Rauch R (2017) Hospitality trends 2018 – what's happening in hospitality. https://www.hospitalitynet.org/opinion/4085914.html
4. Kobres E (2018) New technologies will revolutionize the hospitality industry. https://www.forbes.com/sites/forbestechcouncil/2018/06/28/new-technologies-will-revolutionize-the-hospitality-industry/#6300b74173c3
5. Psychopoulou F (2018) Archive material and statistics of Ammon Zeus hotel
6. HMG Hospitality (2016) Effective hotel marketing in five easy steps published in hotel marketing. https://hmghospitality.com/effective-hotel-marketing-ideas
7. https://www.halkidikitravel.com/en/regions-of-halkidiki/kassandra/kallithea-halkidiki-27

The Environmental Aspects of Packaging: Implications for Marketing Strategies

Anastasios E. Politis, Christos Sarigiannidis, and Vasilis Voutsinas

Abstract Packaging plays a crucial role in the world business and economy. One of the main issues concerning this, is that packaging has a significant relation with the environment, in terms of waste, materials and recycling. According to various studies, packaging is absolutely necessary for protection, safe transportation and delivery of goods within the various forms of the supply chain at global, continental and local levels. As such, packaging creates waste which needs to be managed in a way that the consequences for the environment are as less as possible. In recent years, packaging holistic design innovations, contribute to packaging concepts which are sustainable and environmentally friendly. This paper tries to investigate these forms of sustainable packaging design and construction. Further, the main objective of this paper is to investigate and determine the relationship between marketing strategies and packaging holistic design and production, under the scope of environmental protection and sustainability. In particular, the present study discusses packaging strategies that take under consideration sustainability, the environment and the relation with marketing. The present study reveals that the environmental aspect of packaging is quite important. Sustainability and the environment is considered as one of the principal issues for packaging production and there are many examples of successful packaging concepts that are fully environmental friendly. Marketing takes advantage of such procedures and utilize trends and policies for environmental protection by customizing marketing strategies in this direction. Since packaging deals with immense amount of turnover, sales and production, its financial aspects need to be further investigated, in terms of defining sustainability and the protection of the environment as financial-accounting value.

Keywords Packaging · Environment · Sustainability · Marketing strategies · Green marketing

A. E. Politis (✉)
University of West Attica, Egaleo, Greece

C. Sarigiannidis · V. Voutsinas
University of Patras, Patras, Greece

1 Packaging: Developments and Trends

Packaging plays a crucial role in the world business and economy and it is extremely important for the global society and economy. Innovative developments at all levels are a mainstream procedure for packaging (supply chain, products and sales, transport, security, design, consumption) [1]. Packaging is nowadays, a multidisciplinary field, a rapidly evolving science and a dynamic industry with continuous positive indicators [1].

As Politis points out [2], packaging should must comply with the principal requirements of the product, namely design, structure, functionality and safety in transportation. The product itself with its characteristics as well as the packaging producer, the brand owner, the retailer and the final buyer-consumer, determine the packaging. As such, packaging concepts need to fulfill the packaging buyer specific needs [2]. Packaging is classified according to the three main characteristics: aesthetics shape and form, color, print, finishing), structure, material, construction, transport packaging, functionality (content and packaging is one).

Politis concludes by stating that packaging lies in a quite strong relation with the supply chain, being subjected to changes such as shorter delivery times, larger selections and smaller product quantities [2]. In addition, there is higher and higher demands on package production and packaging logistics. Brand protection is one of the main tasks, followed by the transformation of packaging as a marketing and sales "tool" [2].

A comprehensive research by Smithers Pira in its report on the Future of Global Packaging to 2022, shows that packaging demand will grow steadily at 2.9% to reach $980 billion in 2022 [3]. In addition, according to markets and markets, the global packaging printing market was valued at US\$328.95 billion in 2015 and is projected to reach US\$574.47 billion by 2026, at a CAGR of 5.3% [4].

The aim of the study is to investigate and determine the relationship between marketing strategies and packaging holistic design and production, under the scope of environmental protection and sustainability. The study is a literature one that searched well-known databases under the keywords "Packaging, Environment, Sustainability, Marketing Strategies and Green Marketing" and is not exhaustive.

2 Packaging and the Environment

The environment and its protection, the conservation of natural resources and energy saving, are nowadays key priorities for all modern societies. One of the most important features of packaging is its relationship to sustainability and environmental protection. The identification of practices, applications and procedures for controlling environmental and sustainability data relates to materials, production, handling and, more generally, to the lifecycle of the packaging. Packaging, as an indispensable part of the product, but which is not consumed, is the most appropriate

field where such policies (sustainability and environmental protection) are fully applicable [1].

In this context, a variety of strategies and initiatives, as well as technologies, techniques and systems are being developed in the wider field of sustainability.

Today, it is becoming increasingly clear that the current socio-economic system is engaging in "rape" of nature and the abuse of natural resources that are either polluted or depleted [5]. However, it is confronting that the problem has been perceived and essentially, the policies and strategies being developed are aimed at treating the problem. At the scientific level, more and more scientists, through scientific approach and research activity, are engaged in this field, effectively expressing ordinary people and society in general.

Sustainability and environmental protection, is among the main trends for packaging. As it is stated in webpackaging blog for innovation on packaging, Eco-Friendly Packaging, is among the Top 5 packaging trends of 2018. These trends are E-Commerce, Labeling Requirements and Design, Vintage Design and Light and Flexible Packaging [6]. According to the latter trend—eco-friendly packaging, consumers become increasingly concerned about sustainability, the ingredients and food they're putting into their bodies and they concern about how packaging is affecting the environment.

A circular economy helps to rebuild financial, manufactured, social, natural and human capital, which enhances the flow of both goods and services. The circular economy is contrary to our current "take, make, and dispose" industrial model and aims to redefine products and services to design waste out and minimize its negative impacts. As such, this trend activates brands, who are making renewed efforts toward the circular economy, in order to keep packaging material in use and out of the environment [6].

At business level, many companies today have noticed the growing sensitivity of consumers to social problems, reflected by their interest in environmental concerns, e.g. the usage of sustainable packaging materials that are eco-friendly and safe for consumers and the environment.

As Jersyk points out [7], producers seek, often based on intuition rather than knowledge, eco-arguments for their packaging in order to affect the perceptions of buyers and influence their behavior. Creating an effective design and content for environmental messaging on sustainable packaging may be a significant element in building a competitive advantage for both product and brand [7].

According to another study conducted by pack4ecodesign [8], the environmental impact of packaging can be categorized in three main elements as follows:

– Establishing the precise impact of packaging
– From cradle to grave
– Clear definition of goals

Going deeper in these three elements, the study concludes by stating that companies try to minimize the environmental impact of their products and they increasingly rely upon lifecycle analyses (LCAs) to quantify this impact. These analyses cover the entire spectrum of environmental impact, from raw material extraction to

waste processing, including manufacturing, transport, distribution, and use. In the study, Bernard De Caevel, Managing Director of Intertek-RDC, claims that, "the environmental impact of a packaging can be quantified in terms of air, water, and ground emissions, as well as in terms of a final waste product that must be eliminated". The material used, the packaging weight, and its manufacturing methods are all factors that can increase or decrease this environmental impact [8]. Based in these, packaging has a significant role in the environmental impact of a product/packaging combination.

3   Green Marketing

According to a June 2014 Nielsen study [9], 55% of global online consumers "are willing to pay more for products and services from companies that are committed to positive social and environmental impact." In fact, as early as 1992, the European Commission established the EU Ecolabel, a Europe-wide voluntary environmental labeling scheme that aims to help consumers identify sustainable products and services [10].

In marketingschools.org [11], green marketing is defined as "the marketing of products and companies that promote the environment in some substantial way". Some definitions look for environmentally "safe" or "sustainable" production, while others seek to reduce a company's "carbon footprint."

In either case, green marketing involves more than simply presenting an environmentally friendly product. It also speaks to, and actively promotes, a company's processes and business practices as having low environmental impacts.

Some business practices, such as reducing production waste or energy costs, are good for both the environment and business profitability Adopting such practices may or may not be perceived as "green," depending upon consumer perceptions of other aspects of the business. However, these actions can still be positioned as the company "doing its part"-promoting positive reactions toward the company [11].

As it is stated in polymersolution.com, "while there are lots of opportunities for plastics manufacturers to develop sustainable and green packaging, consumer perception can be the biggest challenge in marketing the packaging" [12].

Further, according to First Carbon Solutions-FCS it is crucial that organizations recognize business drivers for sustainability practices and offers cost-effective sustainability management solutions [13]. FCS states that it is extremely important for companies to develop legitimate and effective green product and marketing strategies, which can lead to greater profits FCS provides five key elements for sustainability, which are: Green Design, Positioning, Pricing, Logistics and Disposal [13].

3.1 Pure "Green" or Greenwashing?

In an attempt to leverage increased demand for more sustainable goods and services, companies have employed marketing tactics to assure consumers that their products are green. However, this development has the potential to trigger the "greenwashing" phenomenon [14]. According to Investopedia [15], "Greenwashing is the use of marketing to portray an organization's products, activities or policies as environmentally friendly when they are not. The act of greenwashing, also known as "green sheen," entails the misleading of consumers about the environmental benefits of a product or policy through specious advertising, public relations and unsubstantiated claims. Greenwashing is a play on the term "whitewashing," which means to gloss over wrongdoing or dishonesty or exonerate without sufficient investigation or spurious data" [15].

Green issues are often complex and highly technical, so consumers are sometimes unknowingly persuaded into buying products that are misleadingly advertised as sustainable or ecologically friendly. Greenwashing can damage a company's reputation, so it is an ill-advised and risky course of action. Once exposed, deceptive advertising can lead to lawsuits and a loss of consumer confidence. As such, it is extremely important for companies to develop legitimate and effective green product and marketing strategies, which can eliminate the need for greenwashing and lead to greater profits and consumer patronage. A company that is honest and genuinely committed to sustainability can earn the respect and loyalty of consumers [14].

In addition, as it is mentioned in a study published in the Journal of Business Ethics [16], "two major issues have been identified by the study. The first is the ethics of marketing as it regards the accuracy of information for "green" products and packaging. The second is the so-called "greenwashing", which is a term that determines the use of environment protection by a misleading way".

The study continues by stating that, "the increased usage of questionable environmental marketing claims has become an issue of concern for academics, policy makers and consumers. Much of the research nowadays, has focused on the accuracy of environmental claims in advertisements, with the information on product packaging being largely ignored. In the study it is concluded that a majority of the packaging information can be classified as being not accurate" [16].

Finally, the financial aspect of green packaging is mentioned in a review paper by Eneizan and Wahab [17]. According to Eneizan and Wahab, firms that adopt green marketing strategy (green product, green price, green distribution, green promotion green people, green process, and green physical evidence) are expected to generate more profits than those firms that do not adopt such strategies.

Despite promotion from scholars and policy makers, several fundamental issues in green marketing, such as the relationship between green marketing strategy and firm performance, remain under investigated. The reviewed and analyzed the seven factors green product, green price, green distribution, green promotion green people, green process, and green physical evidence indicated that the green marketing

Table 1 Controllable and uncontrollable factors of marketing mix

Controllable factors	Uncontrollable factors	
Product	Competition	
Marketing program	Economy	
Promotion	Regulations	
Place	Technology	
Price	Social	Environmental impact

Source: [18]. Modified by the authors

strategy effect positively on the financial and non-financial performance of firms [17].

For some marketing strategies' experts, environment is considered as one of the major uncontrollable factors for marketing mix. They introduce the acronym CERTS, which represents the uncontrollable factors, namely Competition, Economy, Regulations, Technology and Social. The latter, includes sustainability and the environment as an uncontrollable factor by stating that "Marketing can be improved by paying attention to current social trends, such as concern for the environment and going "green"" [18]. Certs are further described as the uncontrollable factors of marketing, which cannot be changed or manipulated by companies to sell their products. These factors must be closely paid attention to and researched in order to best reach the target customers. If companies develop their marketing plan around these factors, they could market their products in a more effective manner. Therefore, the key strategy is to recognize and utilize the opportunities uncontrollable factors can bring for the company [18]. In Table 1, these factors are displayed.

4   Conclusion and Further Research

The study aimed to illustrate that sustainability and the protection of the environment is nowadays one of the principal issues in economy, business and society. It also confirmed that packaging plays a quite significant role in protection, safe transportation and delivery of goods within the various forms of the supply chain at all levels.

Hence, packaging has a significant relation with the environment, in terms of creating waste, which needs to be managed in a way that the consequences for the environment can be minimized.

The present study revealed that the environmental aspect of packaging is quite important. Sustainability and the environment is considered as one of the principal issues for packaging production and there are many examples of successful packaging concepts that are environmentally friendly. Packaging holistic design, materials and production implement sustainability concepts, in order to use less resources, recycle and protect the environment within the lifecycle of a product.

There is a strong relationship among brands, products, packaging and promotion with sustainability and the protection of the environment, creating new tasks for

marketing strategies. Marketing, takes advantage of such procedures and utilize trends and policies for environmental protection by customizing marketing strategies in this direction. The term "Green Marketing" has been introduced and applied in order to define the implementation of sustainability in marketing concepts and policies.

However, attention needs to be given in creating and applying green marketing concepts, since, according to some studies, sustainability and environmental protection is considered as one of the unpredictable and uncontrollable factors in Green marketing.

In addition, context and content of sustainability and environmental protection needs to be further investigated. Clear definitions for promoting sustainability within marketing need to be addressed, so that the so-called greenwashing will be avoided.

Since packaging deals with immense amount of turnover, sales and production, its financial aspects need to be further investigated, in terms of defining sustainability and the protection of the environment as financial-accounting value and within the cost management and accounting systems.

References

1. Sarigiannidis Ch, Politis A, Voutsinas V (2018) Packaging and environment – a comparative analysis of MFCA, full costing and ABC systems in environmental management accounting (EMA). Paper presented at the 1st Hellenic conference on graphic arts, University of Ioannina, Ioannina, 1–3 July 2018
2. Politis A (2014) Transforming packaging buyer requirements to efficient solutions for packaging production, ESKOWORLD conference, Athens, 6 May 2014
3. Smithers-Pira: the future of global packaging to 2022. https://www.smitherspira.com/industry-market-reports/packaging/the-future-of-global-packaging-to-2022
4. Marketsandmarkets, packaging printing market by printing ink. https://www.marketsandmarkets.com/Market-Reports/packaging-printing-market-153207109.html?gclid=CjwKCAjw8ajcBRBSEiwAsSky_ecQnTHgr4mN972nMDuCrB1C2b4npfF9cDby3B1AvIbF4UwiwTxc_BoC_scQAvD_BwE
5. Palaiokrassas J (2002) Sustainable roads, DIFA Athens
6. Top 5 packaging trends of 2018 (2018) https://www.webpackaging.com/en/portals/mjspackaging/assets/11789807/top-5-packaging-trends-of-2018/
7. Jerzyk E (2018) Design and communication of ecological content on sustainable packaging in the young consumers' opinions. Poznań University of Economics Department of Marketing Strategies, PUE, Poland. https://hrcak.srce.hr/file/238214
8. Environmental impact of packaging. www.intertek.com/consumer/sustainability www.pack4ecodesign.org
9. Rayapura A (2014) New Nielsen study says consumers are ready to pay more for social responsibility. https://www.sustainablebrands.com/news_and_views/stakeholder_trends_insights/aarthi_rayapura/new_nielsen_study_says_consumers_are_read
10. Explore the strategy of green marketing. http://ec.europa.eu/environment/ecolabel/facts-and-figures.html
11. http://www.marketing-schools.org/types-of-marketing/green-marketing.html

12. Petkewic R (2012) Marketing opportunities and challenges for green packaging, materials science research & innovation. https://www.polymersolutions.com/blog/marketing-opportunities-and-challenges-for-green-packaging/
13. http://www.firstcarbonsolutions.com/resources/newsletters/july-2016-effective-green-marketing-strategies/5-effective-green-marketing-strategies/
14. What is greenwashing? It's whitewashing, but with a green brush. http://www.greenwashingindex.com/about-greenwashing/
15. Greenwashing. https://www.investopedia.com/terms/g/greenwashing.asp#ixzz5RuVlZube
16. Polonsky MJ, Bailey J, Baker H, Basche C, Jepson C, Neath L (1998) Communicating environmental information: are marketing claims on packaging misleading? J Bus Ethics 17 (3):281–294
17. Eneizan BM, Wahab KA (2016) Effects of green marketing strategy on the financial and non-financial performance of firms: a conceptual paper. Arab J Bus Manag Rev 6(5):254
18. Uncontrollable factors of marketing: CERTS, Oct 2008. http://www.sunpack.com/uncontrollable-factors-of-marketing-certs/

Come for Broadway, Stay for Bypass: Who Is New York's Medical Tourist?

Michele Thornton

Abstract Medical Tourism, characterized by patients leaving their home community to seek health care services elsewhere, is on the rise globally. In New York state, 65,254 non-resident patients (2.86% of all patients seen by hospitals that year) sought inpatient treatment in a hospital in 2015. This was a 10.78% reduction in patients from outside the state seeking care compared with a decade earlier. As the competition grows for patients, understanding those more likely to travel for elective procedures may become an important marketing resource for health care providers. This study uses hospital discharge records to describe demographics, and clinical indicators, and patient travel patterns, and explores the associations with those obtaining elective (non-emergent) surgeries. We find that among non-residents in New York international travelers, older adults, women, and those with a lower severity of illness are positively associated with elective surgeries. Providers hoping to grow this patient population within their facilities are able to gain valuable insight into target markets and potential drivers of patient choice.

Keywords Medical tourism · Elective surgery · Patient choice

1 Introduction

Historically the provision of healthcare services has been seen as a local market. This is primarily due to country of origin-based reimbursement programs and the desire to remain close to home when undergoing treatment [1]. Travelers have always found themselves with emergent needs for care while traveling for business or pleasure. Increasingly we find patients traveling for the primary purpose of seeking healthcare, resulting in the growing trend and industry known as medical tourism [2]. Globally, this market was estimated at over $500 billion dollars in 2012, up from $40 billion in

M. Thornton (✉)
State University of New York, Oswego, NY, USA
e-mail: michele.thornton@oswego.edu

2004 [3]. In 2010, estimates of foreign travelers coming to the United States from abroad ranged between 47,000 and 103,000 annually [4]. Although the United States (U.S.) has long been seen as a preferred location for complex cases and a site of high-quality care—high costs have driven patients to look elsewhere, and markets are emerging in other locations [5]. Patient demand has been rising in Asia, Latin America, the Middle East, and Central Europe and providers are building large state of the art medical complexes and collaborating with local governments to develop national tourism campaigns to build awareness of health care resources [6]. New competition requires a closer look at what types of patients and treatments continue to draw patients to the U.S. Insight into the medical traveler and their needs can give providers and policymakers hoping to increase non-resident market share a competitive edge.

Between 2006 and 2015, there was a 10.78% reduction in non-resident patients traveling to New York (NY) hospitals (total 2006 n = 75,452 and 2015 n = 65,254) for care. The reduction is slightly lower when looking specifically at international patients (-10.55%) going from 1574 in 2006 to 1408 in 2015. Here we describe the non-resident patient population in NY by identifying patterns in demographics, diagnoses, treatment, and hospital choice. We model the characteristics associated with "elective" admit patients, allowing us differentiate between patients that travel to NY for the primary purpose of obtaining care, versus those that access care while traveling for other reasons.

2 Methods

2.1 Study Design and Methods

Using 2 years of hospital discharge data in New York state, we compare changing trends in non-resident surgical patients from 2006 to 2015. Analyses include basic descriptive statistics including t-tests and chi square to explore differences in demographics, health status, and residency. We use a standard logistic regression, adjusting for observable covariates, to examine the associations in non-resident patients characterized as "elective" admits versus those that obtain care while in state on an emergent or urgent basis. This differentiation presumes that patients characterized as emergent or urgent did not plan ahead for the primary purpose of seeking care in New York state. All analyses were conducted using STATA Version 15 [7].

2.2 Data

The study data comes from the Statewide Planning and Research Cooperative System (SPARCS) compliance reports [8]. The SPARCS system is a NY-based all

payer reporting system that collects patient level data on individual characteristics, home address, diagnoses and treatments, services, and charges for all inpatient and outpatient visits. We use variables including age, gender, race, admission type, diagnostic category, risk of mortality, severity of illness, and total charges. We use address to construct measures related to patient proximity to New York state and a binary variable indicating whether the non-resident is a domestic or foreign patient traveler.

In keeping with prior work, we use inclusion criteria to build our sample population [9]. We restrict the sample to include only non-resident patients. Non-residents reported either an out of state or out of the country home address in the patient record. Combining the 2 years of study data provides a preliminary pool of 142,969 patients. After removing records with missing information, patients under age 18 and those classified as non-surgical, we use an analytical sample of 67,685 patients.

3 Results

3.1 Non-resident Patient Demographics and Characteristics

Within our analytical sample we see an overall 9.18% reduction in non-resident patients seeking surgical care between period one (2006), and period two (2015) going from 35,471 to 32,214 respectively, as shown in Table 1. Significant reductions occur across a variety of demographic subgroups. In the three age brackets below age 50, reductions are between 11.05% and 28.27%. Patients between the ages of 61 and 70 show a 19.70% increase, which is consistent with general United States demographic shifts and the aging baby boomer generation [10].

Over this decade we also see shifts in the gender make-up of the non-resident patient population. In both periods, men make up a slight majority of the patient population, at 51.64 and 53.30%, with a significant increase from 2006 to 2015. The patients are overwhelmingly white, which is consistent with other findings on patient travelers [9, 11]. However, we do observe a reduction in their proportion, going from just over 80% to just under 73%. All other racial groups see a related increase, suggesting that a more diverse group of non-resident patients is on the rise. The largest increase is in the group of patients characterized as "Other Race," with an increase of over 50%. This pattern could align with the broader trend towards recognizing multi-racial identities, and a push towards accuracy for purposes of tracking disparities within electronic health records [12].

The geographic areas of residence have also shown a slight shift over this time frame. Proximity is a clear indicator of patient choice in care both domestically and internationally. Over three quarters of the non-resident patient population in New York comes from one of the four states (New Jersey, Pennsylvania, Connecticut and Vermont), or two Canadian provinces (Ontario or Quebec), that share a geographic border. We refer to the patient group that live within these areas as being

Table 1 Non-resident—adult surgical patients in New York State

		All 67,685		2006 35,471		2015 32,214		
Total sample (n)		n	%	n	%	n	%	
Age	18–30	4816	7.12	2664	7.51	2152	6.68	***
	31–40	5515	8.15	3338	9.41	2174	6.75	***
	41–50	9779	14.45	5828	16.43	3953	12.27	***
	51–60	14,257	21.06	7303	20.59	6955	21.59	**
	61–70	15,967	23.59	7651	21.57	8318	25.82	***
	71–80	12,083	17.85	6126	17.27	5960	18.50	***
	81+	5268	7.78	2565	7.23	2706	8.40	***
Gender	Male	35,488	52.43	18,317	51.64	17,170	53.30	***
	Female	32,197	47.57	17,154	48.36	15,044	46.70	***
Race	White	52,030	76.87	28,554	80.50	23,478	72.88	***
	Black	3597	5.31	1752	4.94	1846	5.73	***
	Asian	1856	2.74	869	2.45	989	3.07	***
	Other	10,168	15.02	4296	12.11	5873	18.23	***
Lives in adjacent travel zone		50,725	74.94	26,770	75.47	23,958	74.37	***
International non-resident		1455	2.15	748	2.11	705	2.19	
Admit type	Elective	39,029	57.66	20,751	58.50	18,278	56.74	***
	Emergency	21,857	32.29	10,670	30.08	11,185	34.72	***
	Urgent	6606	9.76	3973	11.20	2632	8.17	***
	Other	112	0.17	74	0.21	119	0.37	***
Average length of stay (days)		5.91		5.90		5.91		
Average risk of mortality (1–4)		1.62		1.53		1.72		***
Average severity of illness (1–4)		1.97		1.87		2.09		***
Average total charges		$69,775.00		$48,462.00		$93,244.00		***

t-test statistic significant at $^{*}<0.05$, $^{**}<0.01$, $^{***}<0.001$

a resident of the adjacent travel zone. This group has reduced its proportional share only slightly, yet still significantly, by approximately 1.5%. This suggests that hospitals may have had some potential success in attracting patients from a wider range of geographic areas. The percentage of international patients overall has been consistent. Although Canadians make up the largest share (23.84%) of international non-resident patients, individuals arriving from the Middle East are nearly equal in size as the second largest group (22.67%). The Caribbean, South America, and the United Kingdom are the next largest regions represented in the sample.

The motivation to travel for healthcare has been characterized into "push" factors at the patient level (i.e. cost, type of illness) and "pull" factors at the organization level (i.e. innovation, efficiency, quality) [1]. One way we can distinguish patients that are being pushed or pulled to care in this state, from those just happen to be in New York when care is needed, is by examining their type of admission. Patients in

Table 2 Top medical diagnostic categories (MDC) among non-resident surgeries in New York

MDC	Definition	2006		2015		p
All						
8	Musculoskeletal system	8085	22.79%	9662	29.99%	***
5	Circulatory	6905	19.47%	5318	16.51%	***
6	Digestive	3627	10.23%	3670	11.39%	***
1	Nervous	2681	7.56%	2108	6.54%	***
11	Kidney and urinary tract	1690	4.76%	1442	4.48%	
4	Respiratory	1659	4.68%	1669	5.18%	**
Elective						
8	Musculoskeletal system	6314	30.43%	8057	44.08%	***
5	Circulatory	2494	12.02%	1925	10.53%	***
1	Nervous	1553	7.48%	986	5.39%	***
6	Digestive	1497	7.21%	1566	8.57%	***
13	Female reproductive	1303	6.28%	560	3.06%	***
10	Endocrine, metabolic	1178	5.68%	568	3.11%	***

t-test statistic significant at $^*<0.05$, $^{**}<0.01$, $^{***}<0.001$

the SPARCs dataset are identified by one of several admission categories (i.e. elective, emergent, urgent). Elective admits are described as patients whose "condition permits adequate time to schedule the admission based on the availability of suitable accommodation [13]." Elective patients are showing a reduction in this sample, while emergent and urgent patients are increasing in number. This suggests that fewer non-resident patients may be choosing to come to New York specifically for the purpose of medical care, but instead just find themselves in an unexpected need for care while in the state for other purposes. The patient record includes two categorical variables, that give us a high-level description of each patient's health status. Both risk of mortality and severity of illness are measured on a four-point scale—with one being low risk/severity and four being high risk/severity. In the overall sample, the mean score for both of these indicators has increased between the two periods.

In addition to the clinical indicators of risk of mortality and severity of illness, each patient is assigned a federal Major Diagnostic Category (MDC). The MDCs are formed by dividing all possible principal diagnoses into 25 mutually exclusive diagnosis areas. The diagnoses in each MDC correspond to a single organ system or etiology, and in general are associated with a particular medical specialty [14]. The top frequencies and the distribution of diagnostic categories for our sample can be found in Table 2. The largest share in both the full sample and the elective population falls under the musculoskeletal system with 44.08% of all elective procedures in 2015, a 44.86% increase over 2006. Although circulatory disease is the next largest share, the data reflect a decline between periods. When focusing on elective procedures specifically, areas of growth also include the digestive classification. There are notable differences between the most common elective versus

non-elective diagnostic categories, with both female reproductive and endocrine classifications rising into the top responses among elective patients.

3.2   Regression

Table 3 provides the results from three uses of the logistic regression model. We first pool the sample of each of the 2 years, and then subsequently break them out separately. The outcome variable is consistent between all models—a binary measure of whether or not the patient is characterized as an elective admit. Observable covariates are used in all models, and p values to define significance are reported at the 0.05, 0.01 and 0.001 levels. Reference categories are identified as appropriate and standard errors are displayed next to their respective beta coefficients.

There are highly significant associations with a broad range of our covariates when looked at in relationship with the classification of elective admissions. When controlling for these factors, higher age ranges show a higher positive magnitude relative to the lower age ranges (18–30 population). This continues to grow until the highest age bracket (81+), where we see a slight dip in magnitude. Non-resident women are more highly associated with elective surgeries than men. Both risk of mortality and severity of illness display a significant, growing inverse relationship with non-resident elective admit surgical patients, which would be expected given the nature of the classification. Living in an adjacent travel zone and being an international non-resident are also both positively associated with the elective admit status.

4   Discussion

The make-up of New York's non-resident patient population is in flux; broad demographic shifts by age, gender and race gives us clues as to what populations may be most open to traveling for elective surgeries in the future. The results suggest that older adults, women, and lower risk non-resident patients have the strongest associations with the elective admission classification. The growing share of non-white non-resident patients indicates a growing diversity that should be considered from the standpoint of culturally appropriate messaging and marketing services.

We also see that, although there is a slight reduction in the percentages of non-resident patients from adjacent U.S. states and Canadian provinces, geographical proximity (adjacent travel zone) remains strongly associated with seeking elective surgery in New York. A slight increase in the ability to attract non-resident patients from a wider reach than shared border regions could fuel optimism for future growth. In an era of heightened competition, the consistent, though stagnant in size, international patient population, suggests a continuing

Table 3 Logistic regression results for elective admit surgeries among non-resident patients in New York

		Pooled (n = 67,685)		2006 (n = 35,471)		2015 (n = 32,214)	
		B	Error	B	Error	B	Error
Age	18–30	Reference					
	31–40	0.4686	0.0421***	0.5455	0.0552***	0.3555	0.0654***
	41–50	0.5712	0.0376***	0.5656	0.0495***	0.5896	0.0581***
	51–60	0.6375	0.0357***	0.5728	0.0479***	0.7192	0.0536***
	61–70	0.7519	0.0354***	0.6435	0.0478***	0.8785	0.0530***
	71–80	0.7590	0.0372***	0.6173	0.0498***	0.9347	0.0561***
	81+	0.2688	0.0441***	0.1002	0.0601	0.4583	0.0652***
Gender	Female	0.2537	0.0168***	0.3085	0.0230***	0.1827	0.0249***
Race	White	0.3495	0.3783	-0.3035	1.4318	0.3952	0.4006
	Black	-0.1450	0.3799	-0.7543	1.4327	-0.1615	0.4035
	Asian	0.2543	0.3816	-0.4195	1.4337	0.2930	0.4065
	Other	0.0408	0.3788	-0.5791	1.4322	0.0273	0.4014
Average risk of mortality	1	Reference					
	2	-0.5049	0.0228***	-0.4695	0.0313***	-0.5476	0.0335***
	3	-1.0688	0.0359***	-0.9542	0.0525***	-1.1811	0.0502***
	4	-1.2211	0.0624***	-0.6417	0.0900***	-1.7514	0.0872***
Severity of illness	1	Reference					
	2	-0.1522	0.0207***	-0.1519	0.0278***	-0.1947	0.0316***
	3	-0.6944	0.0297***	-0.5748	0.0398***	-0.8533	0.0449***
	4	-1.0461	0.0565***	-1.3429	0.0862***	-0.8598	0.0761***
Lives in adjacent travel zone		0.6366	0.0195***	0.5890	0.0265***	0.7072	0.0289***
International traveler		0.2729	0.0589***	0.2363	0.0808**	0.3625	0.0867***
_Cons		-0.3174	0.3800	0.0551	1.4326	-0.5657	0.4043
r²		0.1045		0.0830		0.1341	

p-value is significant at * <0.05, ** <0.01, *** <0.001

pattern of attracting foreign non-residents for care—particularly in the areas of musculoskeletal, cardiovascular and digestive surgeries.

One of the largest challenges of this study is concern over the validity of the selection of the sample population. Conceivably, we could be characterizing patients as residents who are using a local address for patient records but actually live outside the state borders. Conversely, we could be counting expatriates or students (less likely, given the age demographics), within our sample as non-residents, when perhaps they should not be categorized as medical travelers. Additionally, the assumption that elective procedures are all planned ahead of time, suggesting intentional medical tourism, could be too broad. Future studies may choose to incorporate a mixed-methods approach to verify the non-resident patient's primary motivation in seeking care in New York.

The model's fit is also a potential concern, as much of the variation is not described using the basic logistic regression. Using a more sophisticated longitudinal model with added observation periods, fixed effects, and additional variables—including diagnostic category, procedure types, primary language, and payor type—could produce clearer differentiation between associated observables, and account more appropriately for non-observables. Finally, given that this data is exclusive to the U.S. and specifically New York state, it may not generalizable to other geographic areas.

5   Conclusions

Given the overall reduction in non-resident patients traveling to New York state hospitals for care broadly as well as for elective-admit surgeries in particular, the results of this study provide insight for health care providers on the demographic shifts of their non-resident patient population. Understanding the potential market shifts will be key to attracting a broader non-resident patient base. As policy makers attempt to use healthcare to boost tourism more generally, understanding the types of patients that will travel for care and drivers of their provider choice will be key to the success of any geographic medical tourism initiative.

References

1. Veerasoontorn R, Beise-Zee R (2010) International hospital outshopping: a staged model of push and pull factors. Int J Pharm Healthc Mark 4:247–264. https://doi.org/10.1108/17506121011076174
2. Centers for Disease Control and Prevention (2017) Medical tourism. https://www.cdc.gov/features/medicaltourism/
3. Veselova ES (2017) Medical tourism: tourism with health benefits. Probl Econ Transit 59:480–500. https://doi.org/10.1080/10611991.2017.1352363

4. Johnson TJ, Garman AN (2010) Impact of medical travel on imports and exports of medical services. Health Policy 98:171–177. https://doi.org/10.1016/j.healthpol.2010.06.006

5. Johnson TJ, Youngquist JS, Garman AN, Hohmann S, Cieslak PR (2015) Factors influencing medical travel into the United States. Int J Pharm Healthc Mark 9:118–135. https://doi.org/10.1108/IJPHM-02-2013-0004

6. Beladi H, Chao C, Ee MS, Hollas D (2015) Medical tourism and health worker migration in developing countries. Econ Model 46:391–396. https://doi.org/10.1016/j.econmod.2014.12.045

7. StataCorp (2017) Stata statistical software: release 15. StataCorp LLC, College Station

8. NYS Department of Health (2018). SPARCS compliance reports – PFI facility listing. https://www.health.ny.gov/statistics/sparcs/reports/compliance/pfi_facilities.htm

9. Langley JD, Johnson TJ, Hohmann SF, Meurer, SJ, Garman AN (2013) Empirical analysis of domestic medical travel for elective cardiovascular procedures. Am J Manag Care 19 (10):825–832. https://login.ezproxy.oswego.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=24304161&site=eds-live

10. Song Z, Ferris TG (2018) Baby boomers and beds: a demographic challenge for the ages. J Gen Intern Med 33:367–369. https://doi.org/10.1007/s11606-017-4257-x

11. Hinson AM, Hohmann SF, Stack BC (2016) Domestic travel and regional migration for parathyroid surgery among patients receiving care at academic medical centers in the United States, 2012–2014. JAMA Otolaryngol Head Neck Surg 142:641–647. https://doi.org/10.1001/jamaoto.2016.0509

12. Klinger EV, Carlini SV, Gonzalez I, Hubert SS, Linder JA, Rigotti NA, Haas JS (2015) Accuracy of race, ethnicity, and language preference in an electronic health record. J Gen Intern Med 30:719–723. https://doi.org/10.1007/s11606-014-3102-8

13. NYS Department of Health (2016) Statewide planning and research cooperative system (SPARCS). https://www.health.ny.gov/statistics/sparcs

14. Medicare.gov (n.d.) ICD-10-CM/PCS MS-DRG v35.0 Definitions manual. https://www.cms.gov/ICD10Manual/version35-fullcode-cms/fullcode_cms/P0001.html

Innovation in Graphic: Print Communication and Its Contribution to Marketing Strategies

Anastasios E. Politis

Abstract Marketing strategies are applied in numerous forms all around the world. One of the principal means for running marketing is through various forms of communication, which are implemented by print, electronic and mobile media. The present study reveals the enhancement of communication with technological innovations providing added value, support significantly marketing and contribute to the increase of sales to the products. As such relying on print technologies appears as a stable and concrete basis for marketing and sales.

Keywords Graphic communication · Marketing strategies · Printing · Finishing · Packaging

1 Marketing and Graphic Communication

Marketing strategies rely on media and communication. In particular, printing, finishing and packaging are those stakeholders that support the communication of brands, goods and services and contribute quite considerably in sales. This paper investigates innovations that are taking part in graphic communication—print and packaging, especially these that add value to products and brands. These innovations originate from intensive research in new technologies, materials and engineering, and expanding not only visual communication but also other human senses such as haptic, smell and sound. More specifically, research has been conducted in color, printing and finishing technologies and their application mainly on packaging. In the paper, the application of science and technological innovation is presented through selected examples with printing, finishing and packaging. In addition, marketing strategies for products such as food, drinks and beverages are illustrated in a case

A. E. Politis (✉)
HELGRAMED—Hellenic Union of Graphic Arts and Media Technology Engineers, Attiki, Greece

study of an innovative label printing company from Greece, namely the Forlabels SA.

Brands, products, sales and marketing strategies present quite strong bonds. Marketing rely quite considerably in graphic communication, expressed with print and electronic media. Although digital and online marketing are increasingly used, print, and the related technologies are those that implement are interconnected and increasingly dependent on packaging [1].

There is no doubt that graphic communication triggers the attraction on products. Hence, the visual communication is only one of the senses that contribute to the attraction for products and lead to decisions for sales. Continuous development of packaging is increasingly based on modern applications of graphic arts science and technology. Modern packaging requires a holistic design based on the following aspects:

- Product data
- The requirements of brand owners
- Product-related marketing strategies and sales planning
- The (constantly changing) market characteristics

Nowadays, printing and finishing technologies, materials and innovative processes, offer a wide variety of solutions for products promotion and tools for applying advanced marketing strategies. As such, graphic arts science and technology contributes decisively:

- in the quality packaging
- the successful presence of products on the market [2]

Hence brand owners and marketing managers should be aware on new technologies offered by print and packaging sectors [3].

2 Graphic Arts/Communication: Evolution in Science and Technology

Traditionally, in the graphic arts/communication and printing industry, print is one of the products that contribute into the communication and help marketing to promote products. Additional technologies, named after "finishing or post-print processes", contribute significantly in adding value on printed matters. These processes, vary from varnishing to laminating and from embossing to die-cutting and the creation of special effects with certain innovations. The purpose of such advanced finishing technologies is to enhance communication, by adding elements not only related with color and visual domain, but also by expanding communication with additional senses such as smell, odor and haptics.

Such technologies expand to a wide range of innovative applications. A short classification includes (among others):

– Hybrid printing technologies (combination of various printing methods, namely offset, digital printing, flexography, and silk-screen printing).
– Hybrid printing and finishing technologies (combination of printing and post-press technologies and processes)
– New materials such as fluorescent substrates
– Printing of interactive information—printed electronics, RFID/NFC Tags, printing of thermo/time indicators. Technologies that print interactive data, such as Augmented Reality (AR)
– Variable data printing, 6,7,8 color printing, effects printing (such as Mosaic patterns that make every printing sample unique) digital textile printing
– Finishing technologies such as die-cutting, embossing, hot and cold foil application, thermo-transfer, calendering, spot varnish, metallization effects.
– Application of varnishing technologies for the achievement of smell
– Functional printing, functional packaging, 3D printing

3 Examples of Marketing Based on Graphic Communication Technologies

3.1 Follmann

Follmann c has developed aroma varnishes that contain fragrances enclosed in microcapsules. When customers touch a printed package, the capsules release their scent. According to the manufacturer, the enclosed fragrances are potent for up to 12 months. With a view to a wide range of applications and multichannel marketing campaigns, the scented coatings can be used in sheetfed and web offset printing as well as in flexo and screen printing. They are applied by using a special varnish applied at the finishing coating process, with microcapsules including the aroma [4].

3.2 Case Study: Applied Research and Innovation in Graphic Communication and Packaging by Forlabels S.A., Schimatari, Greece

Forlabels, an innovative label printing company in Greece, develops and applies in reality scientific research in advanced printing technologies. Among others, Forlabels develops labels and packaging by applying the mosaic technology as well as the variable data printing technology [5]. Examples are an innovative product in the field of gastronomy, namely a series of miniature ouzo bottles. Thus, 12 different labels, corresponding to the 12 Gods of Olympus, were created, with shrink sleeves dressing miniature ouzo-bottles [5].

Fig. 1 Forlabels (www.forlabels.gr)

Further, Forlabels applies the mosaic technique. With this technique, a very attractive, very impressive and very differentiated image on the shelf, can be created, catching the eye of the consumer and building a special relation between him and your product [5].

Variable and mosaic technologies allow to create collectible packaging to commemorate an event, personalised packaging for a specific consumer providing even personal bits such as his photo, packaging with an educational purpose that may display recipes, information about the product's place of origin, etc. Above all, they are a source of inspiration for designers and for a company's marketing department, allowing them to make smart promotional moves that boost sales making the product more attractive to the consumer (Fig. 1).

4 Conclusion

The present study reveals that the enhancement of communication with technological innovations and their application by graphic communication, print and packaging, offer added value, support significantly marketing and contribute to the increase of sales to the products. As such relying on print technologies appears as a stable and

concrete basis for marketing and sales [6, 7]. The combination of advanced print and finishing technologies applied by innovative printing companies around the globe, drive marketing and brands/products beyond a simple visual communication. They add value to products by creating haptic communication, by introducing augmented reality and the implementation of interactive data, extend the dimensions of communication by eliminating the borders among physical and digital worlds and finally offer the potential for enhanced marketing.

References

1. Politis A (2018) The role of graphic arts science and technology in modern packaging – impacts on retail, marketing and product sales. Pack & Label Day Conference, Thessaloniki, 11–12 May 2018
2. Politis A (2014) Transforming packaging buyer requirements to efficient solutions for packaging production. ESKOWORLD conference, Athens, 6 May 2014
3. Politis A (2018) Evolution in graphic communication science, research and education. In: Introductory-keynote presentation, 1st Hellenic conference on graphic arts, University of Ioannina, Ioannina, 1–4 July 2018
4. www.drupa.com/visit/4705/2/MPAGE42940
5. https://www.forlabels.gr/en/innovations, https://www.forlabels.gr/en/case-studies/go-greek-collectibles, https://www.forlabels.gr/en/case-studies/ionia-olive-oil
6. Politis A (2018) Innovations in the graphic arts, media and packaging fields. Keynote paper presented at the GRID18 – 9th international symposium on graphic engineering and design, Department of Graphic Engineering and Design/University of Novi Sad, Faculty of Technical Sciences, Novi Sad, 8–10 Nov
7. Politis A (2017) The graphic-media communication science – fields, trends and the contribution of research organizations. Paper presented at the scientific conference "Evolution innovation in graphic-media science: research, industry innovation and the role of education," Hellenic Union of Graphic Arts and Media Technology Engineers – HELGRAMED, Athens, 22 Mar 2017

Supporting Cultural Heritage Preservation Through Game-Based Crowdsourcing

Lazaros Toumanidis, Enkeleda Bocaj, Panagiotis Kasnesis, and Charalampos Z. Patrikakis

Abstract It has been decades since the research community has put efforts into combining human and machine intelligence. With the rapidly surging of mobile sensing, gamification techniques have contributed on making the crowd-sourcing computing techniques a promising paradigm for large-scale data sensing. In this paper, starting from a study of gamification and crowd-sourcing techniques, we present an alternative way of combining gamification techniques with crowd-sourcing in order to preserve cultural heritage sites. The proposed application is a scavenger hunt like game where the players have to complete a series of tasks in the form of riddles. Each task may include sending the location of the user, answering a question, uploading media files or annotating some image or audio files related to the pace of visit. Except from empirical input which comes from the experts, our approach collects external data, engaging the sightseeing visitors with sensing and computing devices collectively share data, related to site's or monument's physical structure condition. The collected data are clustered together by archaeological site location and used in machine learning to extract information about the physical condition of the cultural heritage site. Through the application's results, the experts will take the appropriate decisions in order to estimate and predict if there is any need of intervention to maintain the archaeological site or monument in good condition.

Keywords Crowd-sensing · Gamification · Cultural heritage · Machine learning

1 Introduction

The rapid evolvement and proliferation of mobile devices on the domain of computation power, communication and sensing capabilities has resulted in making the individuals (mobile users) important sources of sensing data in a wireless worldwide

L. Toumanidis (✉) · E. Bocaj · P. Kasnesis · C. Z. Patrikakis
University of West Attica, Egaleo, Greece
e-mail: laztoum@uniwa.gr; bpatr@uniwa.gr

network [1]. Smart phones, tablets and other mobile devices with their sensing capabilities such as GPS, camera, microphone, accelerometer and magnetometers, represent a new low cost and flexible distributed type of sensing infrastructure that enables mobile people-centric sensing. In this sense, the wide spreading of mobile devices and the advanced capabilities (e.g., memory and computation capability) has emerged the crowd-sensing. Indeed, the individuals almost always carry on smart devices and use digital services, having this way the chance to interactively emit and contribute on data production and collection.

Mobile Crowd-sensing (MCS) technique is a large-scale sensing paradigm based on the power of user-companioned devices, including mobile phones, smart vehicles, wearable devices, and so on [2]. MCS allows individuals willingly and voluntarily share local knowledge, such as ambient context, local information or noise level, acquired by their smart devices, taking advantage from both individuals and mobile devices. In this way, MCS techniques combine both mobile device sensors and human sensors, sourced by both mobile and social media data sources, with users participating both explicitly and implicitly. Indeed, crowd-sensing techniques leverage to gather information about the physical world in a human-as-a-sensor approach. In this sense, the information that could be aggregated though the human-as-a-sensor is enormous and provides a substantial wealth of qualitative data complementing hardware sensors readings. However, there is the drawback of the miss trustworthiness of the information due to the crowd-sensing participants which cloud lead to inaccurate or even fake data. Mobile crowd-sourcing and gamification techniques have been applied in many applications in the last decade, although it is a domain that needs to be improved and more research work to be applied on.

The accurate and timely data collection is one of the major parts of efficiently running a crowd-sensing application. Thankfully, the rapid growth in the use of mobile technologies has increased the demand for mobile-based data-collection solutions in order to bridge the information with the cloud. In this sense, the crowd-sensing information in combination with the data provided by physical sensors deployed on the field could be directly gathered and fused in a large scaled cloud data base where machine learning and intelligence data mining techniques can be applied.

In this paper, starting from a study of gamification and crowd-sourcing techniques, we present an alternative way of combining gamification techniques with crowd-sourcing in order to preserve cultural heritage sites through a mobile application. More specifically, the proposed application has been spited in two main parts, on the technologies and methods for data collection and the part of presenting the technologies and methods for valuable information extraction. The first part aims to present the data collection which can be through the mobile devices sensors or individuals/visitors annotated information related to the pace of visit. Then, in the second part, the collected data are clustered together by archaeological site location and used in machine learning and deep learning methods to extract information about the physical condition of the cultural heritage site.

2 Related Work

2.1 Mobile Crowd-Sensing Applications

In the earliest of twenty-first century the first mobile crowd-sensing systems/applications made their appearance. First, on 2007 the MobGeoSen [3] application which allows individuals to monitor their local environment such as the pollution and temperature, and their private cases/condition such as activities and health, by using their mobile phones in their everyday life. On the other hand, NoiseTube [4] is a system which aims to provide a new approach for the assessment of noise pollution involving the crowd-sensing. Users/individuals voluntary share their geo-localized measurements and a personal annotation process helps on creating a collective noise map. ParticipAct and People as a Service (PeeaS) are an interesting combination of two MCS platforms which are described from [5].

The flexibility of MCS systems, leveraging on mobile devices features, should be combined with mass adoption in order a crowd-sensing application to be successful. Indeed, a large number of participants/volunteers is required to be involved, in that point the user motivation and engagement are of top priorities when designing such systems/applications. Following this strategy McSense, which is a micro-payment system, allows the participants to choose from a wide range of sensing tasks, such as taking photos at events on campus, collecting Global Positioning System (GPS) and accelerometer readings, or collecting application and network usage from the phones and other proposals that deal about the relevance of the rewards to the quality of the collected data. Furthermore, Biketastic is a system which aims to facilitate knowledge exchange among bikers by sharing routes and biking experience while LiveCompare [6], a system that leverages the ubiquity of mobile camera phones to allow for grocery bargain hunting through participatory sensing. The "Alien vs. Mobile User" is a game that aims to uniformly cover a large area with sensing data is an example of mobile games incentives. The game involves tracking the location of aliens on a specific area and destroying them. It collects Wi-Fi signal data to construct the Wi-Fi coverage map of the targeted area.

2.2 Gamification Techniques for User Engagement

Achieving high number of participants in MCS systems different type of techniques has been invented, one of the most common ones is Gamification. Gamification technique is the use of game design techniques, styles and mechanics in non-game contexts [7] and activities, such as in the ordinary apps which do not have any game contexts. It aims to engage users/individuals in solving problems and driving desired behaviors that help the organization reach a goal, whether it is cutting costs, increasing performance, improving customer satisfaction or devising innovative solutions. Despite its name, the gamification techniques do not always mean playing

Table 1 Gamification techniques

Technique	Description
Leaderboards	Provide a way for users to become engaged with the app via competition
Quizzes	Using a quiz to engage users and appealing to their curious self to find something out about themselves is a very clever way to get information about users
Trophies, badges and leveling	Are a way to digitally reward the user for their engagement and effort spent in performing tasks for you
Progress bar	This shows people what percentage of the process they've completed as they move from step to step
Challenges and actual games	In the absence of actual games, the above techniques provide a method for gamifying the user experience to collect useful information

games or being associated to the game mentality. Gamification is mainly a broader principle that concerns content engagement and participation, which acts in the similarly as a game in which the user will be acting and engaging within the app, allowing to the app to passively collect some useful information from the user. Gamification techniques have been also implemented in the cultural heritage (CH) domain, aiming on achieving the goals and expectations of the organizations [8]. When it comes in the domain of CH has been recognized that these are some of the main goals:

- Preservation and protection of cultural heritage objects and assets;
- Cutting additional staff and outsourcing costs;
- Improving visitor satisfaction and awareness;
- Increasing conservation performance via the passive collection of useful information by the user (that would otherwise have to be collected manually by site staff).

These goals could be accomplished via gamification techniques since it motivates visitor audiences to voluntarily contribute by perform mundane tasks on behalf of the site whilst participating in a fun and engaging activity. Patel [9] provides several techniques that can be used to enhance user motivation and enhancement. In Table 1, we summarize the most common of them.

These are also the techniques that we have consider in our approach.

3   Proposed Solution

In this section we deploy our game-based crowd-sensing in supporting cultural heritage preservation, through creating a hybrid human-machine system. Gamification techniques are used in crowd-sensing application in order to collect data which will be used for the information extraction. The collected data are coming from a mobile's sensors like camera, microphone, environmental sensors, such as ambient temperature or GPS, enriched with human intelligence such as tourists'

- •—— The user has to send his/her location
- •—— The user has to classify a series of media files
- •—— The user has to answer a question
- •—— The user has to upload a media file
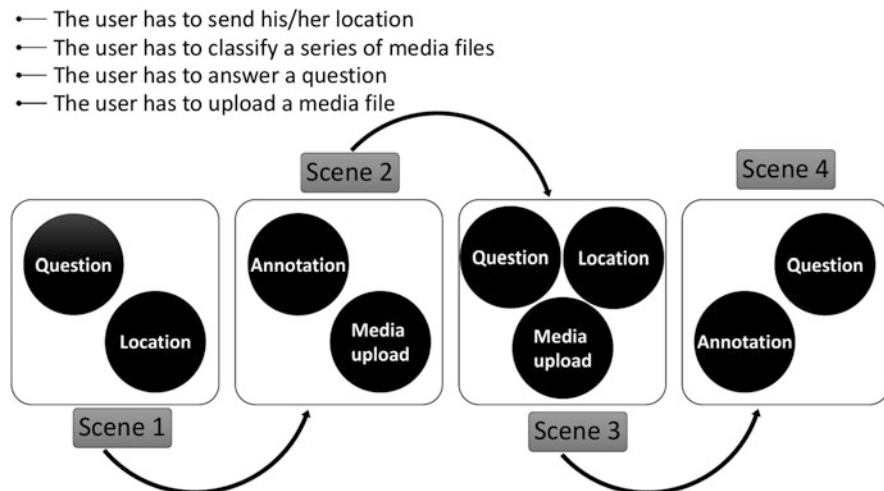
Fig. 1 Gamification flow

contribution, creating this way a valuable resource for techniques that can detect and extract useful information.
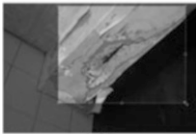
The approach is consisted of two main parts, the technologies and methods used to collect data and the methods applied to extract information from the collected data.

3.1 Technologies and Methods for Data Collection

The main data collection source of crowd sensing is established using the smart mobile devices' embedded sensors, such as the camera, the microphone, the environmental sensors and the GPS sensor. The tourists/individuals will be able to enrich the sensors data through contribution with additional information about the environment. The selected motivation technique is through a scavenger hunt game (Fig. 1), where each player/tourist is asked to complete several tasks in the form of riddles, which may include uploading media like image audio or video files, sending the environments temperature or the humidity values, sending the device's coordinates, answering a question, or performing several annotation tasks. Indeed, based on each game's scenario, tasks may ask the players/tourists to take several recordings in an area for example, or upload several images from an archaeological museum [10].

To complete a session, the user has to unlock every scene by completing one or more tasks that are asked. The annotation tasks could be different each time. The types an annotation task can have are presented on Table 2.

Table 2 Different types of annotation

Annotation types		
Yes/No *Select between two available choices regarding a question*	Multiple Choice *Select from more than two available options*	Text *Submit a text answer*
Area selection *Crop and send an area of interest from a picture*	Drag n' Drop *Group a series of files*	

3.2 Technologies and Methods for Valuable Information Extraction

The type of the collected data could vary, they could be audio samples, images, environmental measurements and the GPS coordinates. In order to extract valuable information from all these types of data, Deep Learning methods are considered to be the most suitable, since they have revolutionized the fields of computer vision [11] and audio signal processing [12]. In particular, audio classification techniques will be applied to recognize sounds of interest at pilot sites, such as thunderstorm or heavy rain, while object detection techniques should be applied to identify the existence of structural hazards, such as cracks on a wall.

Audio Classification The audio signals collected by Wireless Acoustic Sensor Networks (WASNs) or mobile phones will be classified based on Convolutional Neural Networks (CNNs) and introduces the concept of Transfer Learning.

The main advantage of a convolutional layer is that it manages to capture the time-spatial dependencies of audio signals. Consequently, in the case of audio signals, the input (audio samples), which is the preprocessed and segmented audio signal, is converted to a log-scaled mel-spectrogram and is convolved with filters. These filters are trained in order to discover the most suitable pattern, such as peaks in the signal. The output of the convolution is called the activation map, which is the product of several parallel convolutions between the signal and the filters [10].

CNNs approaches are considered to be state-of-the-art even for relatively smaller audio datasets (few thousand of samples). Piczak [12] applied a relatively shallow CNN (two convolutional layers) on log-scaled mel-spectograms using the UrbanSound8K (2018) dataset and achieved to obtain state-of-the-art performance.

Indeed, Deep Learning algorithms achieve higher performance as the size of the training dataset increases, data augmentation techniques have been adopted by researchers. Piczak [13] utilized random time delays to the original recordings of the ESC-50 (2000 clips) and ESC-10 (400 clips) datasets. In both cases, his CNN architecture achieved better accuracy results than the baseline model, and in the case of the ESC-50 the difference between the average accuracies was above 20% (baseline accuracy: 44%, best CNN: 64.5%). In addition, Salamon and Bello [14] explored the influence of different augmentations on the performance of a proposed CNN architecture and obtained an average accuracy close to 79%.

Object Detection Annotated dataset of images collected through the use of gamification techniques has been used in order to develop an object detection model capable of identifying structural damages. In object detection, in contrast to image classification, which tries to classify an image into a certain category, such as cat, you aim, also, to identify the location of objects in an image using bounding boxes. A bounding box is an area defined by these coordinates: x0 (left x coordinate value), y0 (top y coordinate value), width, height. Moreover, in object detection can identify more than one instance of an object.

It is worth mentioning that state-of-the-art image classification and object detection techniques are based on CNNs. However, in object detection the Deep Learning model must be trained to draw effectively the bounding boxes. A typical object detection framework contains the following steps [15]:

1. In the first step, an algorithm is used to generate regions of interest or region proposals. These region proposals are a large set of bounding boxes spanning the full image.
2. In the second step, the CNN model extracts features for each of the bounding boxes, they are evaluated and it is determined whether and which objects are present in the proposals, acting like an object classification component.
3. Finally, in the post-processing step, overlapping boxes (probably depicting the same object) are combined into a single bounding box.

   In this way, damages or changes on the cultural heritage could be indicated.

4   Conclusion

In this paper we provide a short review on existing mobile crowd-sourcing techniques, the ways gamification can be used in combination with these techniques, and how we can make use of this combination when applied on the cultural heritage domain. We present a crowd-sourcing application based on gamification techniques

for supporting cultural heritage preservation. In particular, already existed mobile crowd-sourcing applications have been studied and gamification techniques have been analysed in detail. From these studies have been highlighted and has been extracted keywords and information which can be used for a better implication of the presented approach.

Our approach suggests an alternative application which combines gamification techniques and crowd-sourcing in order to support cultural heritage. The collected data are provided from both mobile devices sensors and tourists/individuals. In this sense, gamification techniques that have been analyzed as a promising user engagement method in order to have more information and simultaneously to be more reliable. The collected data are then used for information extraction. All the types of collected data, such as audio, pictures, text and so one, are processed through different deep learning methods in order the useful information to be extract. Consequently, they are spited in two categories, audio classification and object detection. Each of which is analysed and presented.

References

1. Campbell AT, Eisenman SB, Lane ND, Miluzzo E, Peterson RA, Lu H, Zheng X, Musolesi M, Fodor K, Ahn GS (2008) The rise of people-centric sensing. IEEE Internet Comput 12(4):12–12
2. May P, Ehrlich HC, Steinke T (2006) ZIB structure prediction pipeline: composing a complex biological workflow through web services. In: Nagel WE, Walter WV, Lehner W (eds) Euro-Par 2006. LNCS, vol 4128. Springer, Heidelberg, pp 1148–1158
3. Kanjo E, Benford S, Paxton M, Chamberlain A, Fraser DS, Woodgate D, Crellin D, Woolard A (2007) MobGeoSen: facilitating personal geosensor data collection and visualization using mobile phones. Pers Ubiquit Comput 12:599–607
4. Maisonneuve N, Stevens M, Niessen ME, Steels L (2009) NoiseTube: measuring and mapping noise pollution with mobile phones. In: Athanasiadis IN, Mitkas PA, Rizzoli AE, Gomez JM (eds) Proceedings of the 4th international ICSC symposium on information technologies in environmental engineering. Springer, Berlin, pp 215–228
5. Cardone GL, Bellavista FP, Corradi A, Borcea C, Talasila M, Curtmola R (2013) Fostering participation in smart cities: a geo-social crowdsensing platform. IEEE Commun Mag 51:112–119
6. Deng L, Cox LP (2009) LiveCompare. In: Proceedings of the 10th workshop on mobile computing systems and applications – HotMobile 09. ACM Press, p 4
7. Woodcock J, Johnson, MR (2017) Gamification: what it is, and how to fight it. Sociol Rev. https://doi.org/10.1177/0038026117728620
8. Cognizant (2013) Boosting user engagement through gamification. https://www.cognizant.com/InsightsWhitepapers/Boosting-User-Engagement-through-Gamification.pdf
9. Patel N (2018) How to easily add gamification techniques to your content. https://www.quicksprout.com/2016/07/15/how-to-easily-add-gamification-techniques-to-your-content/
10. STORM project HORIZON 2020. http://www.storm-project.eu/

11. Krizhevsky A, Sutskever I, Hinton GE (2012) Imagenet classification with deep convolutional neural networks. In: Pereira F, Burges CJC, Bottou L, Weinberger KQ (eds) Advances in neural information processing systems 25, NIPS proceedings, pp 1–9
12. Piczak KJ (2015) Environmental sound classification with convolutional neural networks. In: 25th international workshop on machine learning for signal processing (MLSP), Boston, pp 1–6
13. Piczak KJ (2015) ESC: dataset for environmental sound classification. In: Proceedings of the 23rd ACM international conference on multimedia, ACM, pp 1015–1018. https://doi.org/10.1145/2733373.2806390
14. Salamon J, Bello JP (2017) Deep convolutional neural networks and data augmentation for environmental sound classification. IEEE Signal Process Lett 24(3):279–283
15. Towards Data Science (2018) Going deep into object detection. https://towardsdatascience.com/going-deep-into-object-detection-bed442d92b34

Is Social Media Paying Its Money?

Theodoros Oikonomidis and Konstantinos Fouskas

Abstract Businesses are seeking to achieve customer engagement through social media these days. With Facebook providing ready online places for each individual account through Facebook marketplace, it has become significantly easier for someone to build his own business on social media, a trend widely accepted and continuously rising. New smartphone capabilities are utilizing innovative ways of promoting items through social media applications. Digital influencers are working in collaboration with big brands and are seeking customer attention with appealing advertisement. Social media are offering, to identify customer segments that a business is targeting more efficiently. Facebook is offering the promotion of businesses' products for a fee and businesses require to know whether this investment will bring the required ROI. This research focuses on predicting this ROI by developing a prediction model that calculates the number of received likes of potential customers through Facebook. By utilizing a dataset with 500 different posts of a cosmetics company that uses promotions through Facebook, for a social media campaign that ran for 12 months, we have built a numeric prediction model that estimates the received number of a business "likes" in every single post that is published on Facebook.

Keywords Customer engagement · Smartphone capabilities · Prediction model

1 Literature Review

1.1 Introduction

Technological advancements have led many enterprises into the usage of digital means of presence and communication such as social media. Since the advent of

T. Oikonomidis (✉) · K. Fouskas
University of Macedonia, Thessaloniki, Greece
e-mail: t.oikonomidis@uom.edu.gr

huge social media companies such as Facebook LinkedIn and the like, businesses did not emphasize so much into the creation of digital content through social media. At this point of time those services were considered as radical innovation because they changed drastically the way that people communicate with each other through the Internet. Until that time there were a few options, other than e-mail that were offering real time digital communication between the members of a digital community. Although many users were creating social media accounts, the usability of those means were for limited purposes such as communication with friends, and actions such as publication of their favorite songs, quotes, or even publishing their news and updates. During the first years of Facebook very few businesses have made their appearance on social media to attract new customers. But after Facebook invented special advertisements for interested businesses with the option for selecting the customer segments where the promotion is redirected, then numerous businesses made their first appearance into the social media platforms [1].

1.2 Social Media Strategy

The new technological environment brings strategic knowledge to the businesses via social media. Social media democratize the digital environment making more consumer oriented. This means that companies after the advent of social media have faced issues such as negative feedbacks form their potential customers for tactics that were far away from their interest. Businesses can also make a poll inside social media for customer's future buying intentions [2]. Hence those that have digital presence in social media have a competitive advantage of whether their potential customers are going to like a new upcoming product or not. The number of resources and time that can be saved for a potential new product is tremendous since it already exists a basic platform for asking whether the buyers are in favor of a new innovative business idea or not [3].

Digital enterprises are utilizing social media, each one for different reason. Although most of the businesses have as final purpose to raise their sales, some of them have as short-term target to raise their awareness. For many entrepreneur's social media presence is an unavoidable phenomenon that can enhance the digital communication and build trust between businesses and customers. Other businesses focus on keeping a standard communication with potential or existing users to present a more appealing digital profile. Another usage that businesses are utilizing through social media is the after sales service in terms of business to end-user communication. These services have been expanded in other mobile applications such as Viber where users can optimize receiving exclusive offers with the option of subscription [4].

There are numerous case studies where a social media strategy went wrong. Most businesses are thinking that getting little or zero customer attention is harmful for the potential of a company. But this is not the worst scenario. One well known case is the creation of a blog with content regarding specific products of a company, where

individual users that were posting their positive feedback concerning a company's product were eventually fake accounts created by people from the inside of the company [5]. Such behaviors can shut down the operations of a company once and for all. Nonetheless most of the social media have taken precaution measures for such behaviors and have restricted the way that a single IP tunnel can have multiple social media accounts created in a very short period. Affiliate marketing is the most valuable way of promoting the work of a company in the social media the last years. Since Instagram was adopted by Facebook there were numerous attempts of affiliate marketing between one another [6]. Most of the companies have kept a successful roadmap since they are investing in research and development. This also applies for the businesses that are utilizing social media for marketing usage.

1.3   Reimagining Business Marketing Strategy

Most businesses invest time and money in finding the best possible potential customers to be advertised. Businesses are implementing specific benchmarks. However, reimagining a business marketing strategy requires a different type of thinking. People are also investing their time and money in social media and are expecting a ROI. So, by seeking customer intentions through the social media usage is revealing the true intentions of user's interaction through these media [7]. For example, some people are utilizing social media for communication purposes and seek attention among their friends and colleges. Others enjoy streaming video content that is related to their personal interests. There is a part of them though that are seeking their favorite brands and since the marketing strategy of big brands has been reimagined by the existence of social influencers, usually they are following people just to get in touch with their favorite products, invite their friends into those brands and participate into exclusive contests that come with rewards to the winners [8].

Most of the online sites are adopting social media attributes and performances just to become more sociable and more user intergraded. For example, even when large newspapers such as the New York Times are publishing a new article into their online version of the newspaper, users can go online, sign-in, add their own comment and share their opinion regarding the news [9]. People are highly attracted to a media when they can express and spread their ideas. It is also a nice feedback that can associate the publishers to perform better and improve their published content. It is also a direct mean for end-users to share the content and free publicity, and word of mouth that is working in the digital era [10].

There are numerous social media companies that have selected a different strategy regarding the software that they have launched and working so far. For example, Snapchat was initially launched as a mobile application and remains as is until now. Although many competitors believed that the company would not survive so far without an online site presence the company has succeeded in all the rounds of funding and has remained as a mobile application, with the competitive advantage of

owning customers that are mostly millennials, something that has attracted many investing companies that want to be advertised there. Similar path was chosen by Viber that is a major choice for many smartphone users who want to communicate through the Internet, but some years later they launched an application that is compatible with all the software's that are currently run by pcs. Both two social media are leading in terms of success and profitability so much that Snapchat has denied Facebook proposals for a buyout. They also keep a low profile of what business model they are using during the years and the profitability that they are producing [11].

2 Methodology

Traditional ways of measuring digital marketing success always deliver some qualitative results that seem promising but fail to deliver productive results. Most of these are failing since they cannot predict the way that people are reacting on marketing related posts on social media. And this is happening due to the huge number of variables that are playing a vital role to the acceptance of most of the social media users. We have utilized a social media campaign dataset that was implemented by a cosmetics company through Facebook for 12 months to improve business digital performance.

The main goals of this study are the following:

- Implementation of a model that predicts the number of likes in a company that uses social media post publications
- Explore correlations between the attributes that are playing vital role in the model building of a social media post.

2.1 Dataset Implementation

We have gathered a dataset from UCI Machine Learning Repository with 19 variables that are participating in the result in a marketing social media post of a company. There are 500 different Facebook posts that have made a social media marketing campaign and have measured those 19 variables [12]. Some of them are paid Fakebook posts to attract more potential customers and some of them are not. In the following table we present the attributes that were utilized in our model (Table 1).

After a first examination we saw that there might be some correlation between the above attributes and that's why we decided to use a linear regression to export a model that predicts the number of likes of a social media campaign of a digital enterprise. From the initial database we excluded the attribute "type" since it was a non-numeric attribute and therefore it cannot be utilized in a linear regression

Table 1 Description of model's attributes

Attributes	Description
Page total likes	Total likes
Type	The type of the Facebook Post (photo, status, video, link)
Category	Action, product, inspiration
Post month	The month of the year that the post launched
Post weekday	The day of the week that the post launched
Post hour	The hour of the day that the post launched
Paid	Paid and non-paid posts
Lifetime post total reach	The number of people who saw a page post (unique users)
Lifetime post total impressions	Impressions are the number of times a post from a page is displayed, whether the post is clicked or not. People may see multiple impressions of the same post. For example, someone might see a Page update in News Feed once, and then a second time if a friend shares it
Lifetime engaged users	The number of people who clicked anywhere in a post (unique users)
Lifetime post consumers	The number of people who clicked anywhere in a post
Lifetime post consumptions	The number of clicks anywhere in a post
Lifetime post impressions by people who have liked your page	Total number of impressions just from people who have liked a page
Lifetime post reach by people who liked your page	The number of people who saw a page post because they have liked that page (unique users)
Lifetime people who liked your page and engaged with your post comment	The number of people who have liked a Page and clicked anywhere in a post (Unique users)
Comment	Number of comments on the publication
Like	Number of "Likes" on the publication
Share	Number of times the publication was shared
Total interactions	The sum of "likes," "comments," and "shares" of the post

method. After using 10 cross validation folds and a percentage of 66% splits, we managed to build our model [13].

2.2 Initial Hypotheses

The following are the initial hypotheses that led us to the model creation:

H1 The number of likes is positively correlated to the number of total interactions.

H2 The number of total interactions is positively correlated to the number of shares.

H3 The number of shares is positively correlated to the number of likes.

H4 The number of likes is positively correlated to the number of comments.

H5 The number of shares is positively correlated to the number of comments.

H6 The number of total interactions is positively related to the number of comments.

H7 The number of Lifetime Post Consumptions is positively related to the number of Lifetime Post Consumers.

H8 The number of Lifetime People who liked your page and engaged with your post is positively related to the number of Lifetime Post Consumers.

H9 The number of Lifetime Post Consumers is positively related to the number of Lifetime Engaged Users.

H10 The number of Lifetime People who liked your page is positively related to the number of Lifetime Engaged Users.

H11 The number of Lifetime People who liked your page and engaged with your post is positively related to the number of Lifetime Engaged Users.

2.3 Model Creation

The final model of Regression analysis is the following (Table 2):

$$
\begin{aligned}
\text{like} = \ &(-0.204) * \text{Category} + (-0.0536) * \text{Post month} \\
&+ 0.0715 * \text{Post Weekday} + 0.0066 * \text{Lifetime Engaged Users} \\
&+ (-0.0065) * \text{Lifetime Post Consumers} + (-0.9969) * \text{comment} \\
&+ (-0.9717) * \text{share} + 0.0024 \ \text{Total Interactions} \\
&+ (-1.5295)
\end{aligned}
$$

Table 2 Cross validation summary

Correlation coefficient	1
Mean absolute error	0.5438
Root mean squared error	2.2538
Relative absolute error	0.3769%
Root relative squared error	0.6947%
Total number of instances	500

2.4   Results and Discussion

According to the results it seems that there is a high correlation between the total number of likes and the total interactions of a single Facebook post. The higher the number of digital interactions within a post, the higher the number of likes that a digital business is receiving. In a similar way, the rest of the initial hypotheses are confirmed and working inside the digital company and can be utilized from companies for KPIs improvements and for further research. Knowing that the increase or improvement of a specific attribute will improve the performance of others has significant impact in the performance of a digital company. From the model creation we also can confirm the fact that the most significant role on a like result are the "comments" and the "share" attributes. On the other hand, the month that a post is published, and the Lifetime Engaged Users are having the less important role into "the return of a like".

3   Conclusions and Future Work

First and foremost, the most significant conclusion that is coming from this research is the predictions of the number of the receiving likes of a single Facebook post. Although this database is from a cosmetic related digital company, the prediction model can be exploited by similar businesses that are utilizing Facebook for marketing related posts to raise their awareness or traffic into their online site. Since all the initial hypotheses were confirmed businesses can utilize the positive correlations between the variables to better understand how they impact one another and keep focus on improving those that are correlated with the ones that they matter mostly for the business. They can also keep better track of their KPIs on Facebook and utilize other business tools to automatically measure all 19 attributes to keep track of KPIs for performance measuring and can be combined with the model results for better social media performance.

Another interesting question regarding benchmarking inside social media is what percentage of social media accounts are original or doubled ones or even fakes ones. This is a crucial question since there might playing an important role on any research or measurement that is conducted from an institution or a company. A new trend with major influence is the fake news, that fake Facebook accounts are producing in a daily basis for propaganda purposes. It would be interesting for research and entrepreneurship purposes a prediction model that will locate the Facebook accounts that are fake. Finally, the current database from UCI repository can be used from another researcher by utilizing the database and apply classification algorithms for another potential prediction model for future work.

References

1. Kane GC (2015) Why social engagement may be more important than marketing. MIT Sloan Manag Rev 57(1):0. http://search.proquest.com/docview/1719450826?accountid=143960
2. Sashi CM (2012) Customer engagement, buyer-seller relationships, and social media. Manag Decis 50:253–272. https://doi.org/10.1108/00251741211203551
3. Ismail AR (2017) The influence of perceived social media marketing activities on brand loyalty: the mediation effect of brand and value consciousness. Asia Pac J Mark Logist 29:129–144. https://doi.org/10.1108/APJML-10-2015-0154
4. Kietzmann JH, Hermkens K, McCarthy IP, Silvestre BS (2011) Social media? Get serious! Understanding the functional building blocks of social media. https://doi.org/10.1016/j.bushor.2011.01.005
5. Yoshida M, Gordon BS, Nakazawa M, Shibuya S, Fujiwara N (2018) Bridging the gap between social media and behavioral brand loyalty. Electron Commer Res Appl 28:208–218. https://doi.org/10.1016/j.elerap.2018.02.005
6. Hoffman D, Fodor M (2010) Can you measure the ROI of your social media marketing? MIT Sloan Manag Rev 52:41–49. https://doi.org/10.1287/mksc.1120.0768
7. Habibi MR, Laroche M, Richard MO (2014) The roles of brand community and community engagement in building brand trust on social media. Comput Hum Behav 37:152–161. https://doi.org/10.1016/j.chb.2014.04.016
8. Hult M (2017) Dynamic marketing capabilities – organizational renewal towards social media marketing. http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1117437&dswid=5019
9. Clark M, Fine MB, Scheuer CL (2017) Relationship quality in higher education marketing: the role of social media engagement. J Mark High Educ 27(1):40–58. https://doi.org/10.1080/08841241.2016.1269036
10. Papa A, Santoro G, Tirabeni L, Monge F (2018) Social media as tool for facilitating knowledge creation and innovation in small and medium enterprises. Balt J Manag 13:329–344. https://doi.org/10.1108/BJM-04-2017-0125
11. Wang Z, Kim HG (2017) Can social media marketing improve customer relationship capabilities and firm performance? Dynamic capability perspective. J Interact Mark 39:15–26. https://doi.org/10.1016/j.intmar.2017.02.004
12. Moro S, Rita P, Vala B (2016) Predicting social media performance metrics and evaluation of the impact on brand building: a data mining approach. J Bus Res 69:3341–3351. https://doi.org/10.1016/J.JBUSRES.2016.02.010
13. Eibe F, Hall M, Witten H (2016) The WEKA workbench. Online Appendix for "Data mining: practical machine learning tools and techniques", 4th edn. Morgan Kaufmann, Burlington

Consumers Against Luxury Brands: Towards a Research Agenda

Antigone G. Kyrousi and Prokopis K. Theodoridis

Abstract Luxury branding is a highly dynamic and evolving area within brand management. Despite evidence from consumption practices which indicates that there is a negative side in consumers' relationships with luxury brands and responses to them, existing literature on luxury branding seems to remain predominantly focused on the positive aspects of consumption. The paper synthesizes insights from literature on luxury branding, negative brand relationships and theoretical views on negative consumer responses. A research agenda highlighting issues that merit further investigation on this topic is subsequently proposed so as to guide subsequent research efforts. Promising topics for further research are identified research in the following domains: (a) negative internal responses to luxury brands, (b) the antecedents and consequences of negative responses to luxury brands, (c) the dynamics of negative consumer-luxury brand relationships, and (d) the interplay between consumer positivity and negativity.

Keyword Luxury brands

1 Introduction

Luxury branding is a highly dynamic and evolving area within brand management, with brands such as Louis Vuitton, Ferragamo, Chanel, Porsche, Dom Perignon prominently featuring in industry news and showcasing unique marketing strategies. Within academic literature, there are repeated calls for more research on luxury branding [1]. Parallel to the latter, consumers' brand-related behavior increasingly attracts the interest of researchers. Among their many differences from other types of

A. G. Kyrousi (✉)
Deree—The American College of Greece, Athens, Greece
e-mail: akyrousi@acg.edu

P. K. Theodoridis
University of Patras, Achaia, Greece

brands, such as Fast Moving Consumer Goods' brands and other nonluxury ones, luxury brands are also thought to be unique with regard to the place they occupy in consumers' minds and hearts [2]. Despite evidence from consumption practices which indicates that there is a negative side in consumers' relationships with luxury brands and responses to them, existing literature on luxury branding seems to remain predominantly focused on the positive aspects of consumption [3]. Traditionally, this has also been the case in the wider research area that examines consumer behavior with regard to brands; nonetheless, in the last few years, there is a growing number of publications exploring issues such as brand hate, brand avoidance, brand aversion and anti-consumption [4, 5]. Understanding these aspects of consumption is of relevance to both practitioners and academics and it is important to advance research in this line of inquiry [6]. Luxury brands in particular are more prone to consumer negativity compared to nonluxury ones, under Negative Double Jeopardy [7] and they are more likely to elicit extreme negative reactions considering that they have been thought to provoke extreme positive ones [8].

2   Purpose and Methodology

The purpose of the present paper is twofold: first, to provide an overview of literature which can contribute to the understanding of consumer negativity toward luxury brands and second, to stress the need for empirical studies on the topic. In pursuit of the former, the paper synthesizes insights from literature on luxury branding, negative brand relationships and theoretical views on negative consumer responses. Regarding the latter, it proceeds with setting directions for future research on the topic. Following repeated calls for further research on negative brand phenomena [9, 10] and the need for further research on luxury branding [1], the paper contributes by setting an agenda for future research so as to advance understanding of respective phenomena.

From a methodological standpoint, the paper draws on similar approaches (overviews of the literature and compilation of research agendas) which have been previously employed in order to advance research in other nascent areas within the wider field of marketing [11, 12]. Relevant publications have been identified from key marketing and branding journals through databases (Business Source Premier and Scopus) on the basis of thematic relevance; the references of the papers were then screened for citations.

3 Overview of the Literature

3.1 Brands for Firms and Consumers

For the firm that owns and markets it, a brand represents a strategic intangible asset and can be seen as a source of competitive advantage, as well as a symbol through which the firm communicates with customers [13, 14]. Brand equity might be initially formed on the basis of the characteristics of the product, service or experience associated with it, yet it mostly relies on consumers' subjective brand-related perceptions [15, 16]. Hence, a brand can also be defined as a mental representation that exists in the mind of the consumer [17, 18]. From the consumer's point of view, a brand can be seen as a symbol that represents certain values [19] but, a brand can also play anthropomorphic roles even functioning as a 'partner' [20]. For consumers, brands can be much more than inanimate, mundane objects: consumers have been thought to endow brands with human traits [21] and perceive them as idiosyncratic entities with a particular brand personality [22]. Consumers might also relate a brand to their own selves forming a self-brand connection [23] and enter in consumer-brand relationships [24]. While relating to brands and engaging with them, consumers experience internal responses of a cognitive [25] and affective nature [26].

3.2 Consumers 'for' Brands: The Positive Side

Research on consumers' relationships with brands and internal responses to them is quite prolific (see indicatively [27, 28]). There is evidence that brand knowledge structures, brand affect and brand relationships influence short-term and long-term consumer behavior [29, 30]. At the same time, marketing professionals recognize the need for firms to examine and evaluate their brands through the eyes of their customers (cf. [31, 32]). In principle, it appears to be acknowledged that brand-related responses can be positively and negatively valenced [33, 34] and that consumer-brand relationships can be tumultuous [35]. Yet, extant literature on consumer responses to, and relationships with, brands appears to be predominantly considered with the aspects of consumer behavior that are favorable to brands and firms. Indeed, the numerous papers published in recent years in the "highly popular" topic of consumer-brand relationships [24] seem to largely focus on positively laden constructs, such as brand love [36, 37], brand attachment [38], brand commitment [39], brand trust [40]. Diverse theoretical accounts have also been put forward to describe how consumers positively respond and favorably relate to brands [8, 29, 41].

3.3 Consumers 'Against' Brands: The Negative Side

In stark contrast to the previously presented views of consumer behavior towards brands, recent papers have recently started examining the negative side of brand-related phenomena and responses especially regarding negative behaviors manifested by consumers toward brands, such as negative word of mouth [42, 43], brand avoidance [44], resistance [45], boycotts [46], anti-branding [5] and anti-brand activism [47]. A scant of papers deal with internal (and thus unobservable) negative responses such as brand hate [4], brand aversion [48], and negatively-valenced brand engagement [49]. Relevant publications have also dealt with the negative consequences of anthropomorphizing brands [50]. Thus, there is an emerging trend towards examining the negative aspects of consumer behavior [4], yet research in this area is still nascent [10].

3.4 Consumers, Luxury Brands and Negativity

Although the meaning of "luxury" is not unambiguous, contemporary literature on branding frequently distinguishes luxury brands from non-luxury ones (cf. [2, 51]). Traditionally, luxury brands are considered brands that are the most expensive in their category, target specific segments of the market and adopt an exclusive distribution scheme [52]; luxury brands are by design different from the rest and they can be thought as brands which differ in terms of marketing and branding strategy from "non-luxury" ones [2]. Yet, as Vigneron and Johnson [53] point out, it is the subjective consumer perception of a brand regarding the "amount" of luxury it encapsulates which ultimately sets it apart; consumers differ with regard to their attitudes toward luxury and luxury brands in general [54, 55]. The consumption of luxury is particularly characterized by individuals' quest for experiences [56], status-seeking behavior and need or uniqueness [57]. Luxury brands are thought to be emotionally valuable for their core customers who form strong bonds with them [58]; due to their hedonic potential, it comes as no surprise that most extant literature on luxury brand-consumer relationships focuses on positive emotions and responses, such as attachment and trust [59] and love [60]. Nonetheless, it is reasonable to postulate that consumers' responses to luxury brands also have a negative dark side, considering the notion that product categories which elicit the most pleasure have also been suggested to have the potential to elicit negative psychological consequences [29]. Indeed, Bryson, Atwal and Hultén [3] report qualitative evidence regarding hate for luxury brands, noting the potential value of this topic for furthering the understanding of luxury brand consumption, though, to the best of the authors' knowledge, no research has been published as of yet.

4 An Agenda for Further Research

Following the aforediscussed need for further research on the negative aspects of consumer—luxury brand relationships and corresponding internal responses, we highlight promising directions for further research in the following domains: (a) negative internal responses to luxury brands, (b) the antecedents and consequences of negative responses to luxury brands, (c) the dynamics of negative consumer-luxury brand relationships, and (d) the interplay between consumer positivity and negativity. Regarding (a), further empirical research is needed in order to conceptualize different constructs that relate to affective and cognitive responses to luxury brands which are negatively valenced, including but not limited to: brand hate, brand disengagement, brand aversion, as there is evidence to suggest that these are conceptually divergent in a general branding context [48]. In addition, it would be interesting to investigate if consumer negativity is more pronounced for luxury brands compared to non-luxury ones. Further, pertinent to (b), more studies are needed to understand the relationships of such constructs to manifest behavioral responses, as well as their underlying causes; it is noted that this is an increasingly popular area of inquiry (see indicatively [47, 61]) yet there are no empirical studies focusing on luxury branding. When it comes to (c), it would be potentially fruitful to explore existing hostile or negative consumer-luxury brand relationships in order to come up with explanatory theoretical frameworks, given that there is still no widely accepted theory to account for the negative side of consumer-brand relationships. Moreover, considering (d), it would be helpful to understand the process and factors that might alter a positive relationship to turn into a negative one [62].

We conclude our research update by noting that research on branding in general, after decades of investigating the positive aspects of consumer behavior, seems to be undergoing a radical shift. In this process of examining consumption phenomena that are unfavorable to brands, there is an increasing need for more research to shed light on consumer negativity toward luxury brands, given also that the latter have unique characteristics. Such research would have important theoretical implications, considering that this is a highly novel area of inquiry; there are also potential managerial implications, given the importance of the industry worldwide, including the ability of luxury brand managers to form a holistic understanding of the relationships they form with their customers and to prevent the deterioration of relationships with customers, as well as the assessment of potential risk factors jeopardizing luxury brand equity.

References

1. Liu F, Li J, Mizerski D, Soh H (2012) Self-congruity, brand attitude, and brand loyalty: a study on luxury brands. Eur J Mark 46(7/8):922–937
2. Albrecht CM, Backhaus C, Gurzki H, Woisetschläger DM (2013) Drivers of brand extension success: what really matters for luxury brands. Psychol Mark 30(8):647–659

3. Bryson D, Atwal G, Hultén P (2013) Towards the conceptualisation of the antecedents of extreme negative affect towards luxury brands. Qual Mark Res Int J 16(4):393–405

4. Zarantonello L, Romani S, Grappi S, Bagozzi RP (2016) Brand hate. J Prod Brand Manag 25 (1):11–25

5. Østergaard P, Hermansen J, Fitchett J (2015) Structures of brand and anti-brand meaning: a semiotic square analysis of reflexive consumption. J Brand Manag 22(1):60–77

6. Fournier S, Alvarez C (2013) Relating badly to brands. J Consum Psychol 23(2):253–264

7. Rogers A, Daunt KL, Morgan P, Beynon M (2017) Examining the existence of double jeopardy and negative double jeopardy within Twitter. Eur J Mark 51(7/8):1224–1247

8. Chaudhuri A, Holbrook MB (2002) Product-class effects on brand commitment and brand outcomes: the role of brand trust and brand affect. J Brand Manag 10(1):33–58

9. Montgomery NV, Raju S, Desai KK, Unnava HR (2018) When good consumers turn bad: psychological contract breach in committed brand relationships. J Consum Psychol 28 (3):437–449

10. Veloutsou C, Guzman F (2017) The evolution of brand management thinking over the last 25 years as recorded in the Journal of Product and Brand Management. J Prod Brand Manag 26 (1):2–12

11. Lee MS, Fernandez KV, Hyman MR (2009) Anti-consumption: an overview and research agenda. J Bus Res 62(2):145–147

12. Devlin JF (2001) Consumer evaluation and competitive advantage in retail financial services – a research agenda. Eur J Mark 35(5/6):639–660

13. Keller KL (2003) Brand synthesis: the multidimensionality of brand knowledge. J Consum Res 29(4):595–600

14. Kapferer JN (2012) The new strategic brand management: advanced insights and strategic thinking. Kogan Page, London

15. Pappu R, Quester PG, Cooksey RW (2005) Consumer-based brand equity: improving the measurement-empirical evidence. J Prod Brand Manag 14(3):143–154

16. Yoo B, Donthu N (2001) Developing and validating a multidimensional consumer-based brand equity scale. J Bus Res 52(1):1–14

17. Keller KL (2013) Strategic brand management. Pearson Higher Education, Upper Saddle River

18. Park CW, MacInnis DJ, Priester JR (2008) Brand attachment and a strategic brand exemplar. In: Schmitt BH, Rogers DL (eds) Handbook on brand and experience management. Edward Elgar, Cheltenham, pp 1–17

19. Shepherd S, Chartrand TL, Fitzsimons GJ (2015) When brands reflect our ideal world: the values and brand preferences of consumers who support versus reject society's dominant ideology. J Consum Res 42(1):76–92

20. Fournier S, Alvarez C (2012) Brands as relationship partners: warmth, competence, and in-between. J Consum Psychol 22(2):177–185

21. Kim HC, Kramer T (2015) Do materialists prefer the "brand-as-servant"? The interactive effect of anthropomorphized brand roles and materialism on consumer responses. J Consum Res 42 (2):284–299

22. Sung Y, Kim J (2010) Effects of brand personality on brand trust and brand affect. Psychol Mark 27(7):639–661

23. Escalas JE, Bettman JR (2005) Self-construal, reference groups, and brand meaning. J Consum Res 32(3):378–389

24. Fetscherin M, Heinrich D (2015) Consumer brand relationships research: a bibliometric citation meta-analysis. J Bus Res 68(2):380–390

25. Punj GN, Hillyer CL (2004) A cognitive model of customer-based brand equity for frequently purchased products: conceptual framework and empirical results. J Consum Psychol 14 (1):124–131

26. Yeung CW, Wyer RS Jr (2005) Does loving a brand mean loving its products? The role of brand-elicited affect in brand extension evaluations. J Mark Res 42(4):495–506

27. Fetscherin M, Heinrich D (2014) Consumer brand relationships: a research landscape. J Brand Manag 21(5):366–371
28. Fournier S (1998) Consumers and their brands: developing relationship theory in consumer research. J Consum Res 24(4):343–373
29. Chaudhuri A, Holbrook MB (2001) The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. J Mark 65(2):81–93
30. Esch FR, Langner T, Schmitt BH, Geus P (2006) Are brands forever? How brand knowledge and relationships affect current and future purchases. J Prod Brand Manag 15(2):98–105
31. Holt D (2016) Branding in the age of social media. Harv Bus Rev 94(3):40–50
32. Lederer C, Hill S (2001) See your brands through your customers' eyes. Harv Bus Rev 79 (6):125–133
33. Blythe J (2013) Consumer behaviour. Sage, London
34. Solomon M (2012) Consumer behavior: buying, having and being. Pearson, Upper Saddle River
35. Keller KL, Lehmann DR (2006) Brands and branding: research findings and future priorities. Mark Sci 25(6):740–759
36. Batra R, Ahuvia A, Bagozzi R (2012) Brand love. J Mark 76(2):1–16
37. Carroll BA, Ahuvia A (2006) Some antecedents and outcomes of brand love. Mark Lett 17 (2):79–89
38. Malär L, Krohmer H, Hoyer WD, Nyffenegger B (2011) Emotional brand attachment and brand personality: the relative importance of the actual and the ideal self. J Mark 75(4):35–52
39. Sung Y, Campbell WK (2009) Brand commitment in consumer–brand relationships: an investment model approach. J Brand Manag 17(2):97–113
40. Delgado-Ballester E, Munuera-Aleman JL, Yague-Guillen MJ (2003) Development and validation of a brand trust scale. Int J Mark Res 45(1):35–54
41. Matzler K, Grabner-Kräuter S, Bidmo S (2008) Risk aversion and brand loyalty: the mediating role of brand trust and brand affect. J Prod Brand Manag 17(3):154–162
42. Hickman TM, Ward JC (2013) Implications of brand communities for rival brands: negative brand ratings, negative stereotyping of their consumers and negative word-of-mouth. J Brand Manag 20(6):501–517
43. Relling M, Schnittka O, Sattler H, Johnen M (2016) Each can help or hurt: negative and positive word of mouth in social network brand communities. Int J Res Mark 33(1):42–58
44. Lee MS, Motion J, Conroy D (2009) Anti-consumption and brand avoidance. J Bus Res 62 (2):169–180
45. Amine A, Gicquel Y (2011) Rethinking resistance and anti-consumption behaviors in the light of the concept of deviance. Eur J Mark 45(11/12):1809–1819
46. Kähr A, Nyffenegger B, Krohmer H, Hoyer WD (2016) When hostile consumers wreak havoc on your brand: the phenomenon of consumer brand sabotage. J Mark 80(3):25–41
47. Romani S, Grappi S, Zarantonello L, Bagozzi RP (2015) The revenge of the consumer! How brand moral violations lead to consumer anti-brand activism. J Brand Manag 22(8):658–672
48. Park CW, Eisingerich AB, Park JW (2013) Attachment–aversion (AA) model of customer–brand relationships. J Consum Psychol 23(2):229–248
49. Hollebeek L, Chen T (2014) Exploring positively-versus negatively-valenced brand engagement: a conceptual model. J Prod Brand Manag 23(1):62–74
50. Puzakova M, Kwak H, Rocereto JF (2013) When humanizing brands goes wrong: the detrimental effect of brand anthropomorphization amid product wrongdoings. J Mark 77(3):81–100
51. Stokburger-Sauer NE, Teichmann K (2013) Is luxury just a female thing? The role of gender in luxury brand consumption. J Bus Res 66(7):889–896
52. Kapferer JN, Bastien V (2009) The specificity of luxury management: turning marketing upside down. J Brand Manag 16(5–6):311–322
53. Vigneron F, Johnson LW (2004) Measuring perceptions of brand luxury. J Brand Manag 11 (6):484–506

54. Dubois B, Czellar S, Laurent G (2005) Consumer segments based on attitudes to-ward luxury: empirical evidence from twenty countries. Mark Lett 16(2):115–128

55. Wiedmann KP, Hennigs N, Siebels A (2009) Value-based segmentation of luxury consumption behavior. Psychol Mark 26(7):625–651

56. Atwal G, Williams A (2009) Luxury brand marketing – the experience is every-thing! J Brand Manag 16(5–6):338–346

57. Kastanakis MN, Balabanis G (2012) Between the mass and the class: antecedents of the "bandwagon" luxury consumption behavior. J Bus Res 65(10):1399–1407

58. Koronaki E, Kyrousi AG, Panigyrakis GG (2018) The emotional value of arts-based initiatives: strengthening the luxury brand–consumer relationship. J Bus Res 85(3):406–413

59. Song Y, Hur WM, Kim M (2012) Brand trust and affect in the luxury brand–customer relationship. Soc Behav Pers 40(2):331–338

60. Hwang J, Kandampully J (2012) The role of emotional aspects in younger consumer-brand relationships. J Prod Brand Manag 21(2):98–108

61. Hegner SM, Fetscherin M, van Delzen M (2017) Determinants and outcomes of brand hate. J Prod Brand Manag 26(1):13–25

62. Grégoire Y, Tripp TM, Legoux R (2009) When customer love turns into lasting hate: the effects of relationship strength and time on customer revenge and avoidance. J Mark 73(6):18–32

Entrepreneurs: Why They Are Essential to Industry Success, Global Trends and Opportunities and How to Recruit Top Talent

Lisa A. Tamilia

Abstract This paper addresses the importance of entrepreneurs in business (insurance, travel, hospitality, marketing, tourism and all industry generated from sales entrepreneurs) and entrepreneurship global trends and opportunities. It also provides practitioner tools for recruitment and selection of top talent to generate the best success.

Keywords Entrepreneurship · Recruiting · Insurance · Behavior assessment · Sales agents · Marketing

1 Introduction

This paper addresses the importance of entrepreneurs in business. Recruiting and managing sales entrepreneurs is an integral part of generating revenue into business. My practitioner experience is in the insurance industry but the research and applications are applicable to success in all areas of industry generated by entrepreneurs.

There are many opportunities for business success through the increase in numbers of entrepreneurs globally. The interest of young entrepreneurs desiring the path of entrepreneurship also helps business with necessary perpetuation plans. This paper explores the opportunities and positive return on investment of incorporating quality entrepreneurs in business.

Recruiting and selection of top talent is essential to generate success for both the individual and organization. This paper also provides practitioner tools I have used in my industry experience for recruitment and selection of candidates for success.

In my practitioner experience in the insurance industry, the generation of each dollar of incoming revenue starts with the sale of the independent insurance agent entrepreneur. In the insurance industry, insurance agency entrepreneurs are essential

L. A. Tamilia (✉)
Property and Casualty Insurance Industry, State University of New York, Empire State College, Saratoga Springs, NY, USA

to generating premium and each dollar starts with the sale of the insurance policy. Many Property and Casualty insurance companies are solely distributed through the independent agency entrepreneur network to sell business. My practitioner experience is in the Property and Casualty Insurance Company side of insurance. My experience while handling functions in Agency and Territory Management include recruiting, managing and motivating independent agency entrepreneurs. I also focused on growing the business and territory revenue profitably so I needed to focus on both quality and quantity of business written through recruiting top talent.

While in insurance roles to recruit and manage independent insurance agencies, it was essential to (1) recruit the top talent that would be the best in the role and (2) have the correct tools to ensure success for both the entrepreneur and organization. In sales management of any organization, the platform for success has to come from the initial sale and sales agent to promote and grow the organization. All other functions in the organization are supplemental without the initial sale. The independent agent entrepreneur is the sole distribution channel for marketing in most insurance companies and many sales organizations. Their success is essential to the health and growth of any organization. The one channel that brings premium dollars into the insurance organization is the insurance agent entrepreneur therefore it is essential to recruit quality candidates and know the tools and competencies necessary for them to flourish. The relationship and image projected of any organization starts with the entrepreneur who is the direct "face" of the company to the client.

Once you have recruited top talent, it is also necessary to know how to motivate and manage each individual for success. This paper also provides tools for motivation and management of entrepreneurs I used. With these tools I noted a direct correlation with the success of recruitment and results in profitable business growth.

2   Entrepreneurs: Global Trends and Opportunities

There are many global trends with entrepreneurship that are creating opportunities in business. The importance of entrepreneurship transcends all sectors of the economy and all types of business but industry and individual businesses (especially small businesses) are identified as the most crucial for economic growth, productivity growth and job creation [1].

2016 data shows global startup success rate hitting never before seen highs. New business entrepreneurs are entering into competitive marketing and bringing with them new innovative ideas and advanced technologies. Entrepreneurs are reaching into new markets and new locations around the globe [2].

In the hospitality, leisure and tourism sectors, entrepreneurship is especially critical since there are customer expectations and changing demands, innovation evolving and a need to be kept current. Entrepreneurship is important in any industry but crucial in dynamic and constant changing industries throughout the world [1]. Social media also presents new opportunities for entrepreneurs and business

globally. Facebook shows results of advertising revenue for 2014 being 12,466 million dollars. That is an increase of 58% in 2013 and 7872 million dollars. Entrepreneurs and companies need to incorporate the use of social media into their advertising campaigns to capitalize on these results [3].

Entrepreneurship benefits business in many ways. They help create the future of the organization by effectively entering into new markets. Also, they inspire and create powerful cultures attracting exceptional people with like mindsets. Entrepreneurs have a strong focus on customers in the marketplace and know intuitively what customers want and need. They also have a strong focus on results [4].

The Global Entrepreneurship Index (powered by Gedi) 2018 shows entrepreneurs improve economies, impact people's lives by job creation, develop new solutions, development of technology to become more efficient and create a global exchange of ideas. The 2018 Global Entrepreneurship Index shows a 3% improvement in the GEI scores over 2017 that could add $7 trillion to the global GDP. This indicates organizations that support entrepreneurs impact the economy as a whole [5].

Social Entrepreneurship benefits both businesses and their communities served. Consumers are now focused on social responsibility and spend their money on businesses and companies who do too. Unilever conducted a study in 2017 and found that 33% of consumers seek out brands that focus on a sincere, documented desire to promote smart stewardship of planetary, human and other resources. Nielsen also conducted a survey and reported that companies focused on social entrepreneurship were preferred 56% of the buyers regardless of the price of the product or service. Social Entrepreneurship is replacing coupon, sales and other marketing techniques to attract buyers [6].

"Millennials" (20–35 years of age) are the largest segment of the United States employee market. They have a stronger focus on making positive and social changes [7]. More millennials are becoming entrepreneurs than ever before according to a study by BNP Paribas. The "millennial" generation views the corporate environment as less appealing and likes to focus on freedom and creativity in their chosen workplace. This especially is applicable to creative marketing roles. Young entrepreneurs also like the idea of the use of technology and the co-owning spirit of the sharing economy. They see successful fast growing businesses like "Airbnb" and "Uber" and like to envision themselves in these types of businesses and roles [7].

Women in entrepreneurial roles are more significant than ever. In many countries that are members of the OECD (Organization for Economic Co-operation and Development) the number of women entrepreneurs is increasing. Based on statistics from the OECD, women owned businesses account for one quarter to one third of the total business population worldwide [1].

There are many advantages for female entrepreneurs that create opportunity for business. Many business schools and online Master in Business Administration (MBA) programs are offering mentor matching organizations for female start up entrepreneurs. "Million Women Mentors" is focused on connecting female students with established women in their field. The "Cherie Blair Foundation for Women" focuses on pairing female mentors with female entrepreneurs throughout the world. "Wing to Wing" focuses on women empowerment with professional and

personalized mentoring. Women owned businesses also receive grants and benefits through nonprofit organizations and government in the United States. Many private groups award hundreds of thousands of dollars to female entrepreneurs and leaders. Some include "Eileen Fisher Women-Owned Grant Program", "Huggies Brand Mom-Inspired Grants", and "Walmart women's Economic Empowerment Initiative". These benefits attract women into the entrepreneurial roles and create financial support to help potential entrepreneurs within organizations globally [8].

"Mid Life Entrepreneurs" provide another opportunity for entrepreneurs in business. "Mid Life Entrepreneurs" are those 50 years of age or more becoming entrepreneurs. With entering into the role at this point of their careers or entering for the first time, it creates a shorter runway and less time for them to take to generate revenue. There is more sense of urgency and they can pull from their existing knowledge base for success. They have less time to be successful than those at a younger age so can create quicker results [9].

3   How to Recruit Top Entrepreneurial Talent (Practitioner Tool for Success)

One tool I found especially beneficial in recruiting and managing entrepreneurs was the AVA (Activity Vector Analysis) profiling system. Finding top entrepreneurial talent is a key component to success and tools to determine top talent is crucial. The AVA is a psychometric measure using personality vectors and used for recruitment selection. The AVA was created by the organizational psychologist Walter V. Clarke in 1942 [10].

Walter Clarke initially worked in the Human Resources Department in a department store in New York City. In that role he observed employees with similar backgrounds and work experienced had differences in success and failure in their job roles. The bottom line reason he noted in the difference was due to behavior [10].

Walter Clarke took this information and created a psychometric model to measure the behaviors of the individuals in the workplace and also incorporate the behavior requirements of the specific positions. The basic premise of the AVA is that if an individual behaves as themselves they would be more successful in the role and the individual and the organization benefit from the success. From that premise the AVA system was born [10].

The AVA is a profiling system that is easy to use and highly effective in behavioral assessment. It identifies the natural tendencies of candidates and works to predict their workplace behaviors. The AVA system also incorporates specific needs and demands of the specific position. This is crucial to connecting the correct candidates and behavioral demands of positions to success in the role and organizational success [10].

The JAR (Job Activity Rating) is used within the AVA system to identify what is needed for the candidate's behavior in a specific role. The JAR would be specific to

the role for an entrepreneur in the role. In my practitioner experience in the insurance industry, the JAR would be for an entrepreneur independent insurance agent profile. Some of the characteristics for a successful candidate in this role would have certain assertiveness, sociability, maturity, calmness and conformity attributes. These are all called "Vectors" in the AVA system. I had much success with using the AVA system to determine candidates to recruit as independent agent entrepreneurs in the insurance industry. There was a direct correlation between those that scored well in the AVA and those who were both comfortable in the roles and successful in the organization's success and goals [11].

The AVA Vectors include five vectors. Within the five vectors are (1) assertiveness, (2) Sociability, (3) Calmness, (4) Conformity and (5) Self Discipline/Maturity. Vector 1 addresses "Assertiveness" and includes a range from "hesitant" to "forceful. Vector 2 addresses "Sociability" and includes a range from "withdrawn" to "charismatic." Vector 3 addresses "Calmness" and includes a range from "impatient" to "tranquil". Vector 4 addresses "Conformity" and includes a range from "stubborn" to "conforming." Lastly, Vector 5 addresses "Self Discipline/Maturity" and includes a range from "undisciplined" to "ethically strict" [11].

The final AVA profiling system report provides both a narrative and percentage of match of behavior to the position. For example: An AVA test for the position of an Insurance Agent Entrepreneur would have a percentage match of how close they match the profile in the position and also a narrative of their personality and behavior.

I have had experience with recruiting candidates I found to match 98% to the profile. These candidates showed results in the role and it was shown how it directly impacted results and bottom line numbers for the organization. Three of my recruit candidates I selected were 95% or above matching AVA profile. I noted a direct correlation to top revenue and profitable premium growth success for my designated territory through these agency owner entrepreneurs. This assisted the company's profitable growth results through their results.

The AVA system is an invaluable tool for recruiting. It is also a great tool for development of entrepreneurs and use for motivational techniques. It also provides a great platform to managers to direct their businesses in a positive direction knowing their most valuable asset in their entrepreneurs.

The AVA tool can separate high performing organizations from average or low performing ones. Actual behavior by a qualified candidate is what moves the bottom line in business and impacts positive productivity. The AVA also provides a positive return on investment (ROI) to business organizations. Recruiting the correct candidate helps productivity and avoids costs of turnover. It is behavior based and originates from prominent psychologists with validity and reliability. The AVA system is compliant with the necessary EEOC guidelines. The EEOC is the Equal Employment Opportunity Commission in the United States [11].

Companies are noting the impact of the AVA Profiling System. Black and Decker Corporation used the AVA Profiling System since the 1960s. They consider the AVA Profiling System to be "highly accurate" and like the speed and non-threatening manner of the test to candidates [12].

4 Conclusion

In conclusion, entrepreneurs are essential to sales generated industry success. Currently there are many global entrepreneurship trends and opportunities to benefit businesses and organizations. The AVA system is a great resource to identify quality entrepreneurial candidates to help organizations succeed. With the increased global trends of entrepreneurship and the continued demands to grow in business, it is essential to have tools to incorporate into businesses and organizations to help each not only survive but to flourish.

References

1. Ball S (2015) The importance of entrepreneurship to hospitality, leisure, sport and tourism. www.ResearchGate.net
2. Oliveria K (2017) The global growth of entrepreneurship. StartUpRounds.com
3. Sakas D, Nasiopoulous KD, Kavoura A (2015) The development of Facebook's competitive advantage for brand awareness. Procedia Econ Financ 24:589–597
4. Sayburn P (2018) How entrepreneurship benefits big business. www.thechiefexecutive.com
5. Acs ZJ (2018) Global entrepreneurship index powered by Gedi. www.thegedi.org
6. Kulkami C (2017) How social entrepreneurship can benefit businesses and the communities they serve. www.entrepreneur.com
7. Tatar S (2016) Hospitality: a world of opportunities for young entrepreneurs. www.insights.ehtelier.com
8. Editorial Team (2018) The five advantages of being a female entrepreneur. www.thenextwomen.com
9. Zimmerman E (2017) Fast track your business here's how to start a business at midlife. www.aarp.org
10. Borden D (2018) AVA assessment associates. www.AVA-assessment.com
11. Finnigan M (2018) Understanding AVA-activity vector analysis psychological profiling/behavioral assessment: i2iHQ.com
12. Briggs MI (1991) Why Companies are turning to personality assessment to minimize ordeal of hiring someone who doesn't work out. Articles.baltimoresun.com

Hotel Satisfaction from Generation Y

Irene (Eirini) Kamenidou, Spyridon Mamalis, Evangelia-Zoi Bara, and Stavros Pavlidis

Abstract Generational cohort theory is continuously gaining attention in marketing, as considered a better indicator than age. Generational cohort theory depicts that people that are born in the same time zone, similar places and have lived similar life significant events in their coming of age have similar behavior compared to other cohorts. This paper provides the findings of a research concerning the Greek Generation Y cohorts' satisfaction from hotel accommodation. Specifically, it segments the Generation Y cohort based on hotel satisfaction characteristics. An online questionnaire was used for the quantitative research producing a sample of 321 usable questionnaires over a 6-month period. Data analysis included descriptive statistics factor analysis and cluster analysis. The segmentation analysis was based upon the following dimensions—items: Safety and security; Hotel Rooms; Hotel Hospitality; Hotel Management; Entertainment; Recreation Areas; Swimming pools-beach; Price; Value for money; total evaluation; total satisfaction; intention to recommend. Three segments arose reflecting the Greek Generation Y cohorts' satisfaction. Results are discussed and directions for further research are presented.

Keywords Hotel satisfaction · Generation Y · Marketing

1 Introduction

Customer satisfaction consists of the ultimate marketing goal [1], and numerous studies have supported that a company's success is linked with it [2]. Customer satisfaction has been studied in different areas of marketing, some of which are the health field [3, 4], the agricultural [5] and food marketing area [6], the political arena [7], and the education field [8]. Other studies include marketing and job satisfaction

I. (E) Kamenidou (✉) · S. Mamalis · E.-Z. Bara · S. Pavlidis
Eastern Macedonia Thrace Institute of Technology (EMaTTech), Kavala, Greece
e-mail: rkam@teiemt.gr

1021

[9] and tourism satisfaction studies [10]. The above are only few fields with customer satisfaction studies.

The concept of satisfaction is subjective, i.e., each person perceives it differently [11–13]. Thus, the better measure of customer satisfaction is the participants self-rate of their satisfaction Godfrey [11]. As satisfaction is a subjective concept, individual characteristics, such as age influences it [14, 15]. Studies have shown that age affects customer satisfaction, while recently, researchers use generational cohort analysis rather than age in consumer behavior studies [16].

In travel and tourism, "Tourist satisfaction is the result of the interaction between a tourist's experience at the destination area and the expectations he had about that destination" [17, p. 315]. The same authors consider it as a subset of consumer satisfaction.

Additionally, prior research has showed that destination attribute satisfaction influences overall satisfaction [18]. A basic part of the travel and tourism product is the accommodation product, and accommodation satisfaction affects also customer satisfaction [17, 19, 20].

Taking all the beforementioned in mind, this paper deals with hotel satisfaction of the Greek Generation Y cohort and segments them based upon satisfaction from hotel attributes, overall evaluation, overall satisfaction, and intention to recommend.

Having knowledge of consumers satisfaction of the hotel experience, and thus the attributes that lead to satisfaction or dissatisfaction is very important in the lodging industry, even more when it is provided by generational cohort analysis.

2   Literature Review

There is numerous research dealing with customer satisfaction in the hotel industry [21–25]. Though, customer satisfaction in the hotel industry is extensively studied, a handful of studies deal with generational cohorts and satisfaction from accommodation. Lau and Yang [26] explored perceptions of Gen X and Gen Y Chinese tourists regarding the hotel attributes of upscale and luxury hotels in Macau and found significant generation differences in hotel preferences. Lemy [27] studied the Gen Z perception towards the effect of green hotel practices on service quality. Wen [28] investigated China's Generation Y (or Post-80s) consumers and their attribute preferences in resort selection and compared this generation to previous ones (resort consumption, attribute preferences and personal values).

3   Methodology

After an extensive literature review [29–31], an online asynchronous qualitative research was carried out using an open-end single question employing Priporas et al. [32] procedure. The question recorded the characteristics (any kind they can think of

such as room, atmosphere, services, etc.) that they consider important from a hotel provider to generate their hotel satisfaction. These results combined with the previous research developed a questionnaire used in the field research. Besides from qualitative research, items were utilized from the studies of Nadiri and Kashif [33], Kozak and Rimmington [34], and Lewis [35]. The data collection instrument then was forwarded via the internet in 6-month period (July–December 2017) 321 valid questionnaires were collected that belong in the Greek Generation Y cohort. Additionally, in order to take part in the research except for belonging in the Greek generational Y cohort, the sample was utilized solely from Greece, and had to stay at least one night at a hotel in the country. The SPSS ver.24 was used, and analysis included descriptive statistics, factor, and cluster analysis. The questionnaire consisted of 43 questions, of which only the ones that are in line with the objectives and aim of the study will be analyzed. The questions measuring satisfaction were rated on 5-point satisfaction scale, i.e. 1 = very dissatisfied; 2 = dissatisfied; 3 = neither dissatisfied nor satisfied; 4 = satisfied; and 5 = very satisfied. Lastly, four questions referred to total evaluation compared to expectation; total satisfaction level; and intention to recommend. Total evaluation was rated on a 5-point evaluation scale (1 = much worse than I expected; 2 = worse than I expected; 3 = as I expected; 4 = better than I expected; and 5 = much better than I expected). Probability to recommend was rated on a 5-point recommendation scale (1 = very unlikely; 2 = unlikely; 3 = neither likely nor unlikely; 4 = likely; and 5 = very likely. Data analysis included descriptive statistics, factor analysis and cluster analysis for the Generation Y cohort segmentation.

4 Results

4.1 Sample Profile

The total number of 321 valid questionnaires gathered were gathered with generation Y cohort participants ranging from 23 to 39 years old (in 2017 when the research was implemented) and with mean age 28.75 years old (StD = 4.812). Gender was equally distributed, with males representing 50.2% and females 49.8% of the sample. The majority was single (67.3%); with a bachelor's degree (57.6%); and were private employees (35.8%). Lastly, regarding their personal monthly income, three main groups arose: <300 € (19.3%); 300 €–600 € (23.4%) and 600.01–1000.00 (34.0%). Additionally, 22.9% had at least one family member that was fired after 2010 the year of the 1st memorandum of understanding was signed.

4.2 Participants Accommodation Behavior

The total nights per stay of the respondents are maximum 5 days for the 80.9% of the sample; 12.9% stayed 6 or 7 days and 6.2% stayed more than 1 week at the hotel. Most of the participants stayed at the hotel in the months of June (9.3%), July (24.0%) or August (31.2%). Moreover, the majority of participants stayed at 3 star (36.1%) and 4 star (31.8%) hotels respectively. Additionally, 52.0% stayed at the hotel with their spouse or intimate partner, and 40.2% shared a room with friends. Lastly, the sources of information about the hotel was friends (43.6%), internet search (57.6%) and online booking sites (34.0%).

Seven multi-item questions regarding characteristics of the hotel were rated for satisfaction by the Generation Y cohort customers. Regarding the provided by the hotel "Safety and security", the highest satisfaction rate was towards the feeling of safety and security of belongings due to personnel behavior (MS = 3.80). As to satisfaction from the "Hotel Rooms", was the item "individual bathrooms with bathtubs or showers" (MS = 4.23). Concerning "Hotel Hospitality", the "interest in serving the customer" was rated as highest (MS = 3.89), while as to satisfaction from the "Hotel Management", the highest rate was for the item 'The management is friendly with customers" (MS = 4.00). As regards "Entertainment" provided by the hotel, "Recreation Areas" and "Swimming Pools-Beach", the highest rate was for the items: ""Live" music with singers" (MS = 3.12); "hotel's restaurant" (MS = 3.69); and "personnel's service" (MS = 3.54) respectively.

The seven multi-item questions were factors analyzed to produce a smaller set of variables to continue with segmentation analysis. Table 1 presents the aggregated results of factor analysis for the seven questions. It presents the question and the number of items which it consists of, the number of factors derived, the total variance explained (TVE) and the mean factor score (MFS). Lastly, it provides with the new name of the variable.

Continuously, using their MFS, K-Means cluster analysis was realized. In the analysis, four more variables were inserted: satisfaction from price; satisfaction from money for value; total evaluation; total satisfaction; probability of recommendation. K-Means Cluster analysis produced three groups of the Greek Generation Y cohorts'

Table 1 Results from data reduction of hotel-related satisfaction questions

Satisfaction questions	No. of items	Factors produced	TVE %	MFS	New name of variable
1. Safety and security	3	1	82.06	3.85	MFS_SS_GENY
2. Hotel rooms	15	1	64.10	3.95	MFS_HR_GENY
3. Hotel hospitality	3	1	88.77	3.82	MFS_HH_GENY
4. Hotel management	4	1	83.75	3.90	MFS_HM_GENY
5. Entertainment	9	1	77.04	3.09	MFS_HE_GENY
6. Recreation areas	10	1	71.47	3.31	MFS_RA_GENY
7. Swimming pools-beach	8	1	82.91	3.42	MFS_SPB_GENY

Table 2 Segmentation of the Greek Generation Y cohort based on satisfaction, total evaluation; and probability of recommendation

Variables in cluster analysis	Final cluster centers/clusters			ANOVA	
	1 (n = 141)	2 (n = 11)	3 (n = 127)	F	Sig.
MFS_SS_GENY	4.24	1.47	3.62	219.762	0.000
MFS_HR_GENY	4.35	1.44	3.64	256.471	0.000
MFS_HH_GENY	4.17	1.52	3.54	119.159	0.000
MFS_HM_GENY	4.32	1.48	3.62	193.458	0.000
MFS_HE_GENY	3.62	1.35	2.60	103.619	0.000
MFS_RA_GENY	3.81	1.39	2.72	120.146	0.000
MFS_SPB_GENY	3.96	1.36	2.89	114.638	0.000
Price	4.09	1.73	3.69	44.090	0.000
Value for money	4.40	1.09	3.55	141.866	0.000
Total evaluation	4.45	3.18	3.69	58.697	0.000
Total satisfaction	3.97	2.91	3.06	57.224	0.000
Probability to recommend	4.70	2.91	3.61	62.010	0.000

satisfactions of the hotel accommodation. Table 2 presents the results of the segmentation analysis, as well as the ANOVA tests, which revealed that all three groups of the Greek Generation Y-ers have different behavior as regards the segmentation variables.

Cluster I: "satisfied customers". These customers ($n = 141$) compared to the other groups are the satisfied ones (FCC > 3.51). They have seven out of nine attributes/dimensions rated having FCC > 4.01 and are very probable to recommend the hotel they stayed at.

Cluster II: "dissatisfied customers". These customers even though are very few ($n = 11$), they are dissatisfied from the seven variables of hotel satisfaction; the found the hotel as expected and are in total neither satisfied nor dissatisfied. They also are neither likely nor unlikely to recommend the hotel to others.

Cluster III: "indifferent customers". The customers in this cluster ($n = 127$) are the rational ones, since they are indifferent in all cases FCC >2.51 and <3.70; and are most satisfied with the price of the hotel. They are likely to recommend the hotel that they stayed at, and the evaluation from their stay was better than expected, probably due to the good price that the hotel had.

5 Conclusions

This research segmented Generation Y Greek tourists based on attributes of hotel satisfaction. The hotel attributes are: Safety and security; Hotel Rooms; Hotel Hospitality; Hotel Management; Entertainment; Recreation Areas; and Swimming pools-beach. Additional variables in segmentation analysis are Value for money; Total evaluation; Total satisfaction; and Probability to recommend. Three clusters

arose the satisfied, the indifferent and the dissatisfied. This study examined the Greek Generation Y cohort as regards its hotel satisfaction which benefits with inside from a cohort that is understudied. Generational cohorts today are considered significant in marketing [36] and the travel industry [37], and need more consideration from the hotelier segment. Overall, the findings of our study could assist hoteliers better understand how each of the hotels attributes contribute to a pleasant experience and guest satisfaction, which in turn would possibly affect post-consumption behavior like loyalty [2, 24]. Thus, hotel managers would potentially benefit from re-examining their customer satisfaction policies by taking in consideration their guests' suggestions to align and upgrade their standards to those of their customers.

Although the current study adds to the literature, it is not free of limitations. The study took place in one country, and thus future studies could be done in other countries to confirm and expand these findings in order to improve generalizability.

References

1. Kotler P, Levy SJ (1969) Broadening the concept of marketing. J Mark 33(1):10–15. https://www.jstor.org/stable/pdf/1248740.pdf?refreqid=excelsior%3A580770587f39ece1373a9802350d93c0
2. Priporas CV, Stylos N, Vedanthachari LN, Santiwatana P (2017) Service quality, satisfaction, and customer loyalty in Airbnb accommodation in Thailand. Int J Tour Res 19(6):693–704
3. Arpaci F, Aksoy AD (2011) Consumer satisfaction at health service marketing: the views of the elderly over hospital services. Vocat Educ 6(4):120–129. http://dergipark.gov.tr/download/article-file/112085
4. Taylor SA (1994) Distinguishing service quality from patient satisfaction in developing health care marketing strategies. J Healthc Manag 39(2):221
5. Breimyer HF (1962) The three economies of agriculture. J Farm Econ 44(3):679–699. https://www.jstor.org/stable/pdf/1235946.pdf?refreqid=excelsior%3Ab3316dbdbf3b99246fff26975e38551f
6. Gilbert GR, Veloutsou C, Goode MM, Moutinho L (2004) Measuring customer satisfaction in the fast food industry: a cross-national approach. J Serv Mark 18(5):371–383. https://doi.org/10.1108/08876040410548294
7. Anderson CJ, Guillory CA (1997) Political institutions and satisfaction with democracy: a cross-national analysis of consensus and majoritarian systems. Am Polit Sci Rev 91(1):66–81. https://doi.org/10.2307/2952259
8. Thomson C (1989) Monitoring client satisfaction in schools – a marketing activity. Sch Organ 9(2):187–198. https://doi.org/10.1080/0260136890090203
9. Brown SP, Peterson RA (1994) The effect of effort on sales performance and job satisfaction. J Mark 58(2):70–80
10. Chi CGQ, Qu H (2008) Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: an integrated approach. Tour Manag 29(4):624–636. https://doi.org/10.1016/j.tourman.2007.06.007
11. Godfrey GE (1959) A study to identify factors which contributed to student satisfaction and dissatisfaction with the first semester in a diploma school of nursing. Master dissertation, School of Nursing, Boston University. https://open.bu.edu/bitstream/handle/2144/15023/Godfrey_Gertrude_1959_web.pdf?sequence=1

12. Sari RP (2016) The influence of service quality toward customer satisfaction in Yogyakarta. J Pub Adm Stud 1(1):47–55
13. Shaffer JD (1964) Advertising in social perspective. J Farm Econ 46(2):387–397
14. Cunningham GB, Fink JS (2006) Diversity issues in sport and leisure. J Sport Manag 20:455–465. https://doi.org/10.1123/jsm.20.4.455
15. Seyoum S, Karunakaran R (2015) Customer satisfaction towards banking services – a study in Hawassa city administration, SNNP region Ethiopia. Int J Multidiscip Res Rev 1(6):150–159
16. Brosdahl DJ, Carpenter JM (2011) Shopping orientations of US males: a generational cohort comparison. J Retail Consum Serv 18(6):548–554. https://doi.org/10.1016/j.jretconser.2011.07.005
17. Pizam A, Neumann Y, Reichel A (1978) Dimensions of tourist satisfaction with a destination area. Ann Tour Res 5(3):314–322
18. Torres-Sovero C, González JA, Martín-López B, Kirkby CA (2012) Social–ecological factors influencing tourist satisfaction in three ecotourism lodges in the southeastern Peruvian Amazon. Tour Manag 33:545–552. https://doi.org/10.1016/j.tourman.2011.06.008
19. Chaudhary M, Aggarwal A (2012) Tourist satisfaction and management of heritage sites in Amritsar. South Asian J Tour Herit 5(2):47–61. http://sajth.com/old/july2012/Microsoft%20Word%20-%20005+Manjula+Chaudhary.pdf
20. Heung VCS, Quf H (2000) Hong Kong as a travel destination: an analysis of Japanese tourists' satisfaction levels, and the likelihood of them recommending Hong Kong to others. J Travel Tour Mark 9(1–2):57–80. https://doi.org/10.1300/J073v09n01_04
21. Albayrak T, Caber M (2015) Prioritisation of the hotel attributes according to their influence on satisfaction: a comparison of two techniques. Tour Manag 46:43–50. https://doi.org/10.1016/j.tourman.2014.06.009
22. Choi TY, Chu R (2001) Determinants of hotel guests' satisfaction and repeat patronage in the Hong Kong hotel industry. Int J Hosp Manag 20(3):277–297. https://doi.org/10.1016/S0278-4319(01)00006-8
23. Kamenidou IC, Mamalis SA, Kokkinis GF (2012) Directions for improving hotel performance based on customer satisfaction. In: 2nd advances in hospitality and tourism marketing & management conference. https://s3.amazonaws.com/academia.edu.documents/43057662/CLUSTER_CLIENTES_HOTEL.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1549791408&Signature=hp%2FDaCxEnenAPK7VitsSsO3Imfk%3D&response-content-disposition=inline%3B%20filename%3DDIRECTIONS_FOR_IMPROVING_HOTEL_PERFORMAN.pdf
24. Kamenidou I, Balkoulis N, Priporas CV (2009) Hotel business travellers satisfaction based on service quality: a segmentation approach in inner city five-star hotels. Int J Leisure Tour Mark 1(2):152–172. https://doi.org/10.1504/IJLTM.2009.026481
25. Zhao Y, Xu X, Wang M (2019) Predicting overall customer satisfaction: big data evidence from hotel online textual reviews. Int J Hosp Manag 76:111–121. https://doi.org/10.1016/j.ijhm.2018.03.017
26. Lau V MC, Yang FX (2014) Cohort analysis of China generation X and Y on luxury hotels experiences. In: Chien PM (ed) CAUTHE 2014: tourism and hospitality in the contemporary world: trends, changes and complexity. School of Tourism, The University of Queensland, Brisbane, pp 338–352. https://search.informit.com.au/documentSummary;dn=393873563061697;res=IELBUS
27. Lemy DM (2016) The effect of green hotel practices on service quality: the Gen Z perspective. In: Radzi SM, Hanafiah MHM, Sumarjan N, Mohi Z, Sukyadi D, Suryadi K, Purnawarman P (eds) Heritage, culture and society: research agenda and best practices in the hospitality and tourism industry. Proceedings of the 3rd international hospitality and tourism conference (IHTC 2016) & 2nd international seminar on tourism (ISOT 2016), 10–12 October 2016, Bandung, Heritage, Culture and Society, Research agenda and best practices in the hospitality and tourism industry. Taylor & Francis Group, London, pp 9–15. ISBN: 978-1-138-03276-7

28. Wen X (2012) Investigating resort attributes and personal values: a study of China's post-80s consumers and their predecessors. Master dissertation, Purdue University. https://search.proquest.com/openview/1f7a2e3106ac26e23186229c83ecd0d2/1?pq-origsite=gscholar&cbl=18750&diss=y

29. Dominici G, Guzzo R (2010) Customer satisfaction in the hotel industry: a case study from Sicily. Int J Mark Stud 2(2):3–12

30. Li H, Ye Q, Law R (2013) Determinants of customer satisfaction in the hotel industry: an application of online review analysis. Asia Pac J Tour Res 18(7):784–802

31. Zhou L, Ye S, Pearce PL, Wu MY (2014) Refreshing hotel satisfaction studies by reconfiguring customer review data. Int J Hosp Manag 38:1–10

32. Priporas C-V, Kamenidou I, Kapoulas A, Papadopoulou FM (2015) Counterfeit purchase typologies during an economic crisis. Eur Bus Rev 27(1):2–16

33. Nadiri H, Kashif H (2005) Diagnosing the zone of tolerance for hotel services. Manag Serv Qual 15:259–277. https://doi.org/10.1108/09604520510597818

34. Kozak M, Rimmington M (1998) Benchmarking: destination attractiveness and small hospitality business performance. Int J Contemp Hosp Manag 10(5):184–188. https://doi.org/10.1108/09596119810227767

35. Lewis R (1987) The measurement of gaps in the quality of hotel services. Int J Hosp Manag 6(2):83–88. https://doi.org/10.1016/0278-4319(87)90020-X

36. Williams KC, Page RA (2011) Marketing to the generations. J Behav Stud Bus 3(1):1–17

37. Beldona S (2005) Cohort analysis of online travel information search behavior: 1995–2000. J Travel Res 44:135–142

Blockchain and Its Role in the Internet of Things

Mohamed Amine Ferrag, Leandros Maglaras, and Helge Janicke

Abstract This paper provides an overview of blockchain architectures designed for Internet of Things (IoT) networks, namely, Internet of Healthcare Things (IoHT), Internet of Vehicles (IoV), Internet of Energy (IoE), and Internet of Cloud (IoC). This paper starts by providing a horizontal overview of the blockchain mechanism. Moreover, it explores the relation between the IoT and other emerging technologies including, blockchain, IoHT, IoV, IoE, and IoC. For each subsector of IoT, it gives a taxonomy and a side-by-side comparison of the state-of-the-art methods towards secure blockchain mechanism with respect to the specific security goals, performance, limitations, and complexity. The main objective of this article is to provide a thorough summary of the blockchain protocols designed for IoT and published during 2018.

Keywords Blockchain · IoT · Security

1 Introduction

In 2008, Satoshi Nakamato [1] introduced the concept of blockchain that has attracted much attention over the past years as an emerging peer-to-peer (P2P) technology. Nowadays, the blockchain technology can be effectively applied in almost all domains of IoT [2], namely, Internet of Healthcare Things (IoHT), Internet of Vehicles (IoV), Internet of Energy (IoE), and Internet of Cloud (IoC). The blockchain structure is composed of a sequence of blocks, which are linked together by their hash values. In the blockchain network, a public ledger maintains the digitally signed transactions of the users in a P2P network.

M. A. Ferrag
LabSTIC Laboratory, Guelma University, Guelma, Algeria

LRS Laboratory, Badji Mokhtar-Annaba University, Annaba, Algeria

L. Maglaras (✉) · H. Janicke
De Montfort University, Leicester, UK

The main contributions of this paper are:

- it explores the relation between the IoT and other emerging technologies including, blockchain, IoHT, IoV, IoE, and IoC.
- for each subsector of IoT, it gives a taxonomy and a side-by-side comparison of the state-of-the-art methods towards secure blockchain mechanism with respect to the specific security goals, performance, limitations, and complexity.

2 Internet of Healthcare Things

The Internet of Healthcare Things (IoHT) reflects the identification of the healthcare field as a subsector of IoT. The research firm "MarketsAndMarkets" claims that the healthcare segment of IoT will be worth 163.2B by 2020 [3]. Over the past several years, computer scientists and domain experts proposed the blockchain technology to protect the privacy of health records in IoHT.

Using smart contracts, Griggs et al. [4] proposed healthcare blockchain system to secure the IoHT, which the sensors communicate with a smart device writes records using a private blockchain based on the Ethereum protocol. The system model in which communication nodes include, (1) patient equipped with various medical devices, such as an insulin pump or blood pressure monitor, (2) a master "smart device", typically a smartphone or tablet, and (3) smart contract, as presented in Fig. 1. In addition, the system has a private and consortium-led blockchain, i.e., only designated nodes can execute smart contracts and verify new blocks in the blockchain network. Comparison to traditional systems, this system can protect the privacy, i.e., no associations can be made between patients and their data.

In order to explore the efficacy of applying blockchain technology to the healthcare domain, Zhang et al. [5] developed an application, named DASH. Specifically, the authors presented four key interoperability challenges in healthcare and how blockchain technologies can provide assistance, namely, (1) Maintaining evolvability while minimizing integration complexity, (2) Minimizing data storage requirements, (3) Balancing integration ease with security concerns, and (4) Tracking relevant health changes across large patient populations.

In order to handle electronic medical records based on the blockchain technology, Azaria et al. [6] proposed a decentralized record management system, named MedRec. The MedRec system uses four software components: *Backend Library, Ethereum Client, Database Gatekeeper*, and *EMR Manager*. The *Ethereum Client* is used to join and participate in the Ethereum blockchain network.
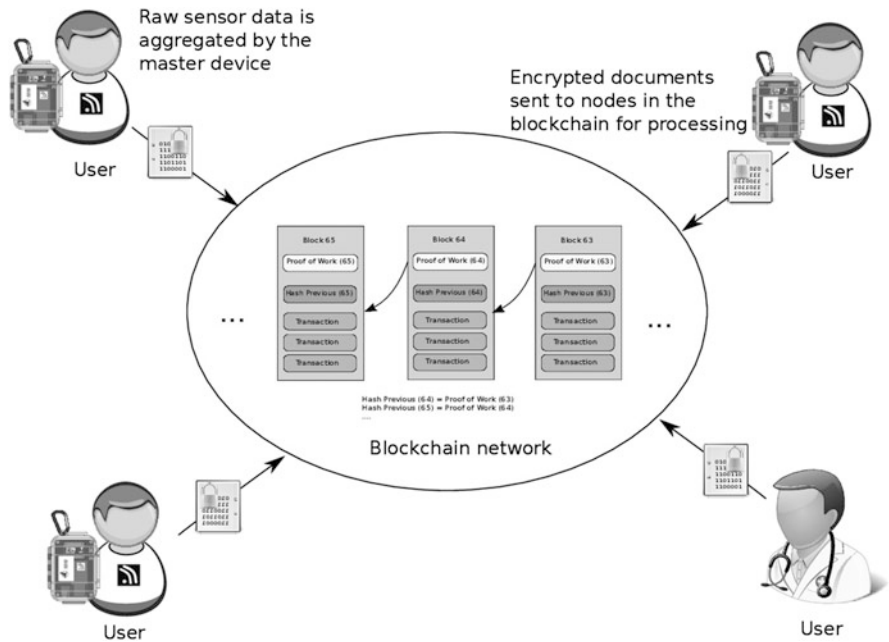
Fig. 1 Blockchain within the Internet of Healthcare things

3 Internet of Vehicles

The Internet of Vehicles (IoV) reflects the identification of the vehicular networks field as a subsector of IoT, which vehicles play an important role for safe and convenient travel [7]. Figure 2 shows a general architecture of blockchain within the IoV. Therefore, various types of frauds, such as odometers frauds, affect the used-car markets in the IoV. The blockchain-based schemes for the IoV are presented in Table 1. To increase transparency and trust in the used-car markets, Brousmiche et al. [8] proposed a vehicles data and processes ledger framework, which is based on a consortium Blockchain. To guarantee the reliability and efficiency of transactions in the IoV as well as the auditability of blockchain-based systems, Gao et al. [9] proposed a blockchain-based privacy-preserving payment mechanism.

In order to keep track of the status of vehicle's membership, Lasla et al. [10] proposed the use of blockchain as a mean to reduce the overhead of the authentication process. Specifically, the authors presented the blockchain within a vehicular network in which communication nodes include, the Road Side Units (RSUs) as validators (read/write permissions), whereas authorities and vehicles can only read or send transactions to RSUs for validation. For more details about the privacy preservation models in Ad Hoc networks, we refer the reader to [13]. However, how to resist against attacks in the blockchain networks? Recently, Oham et al. [11]
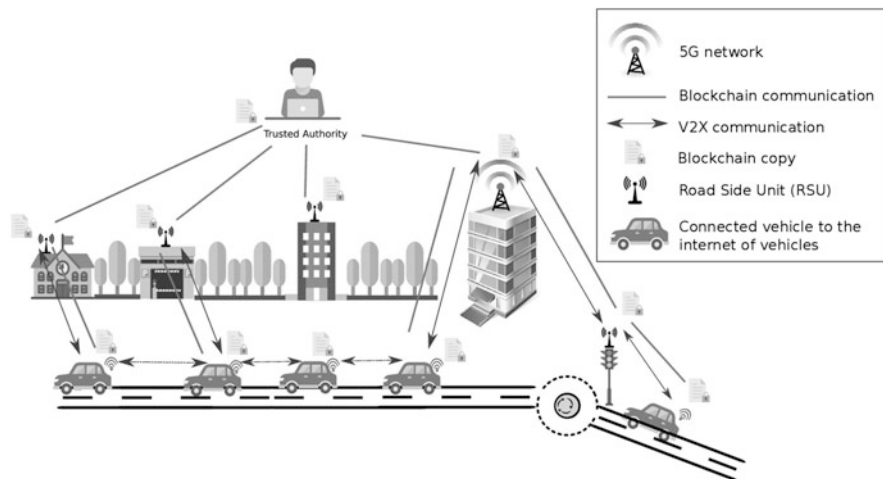
Fig. 2 Blockchain within the Internet of Vehicles

proposed a distributed digital forensics framework, which is based on a permissioned blockchain. This framework resist against attacks, in the blockchain networks, namely, evidence tampering, false information, and unavailable evidence. In addition, Liu et al. [12] proposed a blockchain-enabled security scheme for electric vehicles cloud and edge computing.

4   Internet of Energy

The Internet of Energy (IoE) reflects the identification of electricity infrastructures (smart grid) as a subsector of IoT, which the IoT communication paradigm is used for the management of the smart grid distribution network [14]. Today, the usage of blockchain technology in energy markets is used for blockchain-based energy markets, such as cryptocurrencies, privacy, or state estimations. Based on a private blockchain, Mengelkamp et al. [15] proposed a decentralized market platform for trading local energy generation. The authors proposed a simulation of a local energy market for 100 residential households in order to show the potential electricity cost reductions.

The blockchain-based schemes for the IoE are presented in Table 2. In order to enable tariff decisions in smart grids using blockchains, Knirsch et al. [16] proposed a load profile matching protocol, which allows for decentralized, privacy-preserving tariff decision in the smart grid. To minimize the power fluctuation level in the grid network, Liu et al. [17] proposed an adaptive blockchain-based electric vehicle participation scheme, named AdBEV. The AdBEV scheme the Iceberg order execution algorithm to match the smart grid electricity charging and discharging demand. Therefore, for managing demand response programs in the context of

Table 1 Blockchain-based schemes for the IoV

Year	Scheme	Security model	Goal	Performance (+) and limitation (−)	Complexity
2018	Brousmiche et al. [8]	− Blockchain access management	− Provide more transparency and collaborations between the involved stakeholders	+ Transparency and trust on the used-car markets − Authentication is not considered	Medium
2018	Gao et al. [9]	− Privacy-preserving	− Enables data sharing while securing sensitive user information	+ Ensures the anonymity of user payment data − The threat model is limited	Medium
2018	Lasla et al. [10]	− Authentication	− Keep track of the certificate of each vehicle in distributed and immutable records	+ Reduce the overhead of the authentication process − The auditability of blockchain-based systems is not considered	High
2018	Oham et al. [11]	− Privacy-preserving	− Provides untampered evidence for liability attribution and adjudication	+ Non-repudiation − Sbyil attack is not considered	Medium
2018	Liu et al. [12]	− Authentication, authorization, accounting	− Achieve enhanced security protection in electric vehicles cloud and edge computing	+ Traceability − The threat model is limited	Medium

IoE, Pop et al. [18] proposed a blockchain based decentralized management solution, which it is implemented for validation in Ethereum using energy traces of UK building datasets. Gao et al. [19] proposed a sovereign blockchain-based system, named GridMonitoring, for ensuring transparency, provenance, and immutability in the IoE. For the secure transfer of data from the smart home onto the smart grid, the GridMonitoring system adopt cryptographic primitives, including, consumer private key, consumer public key, and authenticator contract key.

Table 2 Blockchain-based schemes for the IoE

Year	Scheme	Security model	Goal	Performance (+) and limitation (−)	Complexity
2018	Knirsch et al. [16]	− Privacy-preserving	− Improve the existing solution in terms of verifiability	+ Transparency and verifiability − Mutual authentication is not considered	Medium
2018	Liu et al. [17]	− N/A	− Minimize the power fluctuation level in the grid network	+ Lowering the power fluctuation level − The handover delays are not measured	Low
2018	Pop et al. [18]	− Privacy of energy transactions	− Delivering transparent, secure, and reliable	+ Transparency and verifiability − The man-in-the-middle attack is not considered	Medium
2018	Gao et al. [19]	− Privacy of energy transactions	− Ensuring transparency, provenance and immutability	+ Transparency and provenance − The desynchronization attack is not considered	Medium

5 Internet of Cloud

The Internet of Cloud (IoC) is the integration of Cloud computing and Internet of Things, which are very different from each other and, even better, their characteristics are often complementary, as discussed in [23]. Nowadays, blockchain-based systems are proposed for the IoC to save the energy consumed [24], enable cost-effective high-performance computing, realize secure and fair payment of outsourcing services [21], auction mechanisms, securing electronic health record [22], distributed cloud storage, and enhance data retention in cloud storages.

The blockchain-based schemes for the IoC are presented in Table 3. To save the energy consumed cloud datacenters (DCs), Xu et al. [24] proposed an intelligent resource management system. To minimize the total cost of request migration among DCs, this system uses a reinforcement learning-based request migration method by a smart contract. To provide high availability, real-time data delivery, scalability, security, resilience, and low latency, Sharma et al. [20] proposed a blockchain-based distributed cloud architecture with a software-defined networking (SDN). Based on three emerging technologies, namely, fog computing, SDN, and blockchain, this architecture can enable cost-effective high-performance computing.

For eliminating the third-party in the IoC, Zhang et al. [21] proposed a blockchain based fair payment framework, named BCPay, which enjoy soundness and robust fairness. Specifically, the BCPay framework uses an all-or-nothing checkingproof

Table 3 Blockchain-based schemes for the IoC

Year	Scheme	Security model	Goal	Performance (+) and limitation (−)	Complexity
2018	Xu et al. [16]	− N/A	− Save the energy consumed cloud datacenters	+ Minimize the total cost of energy consumption − Computer attacks that affect energy are not considered	Medium
2018	Sharma et al. [20]	− Confidentiality	− Provide high availability and low latency	+ Enables cost-effective high-performance computing − Provide high availability and low latency	Low
2018	Zhang et al. [21]	− Authentication	− Realize secure and fair payment of outsourcing services	+ Efficient in terms of the number of transactions— The desynchronization attack is not considered	Low
2018	Wang and Song [22]	− Authentication	− Achieve different functions of ABE, IBE and IBS	+ Confidentiality, authentication, integrity of medical data − Sbyil attack is not considered	Medium

protocol to achieve soundness and robust fairness. The BCPay is efficient in terms of the number of involved transactions and computation cost, but the desynchronization attack is not considered. To achieve confidentiality, authentication, integrity of medical data, and support fine-grained access control, Wang and Song [22] proposed a cloud-based electronic health record system, which it uses attribute-based cryptosystem and blockchain technology. In addition, this system uses three cryptographic primitives, namely, attribute-based encryption, identity-based encryption, and identity-based signature (IBS) in one cryptosystem. Li et al. [25] proposed a blockchain-based security architecture for distributed cloud storage, named Block-secure. The Block-secure architecture uses a random file replica placement strategy and the Merkle Hash Tree as a validation method. Renner et al. [26] proposed a blockchain-based framework, named Endolith, to enhance data retention in cloud storages.

6 Lessons Learned

Based on the aforementioned research and analysis that we conducted, we propose a seven-step process for proposing a blockchain based privacy-preserving scheme:

- Formalization of the network model,

- Formalization of the attack models (e.g., identity-based attacks, manipulation-based attacks, cryptanalytic attacks, reputation-based attacks, and service-based attacks),
- Definition of the privacy model (e.g., location privacy, identity privacy, anonymity, traceability...etc.),
- Selection of the countermeasures (e.g., cryptographic methods),
- Proposition of the main phases of scheme (e.g., system initialization, nodes registration, ... etc.),
- Prove the robustness of the scheme using various security analysis techniques,
- Evaluate the scheme's performance in terms of storage cost, computation complexity, communication overhead and delay overhead.

7 Conclusions

The emerging idea of the blockchain is rapidly finding its path throughout the IoT, aiming to improve and ensuring transparency, provenance, and immutability. This paper presented an overview of the existing blockchain architectures designed for the IoT networks, namely, Internet of Healthcare Things (IoHT), Internet of Vehicles (IoV), Internet of Energy (IoE), and Internet of Cloud (IoC). This, in turn, should provide a good foundation for researchers who are interested in the relation between the IoT and other emerging technologies including, blockchain, IoHT, IoV, IoE, and IoC. Further, for each subsector of IoT, a taxonomy and a side-by-side comparison of the state-of-the-art methods towards secure blockchain mechanism with respect to the specific security goals, performance, limitations, and complexity, has been presented and discussed. It remains to be seen which will be the case with GDPR [27–29].

References

1. Nakamoto S (2008) Bitcoin: a peer-to-peer electronic cash system
2. Ferrag MA, Derdour M, Mukherjee M, Derhab A, Maglaras L, Janicke H (2018) Blockchain technologies for the internet of things: research issues and challenges. IEEE Internet Things J. https://doi.org/10.1109/JIOT.2018.2882794. Accepted Nov 2018
3. Elmisery AM, Rho S, Botvich D (2016) A fog based middleware for automated compliance with OECD privacy principles in internet of healthcare things. IEEE Access 4:8418–8441
4. Griggs KN, Ossipova O, Kohlios CP, Baccarini AN, Howson EA, Hayajneh T (2018) Healthcare blockchain system using smart contracts for secure automated remote patient monitoring. J Med Syst 42:130
5. Zhang P, White J, Schmidt DC, Lenz G (2017) Applying software patterns to address interoperability in blockchain-based healthcare apps. arXiv preprint arXiv:1706.03700
6. Azaria A, Ekblaw A, Vieira T, Lippman A (2016) Medrec: using blockchain for medical data access and permission management. In: International conference on open and big data (OBD), pp 25–30. IEEE

7. Alam KM, Saini M, El Saddik A (2015) Toward social internet of vehicles: concept, architecture, and applications. IEEE Access 3:343–357

8. Brousmiche KL, Heno T, Poulain C, Dalmieres A, Hamida EB (2018) Digitizing, securing and sharing vehicles life-cycle over a consortium blockchain: lessons learned. In: 2018 9th IFIP international conference on new technologies, mobility and security (NTMS), pp 1–5. IEEE

9. Gao F, Zhu L, Shen M, Sharif K, Wan Z, Ren K (2018) A blockchain-based privacy-preserving payment mechanism for vehicle-to-grid networks. IEEE Netw 99:1–9

10. Lasla, N, Younis M, Znaidi W, Arbia DB (2018) Efficient distributed admission and revocation using blockchain for cooperative ITS. In: 2018 9th IFIP international conference on new technologies, mobility and security (NTMS), pp 1–5. IEEE

11. Oham C, Kanhere, SS, Jurdak R, Jha S (2018) A blockchain based liability attribution framework for autonomous vehicles. arXiv preprint arXiv:1802.05050

12. Liu H, Zhang Y, Yang T (2018) Blockchain-enabled security in electric vehicles cloud and edge computing. IEEE Netw 32(3):78–83

13. Ferrag MA, Maglaras L, Ahmim A (2017) Privacy-preserving schemes for ad hoc social networks: a survey. IEEE Commun Surv Tutorials 19:3015–3045

14. Ferrag MA (2017) Epec: an efficient privacy-preserving energy consumption scheme for smart grid communications. Telecommun Syst 66(4):671–688

15. Mengelkamp E, Notheisen B, Beer C, Dauer D, Weinhardt C (2018) A blockchain-based smart grid: towards sustainable local energy markets. Comput Sci – Res Dev 33(1–2):207–214

16. Knirsch F, Unterweger A, Eibl G, Engel D (2018) Privacy-preserving smart grid tariff decisions with blockchain-based smart contracts. In: Sustainable cloud and energy services. Springer, Cham, pp 85–116

17. Liu C, Chai KK, Zhang X, Lau ET, Chen Y (2018) Adaptive blockchain-based electric vehicle participation scheme in smart grid platform. IEEE Access 6:25657–25665

18. Pop C, Cioara T, Antal M, Anghel I, Salomie I, Bertoncini M (2018) Blockchain based decentralized management of demand response programs in smart energy grids. Sensors 18 (1):162

19. Gao J, Asamoah KO, Sifah EB, Smahi A, Xia Q, Xia H, Zhang X, Dong G (2018) Gridmonitoring: secured sovereign blockchain based monitoring on smart grid. IEEE Access 6:9917–9925

20. Sharma PK, Chen MY, Park JH (2018) A software defined fog node based distributed blockchain cloud architecture for IoT. IEEE Access 6:115–124

21. Zhang Y, Deng RH, Liu X, Zheng D (2018) Blockchain based efficient and robust fair payment for outsourcing services in cloud computing. Inf Sci 462:262–277

22. Wang H, Song Y (2018) Secure cloud-based EHR system using attribute-based cryptosystem and blockchain. J Med Syst 42:152

23. Cook A, Robinson M, Ferrag MA, Maglaras LA, He Y, Jones K, Janicke H (2018) Internet of cloud: security and privacy issues. In: Cloud computing for optimization: foundations, applications, and challenges. Springer, Cham, pp 271–301

24. Xu C, Wang K, Guo M (2018) Intelligent resource management in blockchain-based cloud datacenters. IEEE Cloud Comput 4:50–59

25. Li J, Wu J, Chen L (2018) Block-secure: blockchain based scheme for secure P2P cloud storage. Inf Sci 465:219–231

26. Renner T, Muller J, Kao O (2018) Endolith: a blockchain-based framework to enhance data retention in cloud storages. In: 26th Euromicro international conference on parallel, distributed and network-based processing (PDP), 2018, pp 627–634. IEEE

27. Tziogas C, Tsolakis N (2019) The dawn of GDPR: implications for the digital business landscape. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham

28. Varelas S, Georgitseas P, Nechita F, Sahinidis A (2019) Strategic innovations in tourism enterprises through blockchain technology. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham

29. Coita CD, Abrudan MM, Constanta Matei MC (2019) Effects of the blockchain technology on human resources and marketing. An exploratory study. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Cham

Local Tradition Meets Gastronomy: The Example of Mount Athos Area Kouzina

Magda Peistikou and Natasha Iliopoulou

Abstract This study investigated in depth the growth of interest in combining tourism with food, and more specifically the interaction among gastronomy, tourism, and tradition. Food appears to be an essential element of travel experience contributing significantly in tourist's pleasure during their vacation period. Tourism suppliers, especially in Halkidiki, Greece, realised that they should approach hospitality through a different perspective where local culture and traditions would meet gastronomy and urban life. In order to understand in depth the importance of this transformation in hospitality and travel experience, the example of Mount Athos Area Kouzina festival is being analysed as a case study of this paper. Mount Athos Area Kouzina, was conceptualized and initiated by chef Dina Nikolaou in 2011 and is being organized by the Mount Athos Area Organization ever since.

Keywords Tourism · Gastronomy · Mount Athos Area Kouzina

1 Local Tradition Meets Gastronomy: The Example of Mount Athos Area Kouzina

The intense competition among tourist destinations, resulted in the local culture becoming an extremely valuable asset for the creation of new products that motivate tourists. Also the increase of a new segment throughout Europe, named the 'cultural omnivore'—a modern cultural consumer who takes in all forms of culture acts as a catalyst for the gastronomical industry [1]. With the growth of interest in linking tourism with food, this chapter is exploring the interaction between gastronomy and tourism under the prism of local tradition. The example of Mount Athos area in Halkidiki peninsula that is being presented, is the living proof of the endless possibilities that gastronomy tourism offers to a destination.

M. Peistikou · N. Iliopoulou (✉)
Athens, Greece

The data of this study was collected through bibliography research in order to select, investigate, and understand the significance of gastronomy in culture and local tradition. In which ways did gastronomy valued or promoted certain Greek destinations i.e. Mount Athos in Halkididki, as international tourist destinations? In order to answer this question, this study focused on the examples of Mount Athos Area and Kouzina festival that were analyzed and studied further within the following pages of this paper.

1.1 Gastronomy in a Local Destination

The meaning of the term gastronomy needs to be clarified as each destination interprets it differently. According to Warwick et al., there is conjecture about when the term gastronomy was initially used [2]. Even though various authors argue that there is a strong link to the ancient Greek words gastro (stomach) and nomos (law), the term is assumed to first appeared as the title of Joseph de Berchoux poem published in 1801 La Gastronomie ou L'homme des champs a table [3].

After the publication of the book The Physiology of taste, the derivative "gourmet" also came forward. As the famous gastronome, Anthelme Brillat-Savarin, stated, "Gastronomy is the knowledge and understanding of all that relates to man as he eats. Its purpose is to ensure the conservation of men, using the best food possible" [4]. Nowadays a shift towards the more scientific aspect of the activity is being observed and as a result gastronomy is being treated as a science. An interesting point though made by Lashley et al., is that a concise definition of gastronomy is notoriously elusive. Additionally, they characterise as elitist the interpretation of the definition that tends to associate gastronomy almost exclusively with restaurants and restaurant cuisine [5].

Nevertheless, gastronomy can often be still defined and in several cases as very accurately Gillespie et al. are pointing out it is being confused with pseudo gastronomy which as the author explains is a snobbish attitude that many people adopt towards food and wine [6]. Santich made an interesting attempt to clarify the different terms for gastronomy existing [7]. As the author mentions, the term simply relates to the enjoyment of the very best in food and drink or is a far reaching discipline that encompasses everything into which food enters including all things people eat or drink. Yeoman and McMahon-Beattie summarise the whole idea in the following: "Awareness, interest and the enjoyment of food have coincided with the increased consumption of tourism, therefore it was perhaps inevitable that they would combine and be referred as food, culinary, gourmet or gastronomic tourism" [8].

The contribution of gastronomy in tourism development is unquestionable with various examples worldwide. The fact that food is an essential element of the travel package, resulted the last years in the tourism suppliers focusing on replacing restaurant food with a "culinary experience". This experience is more than simply serving food to tourists. The whole idea is based on transferring the local culture to

the tourist through the help of colours, scents and flavours. Moving to the next level, the tourism industry realised, quite soon enough, that local cuisines should expand their horizons in order to enrich the tourist experience. Based on research, Kivella and Crotts, concluded that the motivation to travel for gastronomy reasons is a valid construct [9]. As a result, the term gastronomy was initiated in the concept.

Richards states: "Gastronomy has a particularly important role to play in this, not only because food is central to the tourist experience, but also because gastronomy has become a significant source of identity formation in postmodern societies" [10]. The advantage of this combination is the difficulty in replicating the product. Maybe the overall idea can be followed by various destinations but the product itself is unique. Each destination produces unique elements and has exclusive access to specific resources. So, the case of "reprinting" in a sense, the idea is impossible.

In parallel, a key factor of the tourism and gastronomy success is the collaboration between the public and the private sector. In addition, gastronomy is to truly reflect local and regional food particularly in rural tourism where scale and volume are success factors [11].

Gastronomy is increasingly being seen by destinations as a means to add value to the tourist experience and is associated with high-quality and high yield tourism. Festivals using gastronomy as a theme especially provide destinations with an opportunity to promote their local produce often reflecting their cultural identity and offer an alternative distribution outlet while educating consumers and generating awareness in an informal environment [12, 13].

Over centuries tourists have travelled to learn other people's languages and ways of life. As a form of well-being tourism, gastronomy tourism has the advantage of procuring unknown enjoyments through the senses familiarising people with others and creating and renewing memories in a realm that is both everyday and exotic. An increasing number of destinations have chosen gastronomy as a hallmark of excellence. Gastronomy tourism has also the advantage that even with no knowledge of the language, food and drink can offer an acclimatisation and naturalisation of the tourist [14].

Also gastronomy has become a significant source of identity formation in postmodern societies [10]. Modern societies and local communities that already introduced to their tourist portfolios, culinary products enjoy the benefits. Quan and Wang [15] determined three benefits that gastronomic tourism can give to destinations:

- Gastronomic tourism contributes to the development of rural tourism and agricultural economy.
- Destinations with various gastronomic resources are in the position to develop a complete gastronomical profile.
- Food can also be included in other aspect of the tourism activity i.e. events.

Moreover, as UNWTO points out: "The interrelation between gastronomy and tourism provide a vehicle for the transmission of culture which in turn, if properly managed, enhances local economic development, sustainable practices and food experiences [16]". Hence, gastronomy tourism, helps to brand and market

destinations, as well as assists in maintaining and preserving local tradition and diversity, harnessing and rewarding authenticity [16]. Through the years, and as gastronomy tourism was further developed, wine tourism started to consist a single market. Various authors consider it nowadays a niche market that exists in the niche market of gastronomy. Adding to that, many wine regions and tourism destinations have realised that the benefits of wine tourism are not limited to the wineries but are also obvious to each area of the regional economy [17].

1.2 Gastronomy, Heritage and Tradition

Cultural heritage is the essence of tourism in many destination areas worldwide. Similarly, gastronomy is an important medium for communicating heritage and promoting heritage tourism. One of the strongest links for all involved in gastronomy is that with heritage. The history of an area both environmentally and culturally will shape that area's cuisine [18]. Often people say that "we are what we eat" and the reflection of society is in the cuisine of each one. This fact if combined with the more recent trend that promotes healthy eating through the consumption of fresh, natural and minimally processed foods [19], results in the creation of a niche market, i.e. the local traditional cuisine. The simple one-to-one relationship between lifestyle and types of cultural consumption is beginning to break down. People are no longer interested in one narrow form of culture, but are selecting elements from a wide range of cultural forms to create their own identity [1].

For Westering "Gastronomy, heritage and tourism are old friends; the relationship between them is mutually parasitic" [20]. The role of gastronomy as a cultural driver is relating to the development and the sustainability of heritage.

The new tourist is in quest of new cultures and ideas and traveling is the vehicle towards the satisfaction of this growing need. It is argued that gastronomy brings culture and cultures together. Place and setting enhance the food experience and arguably vice versa. Heritage and gastronomy combined make for an excellent marriage of tourist resources [20].

Additionally, heritage has long been a mainstay of tourism development in Europe. It is estimated that cultural tourism, which is to a large extent centred on different forms of heritage, accounts for around 40% of all international tourism [18]. What is more, researchers identify a shift towards creative tourism in which among other arts, culinary activities are included [1].

2 The Case of Mount Athos Area

Mount Athos Area is located in the third peninsula of Hakidiki. The region or the easternmost "leg" as it is also known, is a small area with clear blue seas and dense vegetation. In the same area tourists may also find Agion Oros (The Holy Mountain)

that includes 20 monasteries and it is considered to be a self-governed part of the Greek state, under the direct jurisdiction of the Ecumenical Patriarch of Constantinople [21].

Mount Athos area has a rich history that counts more than 2500 years. Xerxes, Thucydides, Aristotle and Alexander the Great, left their footprint in the various small villages of the destination. The whole area of Athos is characterised by rich history, religious monuments, natural beauty and rich culinary traditions. Considering that Mount Athos Area is a multi-shaped holiday destination, guests are being offered various options. From cycling to weddings and from winter excursions to sailing, diving and cruising. Regarding the gastronomic heritage, the tourist has at his disposal a great tasting palette. Rare honey flavors from firs, heathers and pines, mushrooms of all kinds, feta and other types of cheese produced in local traditional creameries, wine made from the monks on mount Athos are only a few. Also tourists can taste tsipouro, a traditional drink made usually from grapes.

Furthermore, the local menu offers various gastronomical options that involve beans, sausages, olive oil and olives. One typical dish that each tourist tastes is mussels that the region is renowned for and tourists may taste in a risotto or steamed. Regarding deserts, the Ammouliani marzipan flowers (amygdalota), pies, doughs and breads are only few of the region's trademarks [22]. A special case though, in terms of local production, is fish. The list of the local products, all kinds of fish can be found in addition to various versions of salted fish. The variety is great and all preferences are being satisfied. It should also be noted, that local producers have managed to keep a good balance between value and products that made the product even more competitive.

2.1 The Mount Athos Area Organization

The Mount Athos Area organization was founded in 2010 by the local tourism community in an attempt to increase visitation in the region. Nowadays, the organization numbers 156 members, included representatives from all economic aspects of the tourist life i.e. sports, culture, trade, etc. [23].

The organization's activities mainly include the strategic promotion of the region through specific actions such as the participation in international tourist fairs and exhibitions. The organization is also responsible for the design and implementation of a yearly marketing plan that involves among others the promotion of the local products to the European markets and the promotion of the local real estate [23].

The main goal of the organization is to promote Mount Athos culture and gastronomy in a wider audience; and build stronger bonds with their international counterparts. Therefore, they collaborate with equivalent international organizations and agencies, with which they make brotherhoods [23]. Last but not least, the Mount Athos area organization is continuously conducting in depth research in order to identify new target markets and set its strategic goals. One significant initiative was the Mount Athos Kouzina festival.

The Mount Athos area Kouzina festival is the biggest in duration food festival in the Balkans. Every year from May till June, the food festival is taking place in the whole area of Mount Athos. The event includes daily presentations of local products and cooking shows from local cooks. All dishes presented are combining the gourmet element with the local tradition [24]. The core concept of the program that includes more than 32 different events is to bridge the local tradition with the modern world and to combine traditional recipes with contemporary cooking techniques. With this in mind, it becomes apparent that old gastronomic customs are being revived and the whole local community invents a new, unique, cultural identity [25, 26].

The Mount Athos Area Kouzina initiative was an idea that an aspiring Greek chef Dina Nikolaou conceived and put in practice a bit later on in 2011. It was then, when the chef first visited the previously unknown to her area of Mount Athos and she motivated the people of the organization to establish this event.

The first Mount Athos Area Kouzina festival was held in 2013 when the organization evaluated the realization of the abovementioned event, as beneficial and valuable for their reputation. The following year, the festival was reigned with success and very soon many European tourists started visiting the area.

More specifically, the Mount Athos area organization saw the first web bookings from Germany, Austria and Greece in 2014. What is more, various European thematic tourist agencies expressed their interest on cooperating with the organisation and local tourist establishments. Until recently, new markets are being added each year to the clientele of the region and the numbers are constantly growing.

The profile of the visitors from a national perspective, is people from all around Europe with an emphasis on Austria, Germany and the Nordic countries. The tourists of Mount Athos area Kouzina are people with a rich educational background who look for authentic and unique experiences. For that kind of tourists, the level of quality is the main factor that will act as a catalyst in their decision making process and usually they enjoy mingling with the local community in various activities [25].

At the same time, the program for the promotion of the initiative for 2014 was published, as well as the renaming of the institution. The new name will be Mount Athos Area Kouzina as the organizers believe that it conveys more clearly its meaning and purpose [23].

3   Discussion and Conclusions

Through this article one can interpret and understand in depth the significance of our findings in light of what was already known about gastronomy, tourism, heritage, and local traditions. The research question "In which ways did gastronomy valued or promoted certain Greek destinations i.e. Mount Athos in Halkididki, as international tourist destinations?" was answered through the findings that were presented within the pages of this article. The literature that was reviewed presented the significance

of gastronomy in Greek tourism industry and especially in the example of Mount Athos in Halkidiki which is true for other cases [27, 28].

The local community of Mount Athos benefited from the exploitation of the local resources in multiple levels: economic, environmental and social. What is more the cultural identity of the region becomes stronger each year with people from all around the world expressing their interest to visit it. The potentials of the area are limitless as every year new strategic partnerships are being signed with key members of the tourism industry worldwide.

References

1. Richards G (2007) The role of gastronomy in tourism development. http://s3.amazonaws.com/academia.edu.documents/33629982/The_role_of_gastronomy_in_tourism_development.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1472974701&Signature=pnSTg4bA5z%2BS50Avf9gjzUqoCro%3D&response-content-disption=inline%3B%20filename%3DThe_role_of_gastronomy_in_tourism_develo.pdf
2. Warwick F, Laing J, Best G, Williams K, Strickland P, Lade C (2016) Tourism, gastronomy and the media. Channel View, Bristol
3. Koch E (2008) The aesthetic body: passion, sensibility, and corporeality in seventeenth century France. University of Delaware Press, Newark
4. Brillat-Savarin J (2009) The physiology of taste (translation edition). Merchant Books
5. Lashley CC, Lynch P, Morrison A (2007) Hospitality: a social lens. Elsevier, London
6. Gillespie C, Cousins J, Pelham P (2002) European gastronomy into the 21st century. Routledge, London
7. Santich B (1996) Looking for flavour. Wakefield Press, Kent Town
8. Yeoman I, McMahon-Beattie U (2015) The future of food tourism: foodies, experiences, exclusivity, visions and political capital. Channel View, Bristol
9. Kivella J, Crotts J (2006) Tourism and gastronomy: gastronomy's influence on how tourists experience a destination. J Hosp Tour Res 30(3):354–377
10. Richards G, Hjalager AM (2002) Tourism and gastronomy. Routledge, London
11. Mount Athos Area Organization (2016) The organization. Available from the website: http://www.mountathosarea.org/
12. Bruwer J (2002) Wine and food events: a golden opportunity to learn more about wine consumers. Aust NZ Wine Ind J 17:92–99
13. Hall CM, Sharples L (2008) Food events, festivals and farmer's markets: an introduction. In: Hall CM, Sharples L (eds) Food and wine festivals and events around the world: development, management and markets. Butterworth Heinemann, Oxford, pp 3–22
14. OECD (2012) Food and the tourism experience. The OECD Korea Workshop, Paris
15. Quan S, Wang N (2004) Towards a structural model of the tourist experience: an illustration from food experiences in tourism. J Tour Manag 25:297–305
16. UNWTO (2016) Tourism and gastronomy. Available from the website: http://affiliatemembers.unwto.org/event/2nd-unwto-world-forum-gastronomy-tourism-0
17. Carlsen J, Charters R (2006) Global wine tourism. CABI, London
18. Robinson P, Heitmann S, Dieke P (2011) Research themes for tourism. CABI, Wallingford
19. Nielsen (2015) We are what we eat. https://www.nielsen.com/content/dam/nielsenglobal/eu/nielseninsights/pdfs/Nielsen%20Global%20Health%20and%20Wellness%20Report%20-%20January%202015.pdf
20. Westering J (1997) Heritage and gastronomy: the pursuits of the 'new tourist'. Int J Herit Stud 5:2

21. In Athos (2016). http://www.inathos.gr/athos/en/
22. Monk E (2010) The cuisine of the holy Mount Athos. Syghronoi Orizontes Press, Thessaloniki
23. Mount Athos Area Organization (2018) The organization. Available from the website: http://www.mountathosarea.org/
24. Greek Gastronomy Guide (2018) Traditional cuisine of Mount Athos area. Basic recipes and signature dishes. http://www.greekgastronomyguide.gr/athos-xalkidiki/paradosiaki-kouzina/
25. Pelet JE, Lecat B, Khan J, Rundle-Thiele S, Lee L, Ellis D, McGarry Wolf M, Kavoura A, Katsoni V, Wegmann AL (2018) Winery website loyalty: the role of sales promotion and service attributes. Int J Wine Bus Res 30:138–152. https://doi.org/10.1108/IJWBR-01-2017-0003
26. Papa M (2014) Interview to Magda Peistikou for Food Service Magazine 120:65–67
27. Kavoura A, Bitsani E (2013) E-branding of rural tourism in Carinthia. Austria Tour Int Interdiscip J 61:289–312. https://hrcak.srce.hr/110912
28. Pelet JE, Lecat B, Khan J, Rundle-Thiele S, Lee L, Ellis D, Wolf M, Wegmann A, Kavoura N, Katsoni V (2017) Don't believe the hype: a grounded exploratory six country wine purchasing study. J Wine Res 28:91–104. https://doi.org/10.1080/09571264.2017.1309644

Comparison of Labor Productivity in Tourism and the Economy, Analysis of Selected Countries

Wojciech Koziol and Anna Mikos

Abstract Practical realization of the main paradigm in economic science, which is the pursuit of sustainable development of the country, requires a proper definition of this concept and the development of tools to measure it. In addition, the improvement of economic policy oriented towards sustainable development is the decomposition of this goal into particular sectors of the economy. The aim of the paper is the analysis of how the tourism sector contributes to a whole country performance. The tool used to achieve the goal of the article allows the calculation of labor productivity for the whole country, as well as for individual regions or industries. This indicator also provides a full comparability between the results obtained. The research covered several European countries that differ in their level of development. Tourism activity has been defined as section I of the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE rev.2, accommodation and food service activities. Thus, an additional detailed purpose of the paper is the presentation of the labor productivity index (LPI) as an alternative measurer of regional and sectorial performance. The presented method of LPI measurement and results of its application may support the political decision-making process of establishing guidelines to optimize the industrial structure of the economy.

Keywords Labour productivity · Sector performance · Tourism

W. Koziol (✉)
Cracow University of Economics, Cracow, Poland
e-mail: koziolw@uek.krakow.pl

A. Mikos
Malopolska School of Economics, Tarnow, Poland

1   Introduction

The generally accepted paradigm of economic sciences is sustainable economic development as a goal of contemporary economies. The aim is therefore socio-economic development, which does not cause current or future losses to the natural environment and society. Socio-economic development can be defined as the upward movement of the social and economic system. This system consists mainly of: production techniques and technologies, management system, economic policy, type and quality of institutions, culture and values, social relations and the condition of the environment. It can be noticed that the concept of development goes far beyond the notion of growth [1]. The national economic system consists of various economic industries, each of which contributes to the final macroeconomic outcome. One of the strategic political goals is to optimize the structure of the economy from the point of view of sustainable growth. A political program based on sustainable growth requires the provision of tools for a reliable assessment of the scope of its implementation.

An important issue is measurement of development. The dynamics of GDP is used to measure the economic growth rate or economic activity of the country. This indicator is often equated with a country's level of development, although it should not be. In literature and economic practice many measures describing the state and pace of development of the socio-economic system have been invented [2]. Some modern concepts of inclusive growth focus on high productivity growth, that can lead to productive jobs, social inclusion that can ensure equality of opportunity, and a social safety net that can reduce risk and act as a cushion for the most vulnerable groups [3]. The labour productivity indicator presented in the paper is a proposal for evaluation of productivity a given country and certain economic industries.

2   Research Method

The useful result of the measurement of economic potential and efficiency should reflect the relationship between the output and the input. This remark also applies to the macroeconomic aspect. A commonly practiced assessment of the country's economic condition on the basis of the size and dynamics of GDP is incomplete. It is limited to the analysis of economic effects while it ignores the aspect of input. GDP per capita indicators also do not meet this condition, as only part of the population contributes to GDP growth. Thus better labor productivity indicator is GDP per employee [4]. At a constant level of national labour force education, this indicator may be a good measure of economic efficiency. The economic value, including GDP, is ultimately the effect of human work performed in a given institutional environment. The relation between GDP and labor input, measured by the amount of remuneration received by employees, is the index of institutional

potential assessment. For the purpose of paper, was used labour productivity index (LPI) represented by the following formula:

$$LPI = \frac{GDPR}{W}$$

where: GDPR—real gross domestic product, W—compensation in economy.

The starting point for the interpretation of the LPI is the analysis of the structure of real GDPR calculated using the income approach. It assumes that GDPR is the sum of the income of all owners of the production factors. This means that the structure of GDP may be presented as the sum of labour income (GDPR (W)), capital income (GDPR (C)), state income (GDPR (G)) and depreciation (GDPR (D)) [5]:

$$GDPR = GDPR(W) + GDPR(C) + GDPR(G) + GDPR(D).$$

These two formulas can be transformed into a form:

$$GDPR = W \cdot LPI = W + (LPI - 1) \cdot W = GDPR(W) + GDPR(A)$$

$$GDPR(A) = GDPR(C) + GDPR(G) + GDPR(D).$$

The above analysis shows that the (GDPR) can be divided into two main components, the part of the remuneration (payroll related) (GDPR (W)) and the non-payroll part (GDPR (A)). Thus, the higher the level of LPI, the greater part of the GDP is intended to finance social benefits such as capital income, public goods and infrastructure. For this reason, a higher level of LPI means a higher standard of living. This statement largely overlaps with the concept and objectives of social and economic cohesion policy, thanks to which the LPI can be an alternative to numerous other indicators used for measuring economic and social cohesion. More about LPI index, its interpretation and practical use presents works [6, 7].

Calculating the value of the LPI requires an adequate data on the real GDP and the wages in economy. Data on GDP are usually available, however there is a need to differentiate the method of growth accounting depending on industry or country development level [8]. Due to the lack of sufficient standardization of data on wages in the economy published statistical information requires appropriate adjustments to determine the disposable wages income. Analysis of the LPI in different industries requires data on gross value added (GVA). Commonly used methodology of GDP measurement is based on summation of GVA in all industries and adjustment on taxes and subsidies.

3 Results

The conducted analysis is pilot and we aim to examine the application possibilities of the given research method. The countries have been selected to represent a diverse economic development structure, high, medium and developing. In addition, the choice of countries was determined availability of data. The research covered six European Union countries. On the basis of data from national statistical institutions LPI, GVA per employee, structure and dynamics of employment, GVA and compensation were calculated. The calculations were conducted both for the whole country and for the tourism sector. Tourism industry has been defined as section I of the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE rev.2, Accommodation and food service activities. The time span of the analysis is differentiated by the availability of statistical data. Data on compensation in Sweden are slightly different from other surveyed countries. Swedish detailed data on compensation in industries are based on working hours.

4 Discussion

The calculations in Tables 1, 2, 3, 4, 5, and 6 are flowing conclusions: In the countries surveyed, tourism has a small impact on the economy. The share of tourism in GVA is 1–2%. Only in Greece this share is larger, in 2010 was 4.8%, in 2014 increase to 6.3%. Tourism also has little impact on the labor market. In Poland, employment in the industry is below 2% of all employees. In other countries it is 3–4%. Only in Greece employment in tourism reaches 6.5–7.9%. Tourism offers relatively low-paid jobs. In each of the countries surveyed, the average pay in tourism is much lower than the national average. In France, tourism workers earn around 80% of the national average wage, while in Germany only half. In turn, labour productivity measured with GVA per employee is clearly unfavorable. In all

Table 1 Analytical data for Poland

Year	Tot.	Sec.I	%	Tot.	Sec.I	%	Tot.	Sec.I	%
	GVA			Wages			Employment		
2009	1220	13.5	1.1%	3102	1918	61.8%	13,449	259	1.9%
2015	1596	18.8	1.2%	3908	2460	62.9%	14,504	258	1.8%
15/9	131%	139%	107%	126%	128%	102%	108%	100%	93%
	LPI			GVA per employee					
2009	2.07	1.92	92.9%	90.7	52.1	57.5%			
2015	1.99	2.09	105.1%	110.0	72.9	66.2%			
15/9	96%	109%	113%	121.3%	139.8%	115.2%			

GVA in billions PLZ, employment in thousands persons, wages monthly in PLZ, GVA per employee in thousands PLZ

Table 2 Analytical data for France

Year	Sec.I	Total	%	Sec.I	Total	%	Sec.I	Total	%
	GVA			Wages			Employment		
2008	44.7	1793	2.5%	23,452	28,949	81.0%	953	25,778	3.7%
2017	57.9	2042	2.8%	27,374	33,264	82.3%	1103	26,299	4.2%
17/8	129%	114%	114%	117%	115%	101.6%	116%	102%	114%
	LPI			GVA per employee					
2008	2.00	2.40	83.2%	46.9	69.6	67.4%			
2017	1.92	2.33	82.1%	52.5	77.6	67.6%			
17/8	95.9%	97.2%	98.7%	111.9%	111.6%	99.7%			

GVA in billions Euro, employment in thousands persons, wages yearly in Euro, GVA per employee in thousands Euro

Table 3 Analytical data for Czech Republic

Year	Total	Sec.I	%	Total	Sec.I	%	Total	Sec.I	%
	GVA			Wages			Employment		
2008	3649	76	2.0%	22.59	12.47	55.0%	4037	119	2.9%
2017	4527	96	2.1%	29.50	17.38	58.9%	4005	118	2.9%
17/8	1.24	1.26	1.05	1.31	1.39	1.07	0.99	0.99	1.00
	LPI			GVA per employee					
2008	2.49	3.21	129%	903.9	638.7	70.7%			
2017	2.38	2.91	122%	1130.3	813.6	72.0%			
17/8	96%	91%	95%	125%	127%	102%			

GVA in billions CZK, employment in thousands persons, wages monthly in thousands CZK, GVA per employee in thousands CZK

of the six countries, this relationship is clearly below the indicator for the whole economy. This is particularly evident in Germany, where one employed in tourism generates only 40% of the value added compared with the average employee. In the countries surveyed a diverse labour productivity index in tourism was observed. In countries traditionally regarded as economically advanced, such as Germany, France or Sweden, LPI in tourism is lower than LPI for the whole country. In Czech Republic and Greece, the opposite situation was recorded. It should be noted that the higher value of the LPI compared to the GVA per employee results from low wages in the tourism industry.

Measuring economic impact of tourism has many research methods. Many of them refer to the analysis of selected areas of influence, such as, for example, income, jobs and taxes, while others measure the impact of tourism on macroeconomic indicators [9]. Kumar et al. concludes, that for a long time, tourism industry has drawn the public's attention only to the positive economic impacts for which tourism claims responsibility. Recently increased attention has been focused on acknowledging and addressing the negative economic impacts connected with tourism [10].

Table 4 Analytical data for Greece

Year	Total	Sec.I	%	Total	Sec.I	%	Total	Sec.I	%
	Employment			GVA			Wages		
2010	4705	307	6.50%	200,314	9538.8	4.80%	22,992	14,705	64.0%
2014	4035	317	7.90%	160,976	10,211	6.30%	19,504	10,853	55.6%
14/10	85.8%	103.3%	121.5%	80.4%	107.0%	131.3%	84.8%	73.8%	87.0%
	LPI			GVA per employee					
2010	1.85	2.11	114.1%	42.57	31.07	73.0%			
2014	2.05	2.97	144.9%	39.89	32.21	80.7%			
14/10	110.8%	140.8%	127.0%	93.7%	103.7%	110.6%			

GVA in millions Euro, employment in thousands persons, wages yearly in Euro, GVA per employee in thousands Euro

Table 5 Analytical data for Germany

Year	Total	Sec.I	%	Total	Sec.I	%	Total	Sec.I	%
	GVA			Wages			Employment		
2008	2305	33	1.4%	27,713	14,220	51.3%	36,353	1294	3.6%
2014	2631	40	1.5%	31,631	15,439	48.8%	38,260	1518	4.0%
14/08	114.2%	120.2%	105.3%	114.1%	108.6%	95.1%	105.2%	117.3%	111.5%
	LPI			GVA per employee					
2008	2.29	1.79	78.4%	63.40	25.51	40.2%			
2014	2.17	1.69	77.9%	68.77	26.14	38.0%			
14/08	94.8%	94.4%	99.4%	108.5%	102.5%	94.4%			

GVA in millions Euro, employment in thousands persons, wages yearly in Euro, GVA per employee in thousands Euro

Table 6 Analytical data for Sweden

Year	Total	Sec.I	%	Total	Sec.I	%	Total	Sec.I	%
	GVA			Wages			Employment		
2010	3094.7	44,931	1.5%	258	187.7	72.8%	6203.6	171.6	2.8%
2016	3864.8	69,875	1.8%	302.1	224.8	74.4%	6827.6	218.4	3.2%
16/10	124.9%	155.5%	124.5%	117.1%	119.8%	102.3%	110.1%	127.3%	115.6%
	LPI			GVA per hour					
2010	1.93	1.39	72.0%	498.9	261.8	52.5%			
2016	1.87	1.42	75.9%	566.1	319.9	56.5%			
16/10	96.9%	102.2%	105.4%	113.5%	122.2%	107.7%			

GVA in billions SEK, employment in millions working hours, wages hourly cost in SEK, GVA per hour in SEK

Research on tourism contribution to economic growth lead to different conclusions. Among other, indicate a decline in the share of tourism in GDP growth [11], a minor contribution of tourism to economic growth in Latin America countries [12] and in Balkan Countries [13]. A significant positive impact of tourism on GDP was recorded in Italy and the UK [11]. In the Mediterranean region, the best results were recorded in Greece [14].

5 Conclusions

Measurement of labor productivity can be a research tool that is easy to apply and provides simple to interpret results. The use of the method is limited by certain requirements regarding statistical data. In the case of industrial sections analyzes, reliable data from individual industries of the economy on GVA and remuneration are necessary.

The political goal should be to strive for a steady national labour productivity increase. Measurement of labor productivity in industries shows the effectiveness of their use of resources, especially human resources. This allows the establishment of guidelines to optimize the structure of the economy.

The research carried out indicates that the tourism industry does not play a significant role in the economy of the analyzed countries. In addition, it is characterized by below-average labour productivity. Sustainable development of the country requires placing resources as much as possible in more productive areas. This remark is particularly important in the case of human resources, which in tourism are clearly low paid. Low wages also mean that it is the industry that generates demand for a relatively low-skilled workforce. This is a serious limitation in implementing the strategy of improving education and professional qualifications in society. Tourism, although it is needed and it is hard to imagine an economy without hotels and restaurants, is an economically unprofitable industry. These recommendations are particularly relevant for Greece, where the share of the tourism sector is high compared to the other countries surveyed. Improving productivity in tourism requires central initiatives that support continuous innovation process in companies [15, 16] and also to support strategic issues in regard to alliances and cooperation [17].

References

1. Kolodko GW (2011) Truth, errors, and lies, politics and economics in a volatile world. Columbia University Press, New York, p 265
2. Costanza R, Hart M, Posner S, Talbert J (2009) Beyond GDP: the need for new measures of progress. Trustees of Boston University, Boston, pp 3–5

3. Xiaodi L, Wang Z, Hetzler A (2017) HFMADM method based on nondimensionalization and its application in the evaluation of inclusive growth. J Bus Econ Manag 18:726–744. https://doi.org/10.3846/16111699.2017.1341848
4. Nedomlelová I, Kocourek A (2016) Human capital: relationship between education and labor productivity in the European countries. In: 10th international days of statistics and economics, Melandrium, Praha, Slaný, pp 1090–1099
5. Hall R, Taylor J (2002) Makroekonomia. WN PWN, Warszawa, p 42
6. Dobija M (2014) Formation of the integrative currency area. SOP Trans Econ Res 1:1–9. https://doi.org/10.15764/er.2014.01001
7. Koziol W, Koziol M (2018) Analysis of the dynamics and regional dispersion of labor productivity as an alternative method of measuring economic and social cohesion on the example of the Visegrad Group. In: 12th international days of statistics and economics, Melandrium, Praha, Slaný
8. Lankauskiene T (2016) Application of the growth accounting method for the construction industry. J Bus Econ Manag 17(3):430–443. https://doi.org/10.3846/16111699.2016.1173580
9. Kumar J, Hussain K (2014) Evaluating tourism's economic effect: comparison of different approaches. Procedia Soc Behav Sci 144:360–365
10. Kumar J, Hussain K, Kannan S (2015) Positive vs. negative economic impacts of tourism development: a review of economic impact studies. In: APTA 2015, Kuala Lumpur 14th–17th May 2015, pp 405–413
11. Brida JG, Pereyra JS, Such-Devesa MJ, Aguirre SZ (2008) Una evaluacion de la contribucion del turismo al crecimiento economico: el caso de Espana, Francia, Italia U.K. y Estados Unidos, Cuadernos de Turismo, No. 22, pp 35–46
12. Brida JG, Pereyra JS, Such-Devesa MJ (2008) Evaluating the contribution of tourism to economic growth. Anatolia 19(2):351–357
13. Cerovic S, Knezevic M, Matovic V, Brdar I (2015) The contribution of tourism industry on the GDP growth of Western Balkans countries. Industrija 43(3):159–165
14. Ivanov S, Webster C (2006) Measuring the impact of tourism on economic growth. Tour Econ 13:21–30
15. Kavoura A, Koziol L (2017) Polish firms' innovation capability for competitiveness via information technologies and social media implementation. In: Vlachvei A, Notta O, Karantininis K, Tsountas N (eds) Factors affecting firm competitiveness and performance in the modern business world. IGI Global, Hershey, pp 185–214
16. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res 18:121–131
17. Serdaris P, Antoniadis I, Tomlekova N (2014) Supply chain management: a view of the distribution channel. Bulgarian J Agric Sci 20:480–486

A Classification Model for Serious Games Used in Museums, Galleries and Other Cultural Sites

Ioannis Paliokas and Stella Sylaiou

Abstract Serious Games (SGs) and Gamification concepts have been introduced lately in many kinds of museum and cultural sites experiences: from on-site gamified navigation to virtual tours in ancient times. Museums and cultural sites have adopted with great success the principles of gamification to offer alternative and more stimulating experiences to their visitors. This paper aims to introduce a classification system for SGs and game-like applications used in museums and other places of cultural and touristic interest. As part of the existing theoretical frameworks and classification systems used in SGs and gamified web platforms, we will discuss the complementarity of existing classification approaches and their possible limitations. The proposed classification system will be presented with respect to the entertaining, informational and educational characteristics of the SGs and gamification applications under study.

Keywords Museum · Serious games · Gamification · Classification

1 Introduction

During the last few decades, onsite museum and cultural sites' visitors have witnessed a shift from the traditional guided tour to digitally enhanced visitor's experiences. This was made possible through ICT technologies in general and the application of the gamification principles in the ways visitors interact with the cultural artifacts. Unlike the videogames, which may be considered as cultural artifacts themselves, as thus to be included in a museum's collections like the permanent collection of the Museum of Modern Art (MOMA) started in 2012 [1], the SGs designed to present the museum contents are considered as a special category. Technologies like Virtual Reality, Augmented Reality, Mixed Reality,

I. Paliokas (✉) · S. Sylaiou
Hellenic Open University, Patras, Greece
e-mail: paliokas.ioannis@ac.eap.gr

large screen displays, mobiles and networking technologies have been adopted by museum and cultural sites for enhancing cultural experience.

There are numerous SGs proposed for digital heritage and wider audiences have gained access to them, not only onsite. Despite the wide spread of various game-like environments and the strong impact they have on the user experience, it seems that there is not a common language to describe the games' characteristics that have been adopted by museum curators, museologists, game developers and researchers. Given the fact that the technology behind SGs has routes to the games used for leisure, sometimes authors use classification models derived from the videogames industry. Nowadays, SGs designed for DH have remarkable differences in their purpose and objectives, in relation to other game types. They use various motivation strategies, are being used in a different context and the application of classification models used in other market domains is not feasible, or when used they may create some confusion.

Towards the gamification of the museum experience, this paper investigates existing classification systems for SGs in the Cultural Heritage (CH) domain and finally propose a model to describe the characteristics of the SGs along with a classification scheme derived from that model. It is expected that those outcomes are of high interest for museum curators, managers and researchers who study the evolution of gamification in digital cultural heritage.

2   Background

CH sites, museums and galleries use game-like applications to strengthen the engagement of their onsite or distant visitors and create memorable experiences. Inspired by the Pokemon Go [2], the National Museum of Singapore introduced the 'Story of the Forest' [3], in which visitors interact with Singapore flowers, plants and animals, which are projected in a giant screen display. The creatures of the artwork can be captured by visitors through the camera of their smartphones and be used for getting more information and as a personal photo collection. The Meanderthal mobile application [4] combines a 'selfie photo' taken by the visitor with information of human ancestors and makes the visitor appear as a Neanderthal telling the story of evolution. These kinds of SGs used in museums are no different than interactive video installations. There are other VR game-like applications used for navigation in a virtual museum, like in the British Museum [5], the Louvre [6] and organizations like the Foundation of the Hellenic World [7]. There are numerous other categories including 3D sculpture apps [8], tabletop games for natural history museums [9], 3D archaeological reconstructions [10], or simple timeline storytelling applications [11]. Substantive findings have been presented by literature reviews regarding game genres for leisure, like the classification of Eric Solomon's [12], but also specifically for the particular topic of SG for CH [13]. Other studies have identified the visiting style and visitor's type [14]. Prensky proposed a classification

for educational SGs based on game styles, content and learning activities [15]. Other classification schemata proposed in the literature can be found in Hendrix et al. [16].

Literature reviews on SGs for CH have been presented in [17] but with a main concern on the technologies used for developing the games in relation to the expected results. A straightforward classification has been proposed by Laamarti et al. [18] taken into account all possible application areas, modalities, interaction styles and environments. Moreover, most classification systems for SGs have been based on a single or very limited criteria. There are either market, or purpose-based classification systems [19]. These review studies do not provide all the detailed information required to categorize the SGs used in CH with respect to their individual characteristics, in order to study them as learning, or infotainment objects. Expanding the work made so far, in this paper we will propose a model to describe the SGs, which were designed exclusively for digital heritage in museum and archaeological site settings and a classification system derived from this model.

3   The Proposed Classification Model for SGs in Museums

There are SGs used to teach, inform, motivate and offer an interactive experience on visitors. But apart from purpose, most authors use the name of the underlying technology to identify and describe SGs. For example, they say a *VR* game for *teaching history* [20], an *AR* application for *virtual excavation* [21], and so on. Thus, given the technology and the purpose of a SG, people can make a meaning. Apart from that, the playing style, the contents and the specific interest of the game are equally important factors to understand where a SG for digital heritage stands in relation with others. The proposed model was created as an outcome of the methodology presented in Fig. 1. This simple algorithm was repeated for all SGs found in a pool of papers published from 2009 to 2015 in IEEEXplore and ACM Digital Library. The search string was formulated by the terms 'Museum' and 'Game' in the
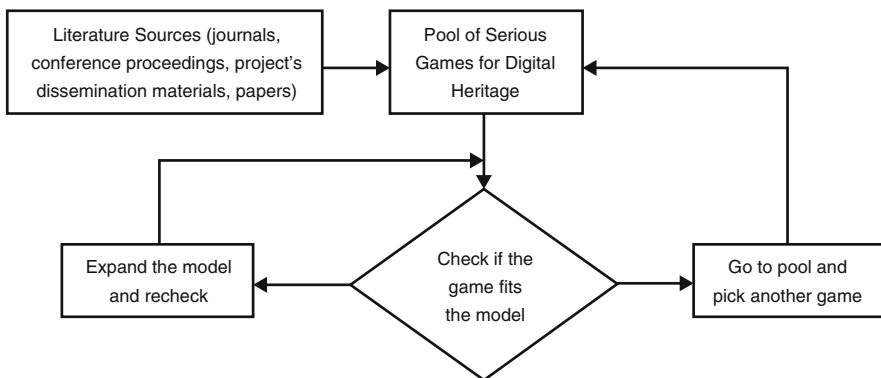
Fig. 1 Model development methodology

title and abstract, duplicates and some not relevant papers were removed and finally 48 studies were resulted.

Following this method, even one and single game could expand the model in order to hold any similar future games as well. Given a characteristic of a game not found elsewhere, it can expand the model horizontally. For example, the possibility to create digital 3D sculptures as replicas of the original artifacts [8] is a characteristic, which extends the typical functionality of digital heritage games. On the other hand, if a game extends an existing model characteristic, then this contributes to a vertical expansion (in depth). The proposed model can be dynamically adjusted to any future progress made on the SGs technology, contents, user experience, and sized qualities (dimensions). The model will be able to answer the following questions: (a) What is this game for? (b) Who is playing the game? (c) What players have to do (to complete the game)? (d) How playing this game feels? (e) What equipment do people need to play? After applying the proposed model development methodology, we categorized the SGs in various groups depending on the way each game was different than others. The results are presented in Table 1.

After proposing a taxonomy schema for SGs used in digital heritage the question is: can we define game genres based on the elements of Table 1? Are all taxonomy criteria equally important and thus required for game genres definition? For example, one could describe a game as:

A single-player game designed to allow students to navigate in a simulated environment using VR equipment in order to learn about life in Middle Ages.

This short description gives an overview of the size, users, experience, working environment, technologies, intention and theme of the SGs. Thus, apart from a taxonomy schema, our findings can be used to propose a formal description template for SGs used in digital heritage.

4 Discussion

SGs are computer games used in non-leisure contexts, but—according to the Table 1—if a game is of type 'fun' in purpose, then how to consider it as a SG? This paradox can be resolved given the fact that the game is offered in a museum context and under a museological purpose. As de Freitas noted for virtual worlds, there is a shift from knowledge transfer strategies to encouraging learner empowerment through increased interactivity. In our case, the virtual worlds offered through the SGs in digital heritage settings can offer to SGs a diffuse educational role. On the other hand, digital heritage and tourism can be considered as communicating vessels: SGs for museum settings are not only bridging interdisciplinary study and market areas, but they provide 'meaningful gamification' experiences to tourists [22] and museum visitors [23], through a background story, game elements and learning challenges that do fit in the museum context.

Table 1 The resulted classification model

Contents	
Assets	**Static** content (articles, images and sketches), timed (videos and animation with narration)
	Dynamic content (3D objects, 360 images/Panoramas, applications, complicated Learning Objects)
Working environment	**Simulated** environment (time-travel, distant location, dangerous environment)
	Real-world environment (e.g. the physical building of the museum like in QTVR, 360 pictures, etc.)
Content handling	**Create** new assets within the application (3D sculpture, authoring articles, upload user-generated content)
	Modify existing contents (create versions, wiki co-authoring contents
	Use assets and available information to create collections like favorites, personalized views, online instructional materials and presentations
	Review content, make documentation, contribute to the reputation of the original authors, evaluate the quality from a museological and educational point of view
User experience	
Navigation (or exploration)	**Search and view** assets and their metadata (permanent collections, exhibitions) using criteria, manage findings, share results with other users, repeat navigation routes, keep personal timelined navigation history
	Walking themes are literature walks to discover hidden spots of a unknown place in urban environments, or in archaeological sites
	Navigate in a virtual world like in simulations (distant places, time-travels), explore knowledge-base through a narration
	Follow a predefined route (**narration**) made by professionals
Motivation/ challenge	**Curiosity** to discover hidden treasures
	Puzzle solving (put pieces together in a logical way to come to a solution), like in mysteries, and making investigations on known historical events/ crimes
	Competition driven by gameplay against others or the need to perform better than previous time (self-development)
	Collection of objects (Learning Objects, digitalized artefacts, etc.)
	Spend time on recreational activities
Intention (purpose, scope or motivation)	
Survival	The survival abilities are proven **against other players** by beating, or eliminating others during a game session
	Play against the Artificial Intelligence (AI) of the game and **win time**
Sociocultural	People participate under the intention to meet other people, extend their personal **networking**, make and share a social profile
	Emphasis is given to **socialization and collaboration** with others to achieve the wished result, participate in a group (shared identity) and share awards
	Emphasis on **achievements** (be more active in relation to other users)

Table 1 (continued)

Learning	Use the game in **learning activities** for typical (e.g. school projects), and/or non-typical forms of education
	Learning new things driven by pure **curiosity**
Information	**Update information** on knowledgeable audiences on a specific subject, provide first information about a subject to non-experts
	Find **evidence** for supporting claims, attitudes and beliefs
Engagement	Make more people **participate** in organizational activities
	Lengthen the time people participate in activities or stay in the museum
	Increase the frequency of returning visitors
Dissemination	Support typical forms of dissemination activities for **advertisement**
	Support **brandnaming** activities to distinguish the organization, the services on offer or its collections from rivals
	Support the dissemination of **scientific** results (research, excavation, museological documentation)
Size	
Number of users	Games for **single players** (visitors)
	Team-playing games (more than one players can play the game but organized in teams
	Massive multiplayer solutions
Mass-effect	Run **crowd-sourcing** campaigns (e.g. to extend the knowledgebase of the organization with user-generated contents)
	Create publicly available **knowledge bases** (e.g. large collections of digitalized cultural objects, Learning Object repositories)
Used technologies	
Level of immersion	Simulated 3D environments in **desktop** applications (desktop-VR)
	Stereoscopic projections in monitors
	Virtual Reality (fully immersive environments) technology using headsets and other special equipment (including 'Caves')
	Augmented Reality (mixed physical and virtual objects making a blended reality place of interaction)
Used devices	**Mobile devices**, like smartphones and tablets using various sensors (microphone, camera, GPS)
	Wearables and **IoT** devices (like QRCodes, beacons, etc.)
	Museum **special equipment** like giant-screens, networking infrastructure (servers, gateways), 3D printers
	Robots offering advanced audio tour services for onsite visitors using visitor's location tracking
	Drones used for high-tech distant guide services
Social networking	Games which involve existing **Social Networking platforms** (e.g. SGs delivered as Facebook applications)
	Social environments developed around the community of the organization (usually small-scale custom-made social platforms)
Various	Existing **Smart City infrastructure**
Users	
Students	Young students (pre-school, elementary school students)
	Mid- and high-school students
	University students

Table 1 (continued)

Game-makers	**Game-masters** is a team of users is consisted of game rule regulators and game use case creators (e.g. museum curators, game initiators, domain experts, managers, admins)
	Game-developers who actually develop software and game technologies
Game-assistants	Parents, relatives and friends who may provide help during the game on behalf of the player
	Other companions in a role of game-assistant (e.g. museum personnel, team leaders)
Others	Game development companies, other digital heritage organizations
	Principle investigators, post-doctoral researchers, research assistants with an interest on game technologies, SGs design, and evaluation results
	Game testers play the games to discover bugs, missing functionalities, study future characteristics
Theme	
History	Various themes related to history and archaeology
Natural sciences	Study of various natural phenomena, chemistry and physics, astronomy, earth science, biology, etc.
Art	Modern art, renaissance, ancient art, etc.
Miscellaneous	Various other topics (e.g. wax sculptures museums) and some new kinds of museums like the videogame museums

The proposed model offered a set of reference and administrative metadata to be used in description, reference, categorization and analysis of SG characteristics which were designed for digital heritage and museum settings. This model can also be used to estimate the level of similarity and difference between two SGs and this is included in the future plans of this study.

References

1. MOMA (2012) Collection of videogames. Museum of Modern Art, New York. https://tinyurl.com/bt3z7wp
2. Niantic (2016) PokemonGo. https://www.pokemongo.com
3. teamLab (2016) Story of the forest. National Museum of Singapore
4. Meanderthal mobile application. Smithsonian Institute. http://www.si.edu/object/SCLDA_1020
5. Rae J, Edwards L (2016) Virtual reality at the British Museum: what is the value of virtual reality environments for learning by children and young people, schools, and families? In: Museums and the Web 2016 (MW2016)
6. Nintendo (2013) Nintendo 3DS guide. louvreguide.nintendo.com
7. Gaitatges A, Christopoulos D, Papaioannou G (2005) Virtual reality systems and applications: the ancient Olympic games. In: Bozanis P, Houstis EN (eds) PCI 2005. LNCS 3746, pp 155–165
8. Vosinakis S, Koutsabasis P, Makris D, Sagia E (2016) A kinesthetic approach to digital heritage using leap motion: the Cycladic sculpture application. In: VS-GAMES 2016

9. Horn MS, Leong ZA, Block F et al (2012) Of bats and APEs: an interactive tabletop game for natural history museums. In: CHI 2012, pp 2059–2068
10. Pietroni E, Ray C, Rufa C et al (2012) Natural interaction in VR environments for cultural heritage and its impact inside museums: the Etruscanning project. In: Proceedings of the 18th international conference on virtual systems and multimedia (VSMM), pp 339–346
11. Debevec P (2005) Making the Parthenon. In: Proceedings of the 6th international symposium on virtual reality, archaeology, and cultural heritage, p 4
12. Solomon E (1984) Games programming. Cambridge University Press, Cambridge
13. Anderson EF, McLoughlin L, Liarokapis F et al (2010) Developing serious games for cultural heritage: a state-of-the-art review. Virtual Real 14(4):255–275
14. Antoniou A, Lepouras G (2010) Modeling visitors' profiles: a study to investigate adaptation aspects for museum learning technologies. ACM J Comput Cult Herit 3(2):article 7
15. Prensky M (2001) Digital game-based learning. McGraw-Hill, New York
16. Hendrix M, Protopsaltis A, Rolland C et al (2012) Defining a metadata schema for serious games as learning objects. In: Proceedings of the 4th international conference on mobile, hybrid, and on-line learning (eL&mL), pp 14–19
17. Paliokas I, Sylaiou S (2016) The use of serious games in museum visits and exhibitions: a systematic mapping study. In: Proceedings of the 8th international conference on games and virtual worlds for serious applications (VS-Games). https://doi.org/10.1109/VS-GAMES.2016.7590371
18. Laamarti F, Eid M, El Saddik A (2014) An overview of serious games. Int J Comput Games Technol 358152. https://doi.org/10.1155/2014/358152
19. Djaouti D, Alvarez J, Jessel JP (2016) Classifying serious games: the G/P/S model. In: Handbook of research on improving learning and motivation through educational games: multidisciplinary approaches. https://doi.org/10.4018/978-1-60960-495-0.ch006
20. Neamtu C, Comes R, Matescu R et al (2012) Using virtual reality to teach history. In: Proceedings of the 7th international conference on virtual learning, pp 303–311
21. Wojciechowski R, Walczak K, White M, Cellary W (2004) Building virtual and augmented reality museum exhibitions. In: Proceedings of the 9th international conference on 3D Web technology, pp 135–144
22. Xu F, Buhalis D, Weber J (2016) Serious games and the gamification of tourism. Tour Manag 60:244–256
23. Döpker A, Brockmann T, Stieglitz S (2013) Use cases for gamification in virtual museums. In: Proceedings of the Jahrestagung der Gesellschaft für Informatik 2013, pp 2308–2321

Augmented Reality: The Proposed Moderating Role of Hedonic and Utilitarian Motivations on the Intention to Visit a Destination

Nergis Aziz and Barry A. Friedman

Abstract Augmented Reality (AR) is a nascent technology in the tourism sector, and little is known about its impact on tourists' intention to visit a destination. The main goals of this research are to first determine the extent that utilitarian and hedonic motives drive consumers to use AR on their smartphones, and second to determine whether AR users' motives influence their attitudes towards a destination and intention to visit a destination. We offer a conceptual model using the Theory of Planned Behavior and propose a study to ascertain the moderating role of hedonic and utilitarian motives on individuals' intention to visit a destination. Implications for the use of AR in the hospitality and tourism industry are discussed.

Keywords Augmented reality · Motivation · Theory of planned behavior

1 Introduction

E-tourism in the future will be focused on consumer-centric technologies. To remain competitive, organizations therefore must embrace Information Technology (IT) that personalize consumer experiences according to preferences, language skills, and depth of information [1]. IT and tourism should be linked because their application influences tourists' experiences and behaviors [2].

Digital technology plays an important competitive role in destination marketing, as website integration, mobile devices, social media networks and augmented reality are used by destinations and attractions [3]. Augmented reality is a system "(. . .) that supplements the real world with virtual (computer-generated) objects that appear to coexist in the same space as the real world" [4, p. 34]. Today, AR technology is

N. Aziz (✉)
Narxoz University, Almaty, Kazakhstan
e-mail: nergis.aziz@narxoz.kz

B. A. Friedman
State University of New York at Oswego, Oswego, NY, USA

utilized in the sports, games and training, tourism, medicine, education; and marketing [5], in heritage tourism [6], retailing [7], and entertainment [8]. For example, well-known retailer Ikea developed an AR application "Ikea Place" which allows customers to experience and experiment with furniture from the retailer before purchase. In tourism, AR applications provide traveler guidance in a wide variety of venues, including directions, holiday destination selection, attractions to be visited and sightseeing. AR technology appeals to customers and improves commitment [9] and enhances visitor experiences [10]. The next generation mobile will be equipped with AR applications, making their use more widespread [11]. The global augmented reality market is expected to grow significantly to about 90 billion US dollars by 2020 [12].

Destination managers use AR to improve experience of tourists. AR applications are used not only on open historical areas but at the same time in the historical buildings and objects. Visitors to historical sites such as Pompeii (Italy), the Acropolis at Athens (Greece), The Black Church in Romania, La Lonja (The Silk Exchange) buildings—a masterpiece of late Gothic architecture (Valencia, Spain), "Time traveler" in Berlin (Germany) could watch the past come to life thanks to augmented reality [13], Ephesus (İzmir, Turkey) as well as museums. For example, Sakıp Sabancı Museum, Maritime Museum, Bursa Tofaş Clock Museum, Topkapı Palace, Carpet Museum, SEKA Paper Museum, Burdur Kavaklı Greek Church Nature Museum and Hatay Archeology Museum are among the museums that use AG application in Turkey [14].

Using AR in the tourism marketing will enhance tourist satisfaction based on the assumption that tourists will actively accept and use AR [15]. Therefore, it is crucial to investigate the effects of AR on consumer behavior. However, this is a nascent area and research has yet to thoroughly examine this potential. Previous studies on AR in the tourism context have examined the problems and opportunities of AR adoption for tourism needs [16], usage of AR in heritage tourism [6] and science festivals [17], tourists' readiness and acceptance of AR technology [18] and attitude and behavioral intention about AR adoption [19].

This research aims is to determine what motivates consumers to use AR applications on their smartphones (utilitarian and hedonic motivations), to investigate the relationships among consumer demographics, motivation and AR use, to examine how these motivation variables to use AR influence visitors' attitudes towards a destination and examine the moderating role of hedonic and utilitarian motivations on the relationship between attitudes towards a destination and intention to visit a destination again in the future.

Particularly, the present research aims to address the following research questions:

1. Are visitors' AR experiences hedonic or utilitarian?
2. What are the relationships among motivational variables and visitor demographics?
3. How do these motivation variables to use AR influence visitors' attitudes towards a destination and intention to visit it in the future?

4. What is the moderating role of hedonic and utilitarian motivation variables to use AR between attitudes towards a destination and intention to visit this destination?

To address these research questions, we first provide a theoretical background and offer the Theory of Planned Behavior (TPB) as a conceptual model to better understand how and why an augmented reality can add value in tourism. Four propositions and a conceptual model are developed and presented. Conclusions and implications are then provided.

2 Theoretical Background

2.1 Augmented Reality

AR is the digital overlay of information into users' direct surroundings using devices such as smartphones or wearable smart glasses [19]. Furthermore, "AR differs from other interactive technologies in its so-called augmentation, arguably its defining characteristic, which refers to its ability to overlay physical environments with virtual elements" [20]. Basically, AR is the technology that integrates virtual 3D images and the real world, allowing users to involve themselves in the real world and simultaneously interact with virtual objects, blurring the boundary between real and virtual, achieving complete immersion for the user [21]. Academic research on augmented reality provided important insights into consumers' user experience of augmented reality applications. Destinations can obtain a great advantage and attract new markets via effective AR implementation [22]. Studies state that AR provides an opportunity to enhance the information about destinations and create memorable experiences for visitors [19, 23]. Furthermore, previous research has investigated its AR technology adoption in cultural heritage tourism [18].

2.2 Theory of Planned Behavior

We propose the TPB as a conceptual framework within which to better understand the moderating role of hedonistic and utilitarian motives on tourists' intention to visit a destination. According to TPB, [24] "an individual's behavior is largely dependent on his or her intention to perform a behavior, which in turn, is affected by the individual's attitudes towards the behavior, subjective norms he or she believes significant others have concerning the behavior, his or her perception of whether the behavior can be performed [25, p. 225]. More recently, ecotourism has increased as tourists place more emphasis on environmental sustainability and green marketing. Ecotourism refers to tourists' desire to visit underdeveloped nations to appreciate diverse culture, ecology and nature. The TPB has been useful in understanding tourists' intention to visit such destinations [26].

2.3   Attitudes

Research has shown that attitudes towards places could be modified efficiently by AR applications that refer to a place's multicultural past [27]. Moreover, location-based AR games and applications were found useful in educating players about places and tourism, such as by increasing visitors' explorations of a given place [28, 29].

2.4   Behavioral Intentions

Travelers form positive or negative attitudes toward AR when they use AR at heritage sites or destinations. Thereafter, tourists' attitudes toward AR will lead to formation of heritage destination images through AR. A destination image will influence a tourist's intention to travel [30]. Likewise, Technology Readiness, visual appeal, and facilitating conditions significantly influenced intention to use AR and intention to visit a heritage site through the beliefs, attitude toward AR, intention to use AR, and intention to visit a heritage site [6].

2.5   Hedonic and Utilitarian Motives as Moderating Variables

Consumption is driven by hedonic or utilitarian motives, and products often are categorized accordingly as primarily hedonic or primarily utilitarian [31]. While hedonic motivations are concerned with fun, playfulness, enjoyment, and entertainment experiences, utilitarian motivations are goal-oriented rational behavior [32, 33]. Previous studies have investigated the correlation between hedonic and utilitarian motivations and different variables, such as satisfaction and brand love [34], e-service quality [35], mobile user engagement intention [36], consumer participation behavior brand involvement [37], consumer-brand interaction and behavioral intention in the context of luxury brand related activities on social media [38]. The recent research has rarely delved deeply into the relationship between motivation and attitudes for AR applications usage. Study investigated consumers' use of AR shopping apps in real-life conditions confirmed laboratory studies [39, 40] in finding that consumers value AR apps for a combination of utilitarian and hedonic reasons. Though, utilitarian benefits were found to be most important for consumers. However, previous research propose that consumer AR experiences might be more hedonic than utilitarian AR represent a potential hedonic medium although evoking feelings of pleasure [41] and enjoyment and a sensation of presence [42]. But, these assumptions need to be tested empirically in future studies [20]. Visitors may be interested in AR applications based on their hedonic and utilitarian motivation. Information and creative interaction provided by AR

applications can meet their needs. Hedonic and utilitarian motivations for using AR may influence the user's attitude towards a destination because hedonic value is strongly related to positive electronic word-of-mouth, repatronage anticipation, and loyalty [43]. Thus, AR users driven by hedonic motives might show positive attitudes towards a destination and increase the behavioral intention towards a destination. This study proposes that hedonic and utilitarian motives both motivate visitors to use AR applications. Information and fun lead to enhanced experience that visitors get as a result of AR use. Therefore, the attitude towards a destination is positively influenced by hedonic and utilitarian motives. These motives also play moderating role on the intention to visit a destination again.

3 Conceptual Model and Research Propositions

This study aims to facilitate future research effort therefore propositions are listed below. The conceptual model presented here was developed based on Ajzen's Theory of Planned Behavior. Figure 1 contains a conceptual model that illustrates moderating role of hedonic and utilitarian motivations on attitudes and intention to visit a place. This study explores the relationship between motivations to use AR and attitudes towards a destination while controlling for the effects of the demographic variables such as age, gender, education, and income. Demographics might influence attitudes towards a destination. The model aims to explain the impact of hedonic and utilitarian motives on attitudes towards a destination, the impact of attitudes on the behavioral intention to visit a destination and understand the moderating role of utilitarian and hedonic motivations on behavioral intention to visit a destination again in the future.

The propositions that are suggested as followings:

Proposition 1: There is a positive relationship between hedonic motives and attitudes towards a destination. **Proposition 2**: There is a positive relationship between utilitarian motives and attitudes towards a destination. **Proposition 3**: The
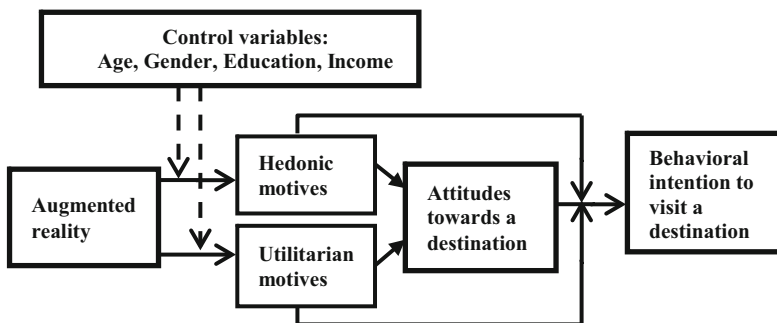
Fig. 1 The moderating role of hedonic and utilitarian motivations on attitudes and intention to visit a destination

relationship between attitudes towards a destination and behavioral intention to visit a destination is positively moderated by hedonic motives. **Proposition 4**: The relationship between attitudes towards a destination and behavioral intention to visit a destination is positively moderated by utilitarian motives.

3.1 Control Variables

AR is an example of modern technology that can tremendously help cities because information can be organized and transferred in layers or upon request. Thus, that information can be targeted according to demographics of individuals. So, visits can be personalized via mobile AR applications according to visitors' desires and expectations, resulting in a much more remarkable experience [44]. Therefore, the specific demographic variables considered in the present study were selected. We investigate four variables: age, gender, education, and income.

4 Conclusion

Fierce competition forces destinations to find innovative ways to attract visitors. Therefore, it is important to understand visitors' demographics and their motives to use AR and how these variables influence visitors' attitudes towards a destination and behavioral intention to visit this destination in the future. The purpose of this study was to determine what motivates consumers to use AR on their smartphones. This study proposed the conceptual model based on Ajzen's Theory of Planned Behavior by integrating AR users' motivations, attitudes and behavioral intention. Utilitarian motives focus on the idea that visitor will get needed information about a place or object quickly and effectively. Therefore, visitors would prefer to use AR applications on their smartphones in order to reach needed information. Such applications are undoubtedly providing easier access to information from the utilitarian perspective such as getting information sought as soon as possible and in a personal way. Therefore, utilitarian motives of AR users will be positively related to attitudes towards a destination. Hedonic motives focus on the idea that visitor will have a fun and joy while visiting a place and objects. Therefore, visitors would prefer to use AR applications on their smartphones primarily to have a fun and joy which will lead to obtaining a remarkable experience. Therefore, hedonic motives of AR users will be positively related to attitudes towards a destination. Positive attitudes towards a destination will be positively related to visitor's intention to visit this destination again in the future.

5   Managerial Implications

"Destinations fail to design and deliver tourist experiences from the tourist's perspective, but sell the tourist products supplied. It is difficult for those destinations to obtain sustainable competitiveness and development capability in the fierce tourism marketplace" [45]. This study underlines the importance of the role AR in tourism industry. Destinations managers should know whether AR applications influence visitors' attitudes towards a destination and encourage them to visit it again in the future. Based on information, they should develop comprehensive destination branding strategies that include, among other elements, social media [46–48]. AR and conventional methods in order to gain a competitive advantage through enhancing and personalizing visitors' experiences. As part of a total branding strategy, AR may be an effective tool for destinations in their efforts to differentiate themselves from others and add value to their overall image.

References

1. Buhalis D, O'Connor P (2005) Information communication technology revolutionizing tourism. Tour Recreat Res 30:7–16. https://doi.org/10.1080/02508281.2005.11081482
2. Law R, Leung R, Buhalis D (2009) Information technology applications in hospitality and tourism: a review of publications from 2005 to 2007. J Travel Tour Mark 26(5–6):599–623. https://doi.org/10.1080/10548400903163160
3. Lagiewski R, Kesgin M (2017) Designing and implementing digital visitor experiences in New York State: the case of the Finger Lakes Interactive Play (FLIP) Project. J Destin Mark Manag 6:118–126. https://doi.org/10.1016/j.jdmm.2017.03.005
4. Azuma R, Baillot Y, Behringer R, Feiner S, Julier S, MacIntyre B (2001) Recent advances in augmented reality. IEEE Comput Graph Appl 21(6):34–47. https://doi.org/10.1109/38.963459
5. Adhani NI, Rambli DRA (2012) A survey of mobile augmented reality applications. In: 1st International conference on future trends in computing and communication technologies, pp 89–96
6. Chung N, Han H, Joun Y (2015) Tourists' intention to visit a destination: the role of augmented reality (AR) application for a heritage site. Comput Hum Behav 50:588–599. https://doi.org/10.1016/j.chh.2015.02.068
7. Rese A, Baier D, Geyer-Schulz A, Schreiber S (2017) How augmented reality apps are accepted by consumers: a comparative analysis using scales and opinions. Technol Forecast Soc Chang 124:306–319. https://doi.org/10.1016/j.techfore.2016.10.010
8. Rauschnabel PA, Rossmann A, tom Dieck MC (2017) An adoption framework for mobile augmented reality games: the case of Pokémon Go. Comput Hum Behav 76:276–286. https://doi.org/10.1016/j.chb.2017.07.030
9. Höllerer TH, Feiner SK (2004) Mobile augmented reality. In: Karimi H, Hammad A (eds) Telegeoinformatics: location-based computing and services. Taylor & Francis Books, London
10. Moorhouse N, tom Dieck MC, Jung T (2017) Augmented reality to enhance the learning experience in cultural heritage tourism: an experiential learning cycle perspective. eRev Tour Res 8:1–5
11. Turizmciler AR ve VR'den nasıl yararlanmalı? https://www.turizmajansi.com/haber/turizmciler-ar-ve-vr-den-nasil-yararlanmali-h19447

12. Augmented reality (AR) – statistics & facts. https://www.statista.com/topics/3286/augmented-reality-ar/. Accessed 8 July 2018

13. Akkuş G, Akkuş Ç (2018) Tarihi Turistik Alanlarda Kullanılan Mobil Artırılmış Gerçeklik Uygulamalarının Değerlendirilmesi (Evaluation of the mobile augmented reality applications used in historical tourist attractions). J Tour Gastron Stud 6(1):83–104

14. Sertalp E (2016) Artırılmış gerçeklik (AG) uygulamalarının turizm alanında kullanımı. 21. Türkiye'de İnternet Konferansı. TED Üniversitesi, Ankara, pp 1–7

15. Yovcheva Z, Buhalis D, Gatzidis C (2013) Engineering augmented tourism experiences. Springer, Berlin, pp 24–35

16. Kounavis CD, Kasimati AE, Zamani ED (2012) Enhancing the tourism experience through mobile augmented reality: challenges and prospects. Int J Eng Bus Manag 4:10

17. tom Dieck MC, Jung HY, Rauschnabel PA (2018) Determining visitor engagement through augmented reality at science festivals: an experience economy perspective. Comput Hum Behav 82:44–53

18. Jung T, Lee H, Chung N, tom Dieck C (2018) Cross-cultural differences in adopting mobile augmented reality at cultural heritage tourism sites. Int J Contemp Hosp Manag 30:1621–1645. http://www.emeraldinsight.com/loi/ijchm

19. Jung T, Chung N, Leue MC (2015) The determinants of recommendations to use augmented reality technologies: the case of a Korean theme park. Tour Manag 49:75–86. https://doi.org/10.1016/j.tourman.2015.02.013

20. Javornik A (2016) Augmented reality: research agenda for studying the impact of its media characteristics on consumer behaviour. J Retail Consum Serv 30:252–261. https://doi.org/10.1016/j.jretconser.2016.02.004

21. Lin H-F, Chen C-H (2015) Design and application of augmented reality query-answering system in mobile phone information navigation. Expert Syst Appl 42(2):810–820. https://doi.org/10.1016/j.eswa.2014.07.050

22. Tscheu F, Buhalis D (2016) Augmented reality at cultural heritage site. In: Inversini A, Schegg R (eds) Information and communication technologies. Springer, Heidelberg, pp 607–619. https://doi.org/10.1007/978-3-319-28231-2_44

23. tom Dieck MC, Fountoulaki P, Jung TH (2018) Tourism distribution channels in European Island destinations. Int J Contemp Hosp Manag 30:326–342. https://doi.org/10.1108/IJCHM-12-2016-0649

24. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50:179–211

25. Gordon JW, Kerry SC, Deng J (2006) Ethnicity, gender, and the theory of planned behavior: the case of playing the lottery. J Leis Res 38:224–248

26. Lee TH, Fen-Hauh J (2018) Ecotourism behavior of nature-based tourists: an integrative framework. J Travel Res 57(6):792–810. https://doi.org/10.1177/0047287517717350

27. Oleksy T, Wnuk A (2016) Augmented places: an impact of embodied historical experience on attitudes towards places. Comput Hum Behav 57:11–16

28. Ardito C, Sintoris C, Raptis D, Yiannoutsou N, Avouris N, Costabile MF (2010) Design guidelines for location-based mobile games for learning. In: International conference on social applications for lifelong learning, pp 96–100

29. Ballagas R, Kuntze A, Walz SP (2008) Gaming tourism: lessons from evaluating rexplorer, a pervasive game for tourists. In: International conference on pervasive computing. Springer, Berlin, pp 244–261

30. Nadeau J, Heslop L, O'Reilly N, Luk P (2008) Destination in a country image context. Ann Tour Res 35:84–106. https://doi.org/10.1016/j.annals.2007.06.012

31. Hirschman EC, Holbrook MB (1982) Hedonic consumption: emerging concepts, methods and propositions. J Mark 46:92–101

32. Babin BJ, Darden WR, Griffin M (1994) Work and/or fun: measuring hedonic and utilitarian shopping value. J Consum Res 20:644–656

33. Batra R, Ahtola OT (1991) Measuring the hedonic and utilitarian sources of consumer attitudes. Mark Lett 2:159–170

34. Hsua C-L, Chen M-C (2018) How gamification marketing activities motivate desirable con-sumer behaviors: focusing on the role of brand love. Comput Hum Behav 88:121–133. https://doi.org/10.1016/j.chb.2017.03.066

35. Mouakket S, Al-hawari MA (2012) Examining the antecedents of e-loyalty intention in an online reservation environment. J High Technol Manag Res 23:46–57

36. Hoon Kim Y, Kim DJ, Wachter K (2013) A study of mobile user engagement (MoEN): engagement motivations, perceived value, satisfaction, and continued engagement intention. Decis Support Syst 56:361–370. https://doi.org/10.1016/j.dss.2013.07.002

37. Liang X, Yang Y (2018) An experimental study of Chinese tourists using a company-hosted WeChat official account. Electron Commer Res Appl 27:83–89. https://doi.org/10.1016/j.elerap.2017.12.007

38. Martín-Consuegraa D, Díaza E, Gómezb M, Molinab A (2018) Examining consumer luxury brand-related behavior intentions in a social media context: the moderating role of hedonic and utilitarian motivations. Physiol Behav. https://doi.org/10.1016/j.physbeh.2018.03.028

39. Hilken T, de Ruyter K, Chylinski M, Mahr D, Keeling DI (2017) Augmenting the eye of the beholder: exploring the strategic potential of augmented reality to enhance online service experiences. J Acad Mark Sci 45(6):884–905. https://doi.org/10.1007/s11747-017-0541-x

40. Yim MYC, Chu SC, Sauer PL (2017) Is augmented reality technology an effective tool for e-commerce? An interactivity and vividness perspective. J Interact Mark 39:89–103. https://doi.org/10.1016/j.intmar.2017.04.001

41. Kourouthanassis P, Boletsis C, Bardaki C, Chasanidou D (2015) Tourists responses to mobile augmented reality travel guides: the role of emotions on adoption behavior. Pervasive Mob Comput 18:71–87

42. Lin A, Gregor S, Ewing M (2008) Developing a scale to measure the enjoyment of web experiences. J Interact Mark 22(4):40–57

43. Jones MA, Reynolds KE, Arnold MJ (2006) Hedonic and utilitarian shopping value: investi-gating differential effects on retail outcomes. J Bus Res 59(9):974–981. https://doi.org/10.1016/j.jbusres.2006.03.006

44. Sparacino F (2002) The museum wearable: real-time sensor-driven understanding of visitors' interests for personalized visually-augmented museum experiences. Paper presented at the Museums and the Web 2002: Selected Papers from an international conference, Pittsburgh

45. Zhang H, Wub Y, Buhalis D (2018) A model of perceived image, memorable tourism experiences and revisit intention. J Destin Mark Manag 8:326–336. https://doi.org/10.1016/j.jdmm.2017.06.004

46. Jung TH, Dieck MCT, Chung N (2018) Determinants of hotel social media continued usage. Int J Contemp Hosp Manag 30:1152–1171. https://doi.org/10.1108/IJCHM-02-2017-0068

47. Kavoura A, Stavrianeas A (2015) The importance of social media on holiday visitors' choices – the case of Athens, Greece. EuroMed J Bus 10:360–374. https://doi.org/10.1108/EMJB-03-2015-0016

48. Dieck MCT, Jung TH, Kim WG, Moon Y (2017) Hotel guests' social media acceptance in luxury hotels. Int J Contemp Hosp Manag 29:530–550. https://doi.org/10.1108/IJCHM-10-2015-0552

Crisis Management Within the Hotel Industry: The Case of Luxury Hotels and Resorts in Popular Greek Tourism Destinations

Foteini Giannopoulou

Abstract This study examines the crisis management concept within the hotel industry. Hotel industry seems to be reluctant in applying crisis management strategies and consider crisis management as an essential element of their overall strategy to provide a safe and secure environment both for guests and employees, differentiate themselves and be able to recover quickly if a crisis occurs. This survey was conducted in some of the most popular Greek Tourism destinations and the sample was consisted of executives from government and independent agencies and managers of luxury hotels and resorts. A multiple case study model was used in tandem with a thorough analysis of the relevant literature review. For this study, semi structured interviews were employed. The findings indicated that crisis management concept either is absent when it refers to privately-owned hotels or the minimum crisis management techniques are used but, on the contrast, hotels that operate under the umbrella of groups have a complete crisis management framework. Suggestions for future research based on the specific conceptual framework are presented. Additionally, useful information and recommendations on how to use crisis management as a management are provided.

Keywords Crisis management · Hotel industry · Crisis framework

1 Introduction

It is evidence, that organisations, globally, are crisis prone and operate within a complex environment that affects their functionality. The last two decades the global tourism industry has experienced many crises and disasters [1]. For this reason, the global community seeks to investigate and develop more effective frameworks and strategies for managing emergencies related to crises and disasters.

F. Giannopoulou (✉)
Athens, Greece
e-mail: fg@iris-consulting.eu

2 Literature Review and Research Model

2.1 Definition of Crisis and Disaster

Crisis and disasters are two complex terms and have been categorized into: intentional crises and unintentional crises [2]. "The word crisis has its origins to the Greek word "krisis" and means differentiation or decision" [3]. In the contrast, according to McCool [4] a disaster can be described as a sudden natural or man induced hazard that causes considerable losses or damages in life and property. Disasters affect the whole chain and a systematic approach by all stakeholders is needed to acquire normality and recovery [5].

2.2 Crisis and Disaster Management in Tourism

The "crisis in tourism" is not a new phenomenon [6], but as tourism is growing, globally, crises and disasters became more frequent, larger on scale with negative impacts. The management of crises and disasters is crucial as it is important to apply practices that will diminish the impacts and ameliorate the recovery period both for the organisations and the destinations. Crisis management is either proactive or reactive [4]. Hotels are special organisations that operate 24 h a day and 7 days per week. Furthermore, their existence is depending both on guests and employees and therefore, hotels are very susceptible to changes, crises and disasters that might occur without any warning signals [7].

3 Crisis Management Within a Framework

The literature in crisis management provides the researchers with a wide variety of frameworks to assist them to understand the complex environment of tourism. For this study, is adopted the framework of Crantall [8] that examines the internal and external landscape of an organization and provide useful insights on how this information should be used by the organisations to be able to cope with unforeseen events. A SWOT analysis helps monitoring the external and internal landscape of an organization, provide a general environmental scanning and valuable information is extracted about the current trends or developments that might threaten an organization [9]. The first part of the framework examines the internal environment of the organization, while the second part focuses on events evolve out of the limits of the organization and is called external landscape.

Landscape Survey The identification of the weakness and the strengths of an organization enables managers to design their strategies and be prepared for uncertainty. Some organizations are keen and show great enthusiasm to prepare for crisis

events while some others are crisis prone [10]. Furthermore, organisational culture can be considered as a key aspect in prevention or reduction of likely risks into crises and disasters. Kulatunga [11] proposed that to ameliorate resilience, it is necessary for the organisations to proceed in cultural change to form a "risk culture". The tendency to prepare for crisis is, also, a result of the ethics of an organisation as well as of the safety policies applied within the organization.

While examining the external landscape, the industry vulnerability is a determination on what type of crises an organization may have to confront. Safety and security issues might be potential crises generators [12]. Globalization is a factor that may cause damages or expenses to the major stakeholders as it may create a boring image with no authenticity [13]. Technology and innovation have a positive impact on tourism industry while offer new opportunities for development.

Strategic Planning   Crisis management is interrelated to technical and operational planning. According to Crandall [8] the internal landscape of an organization relies on the formation of crisis teams. Ritchie [14] suggested that crisis teams should consist of all the stakeholders that are affected in a potential crisis. The development of worst-case scenarios is the mechanism that allows all the parties involved to validate their exercise objectives using their own decision making while reproducing crisis characteristics as a surprise [15]. Training should have a holistic approach aiming to provide information about the readiness of an organisation to cope with an inevitable event [16]. Crisis planning assists the organisations to be crisis prepared and might be proactive or reactive [4].

Strategic planning, while referring in external landscape consists of the all the stakeholders with vested interest [17] and their activities to prevent or to confront a crisis. Governmental regulations and legislations and independent agencies, typically, assist the industries to prevent future crisis incidents. Another important factor that should be taken in consideration is the current trends of the industry. Media have addressed to play a fundamental role in crisis management and all the actions taken should be approved by the primary stakeholders. Good relations with the media may assist the recovery from a crisis.

Crisis Management   There is an increase of pressure to the organisations both from their external and internal environment that make crisis management a necessity [18]. From the perspective of the internal landscape, an organization focuses on the actions taken to return to operational status and to manage the primary stakeholders. Primary stakeholders should be involved in the management of crises, by being made aware of the situation, the decisions that are made by the crisis team and the message that is shared to the public through the media [19]. Referring to the external landscape, the reactions of the secondary stakeholders are examined. Secondary stakeholders include consumers, suppliers, competitors, the local community, governments and regulators, nonprofit organizations and the environment [17]. It can, also, include negative media coverage, public negative opinion and web-based threats [8].

Organisational Learning After the ending of a crisis an organisation to prevent similar future crises should be able to learn from the crisis, already, occurred and be able to revise its strategies and not make the same mistakes [20]. Boukas [21] illustrated the lack of learning within the tourism organisations. Drupsteen [20] concluded that there is insufficient learning within the organisations. An effective strategic crisis management plan may strive to organization renewal, stability, and growth after a crisis is terminated [22]. In the external landscape, it is observed that organizations after a crisis reevaluate and revise their crisis management strategies. Government and the related agencies, often, apply new regulations to protect the industry from similar future crises and increase safety. Furthermore, the secondary stakeholders become more aware and may change their perceptions after a crisis incident.

The main purpose of this study was to provide a thorough analysis for crisis management within the organizations and more specifically in Greek luxury hotels in popular destinations along the Greek territory. In addition to this, it was examined how specific approaches can be effective and reduce business discontinuance in hotels to improve guests' safety perception. In this paper a multiple case study design was chosen.

4   Methodology

Ten five-star hotels and resorts in popular Greek destinations along with the governmental approach regarding tourism sector are examined in order the ensuing data to provide greater value to the findings. To fully comprehend the phenomenon of crisis management, vital piece of information was obtained through semi structured interviews and organisational documents. The target population of this research are managers/owners of the hotels as well as high level executives from governmental authorities related to tourism. In this study the sampling frame derived through research to several reliable directories regarding the popular destinations in Greece. Ten hotel managers and three high level governmental and regulatory executives agreed to participate. Six of the hotels belong to group or chains that operate in several destinations all over Greece, while the rest are privately-owned. Hotels that were examined are in Athens, Kos, Rhodes, Crete, Zante, Skiathos, Santorini and Mykonos. All the participants had the knowledge and were involved in crisis management practices within their organisations. The length of the interviews varies from 30 to 40 min. Semi structured interviews took place from 01/09/2018 to 30/09/2018 and all the participants had the chance to elaborate and study the open-ended questions before the interview. Interviews were conducted via telephone under the same protocol. Moreover, all participants informed that their anonymity will be protected.

5 Findings and Discussion

The empirical findings of this study unveiled that nine of the ten hotels that were examined operate within a crisis management concept. More analytically, the chain hotels, where the guidelines are provided by the heavy names of the global tourism industry, are well prepared to cope with a crisis or disaster. While on the other hand the medium enterprises privately owned, either do not have any crisis management plans or plans are limited to follow the safety and security standards imposed by the Greek authorities. Consisted with Rittichainuwat [23] the large lodging organisations have highly developed crisis-management plans, while on the contrary the managers of small businesses have the tendency to believe that crisis management is not important and respond to crises when occur. These findings, no matter referring to a privately-owned hotel or a chain hotel plead for industry-wide standards which ensure safety and security for employees, guests and all other stakeholders. The analysis of the findings is based on the framework applied to examine the internal and the external landscape of luxury hotels and resorts in popular Greek tourism destinations and here below are presented analytically the elements that were identified.

Landscape Survey All the participants agreed that by identifying the strengths and the weaknesses of an organization, they can design their strategic plans and be prepared to cope with internal and external crises. The chain hotels had an enthusiastic approach regarding crisis management and were keen to apply the needed actions in all levels of their entities. However, one manager of a privately-owned hotel underlined the importance of crisis management and because their hotel started to operate last summer they, seriously, think to design a crisis management strategy the new season. The organizational culture of a company plays integral role and the big lodging companies focus on shaping the employee's behavior and improve the overall performance of their organization. The interviewees of the chain hotels agreed that they encourage the collaboration, knowledge sharing and working on teams to improve their services and the safety perceptions regarding their property. Referring to the external environment, all the participants highlighted the outdoor threats that the hotels must face and that are crisis generators. The vulnerability of the industry combined with the political instability in Greece created several problems to the hoteliers. The major difficulty was the financial issues that affected dramatically their operational part and forced them to adjust their strategies to meet the new requirements. Furthermore, the rapid developments on technology are used by the hoteliers as a tool to be crisis prepared and to improve their safety.

Strategic Planning The rapid changes in the hospitality sector make a necessity for the organisations to practice strategic planning and crisis management together to be prepared to act in future crisis events effectively. All respondents from the hotels, concluded that the formation of crisis teams is of the utmost importance. Seven of the ten participants underlined the significance of the development of the worst-case scenarios, the training of the employees, drills and exercises that took place within

their properties yearly. Zech [16] proposed that trainings need to be conducted on a regular basis and that all the stakeholders should participate. Training may be directed by the official authorities in cooperation with the hoteliers and the issuance of certificate of participation may be an additional motivation. Examining the external landscape focus is made on the governmental safety and security regulations that every hotel should follow to be licensed. The big hotel chains operate within another framework as they should follow not, only, the Greek law but, also, the law of the country that the hotel chain belongs. It is argued that English law is stricter, and as the executive from the Hoteliers Union explained, the union plans to invite high executives from abroad to design an integrated crisis management model that hoteliers will be able to study and adapt to their property. Furthermore, there was unanimity regarding the role of media and the need to establish good relations and the way the message should be conveyed to the public to restore the image of a hotel and not affect the whole destination.

Crisis Management The findings of this study demonstrated that there is a gap in knowledge in what is crisis management. Privately owned hotels in Greek hospitality sector are medium size enterprises and crisis plans are costly and available sources are not enough to be allocated to design effective crisis management strategies. Thus, it seems that organisations are reactive rather than proactive, although in some cases there are plans. On the contrast, the chain hotels that were examined have developed integrated crisis-management plans and their teams are trained to act sufficiently. Collaboration and information sharing are two parameters that might provide solutions. Eight of the ten participants admitted that their hotels had experienced a worst crisis. Emphasis was given to the media coverage of the event to minimize the negative impacts and prevent damage of their reputation.

Organizational Learning All the respondents summarized that learning within an organization is an essential element of organizational performance and effectiveness. Knowledge and education on various contingency scenarios contribute to the cultivation of crisis management consciousness, while repetition enables the parties involved to act efficiently in case of a real occurrence. The results of this research disconfirmed the belief of Boukas [20] that there is lack of learning within the tourism organisations. Furthermore, it was identified that there is a gap on how organizational learning can lead to organizational renewal after a crisis incident. Governmental regulations and legislations seek to take advantage of the lodging industry rather than support the industry. Although, after major crises incidents such as natural disasters, new revised regulations because of the lessons learned are applied to prevent future crises.

6   Conclusions

In the era of globalisation crises have been a more frequent phenomenon, that threat to jeopardize the normalcy of an organisation and destroy its good reputation within a community [24]. The hospitality sector is one of the biggest industries growing rapidly [25, 26], but, is one of the most sensitive and vulnerable industries to crises. It is important to acknowledge that this paper confirmed the belief that crisis management is at primary stage in Greece and the majority of the hotels are not prepared efficiently to cope with an acute event. Although some efforts are done, the meaning of crisis management is not clear and most of the times the owner, the general manager or the operational manager are the ones that should deal with these issues. The findings unveiled that the hotels that are not privately-owned have an integrated crisis management concept that could be used in a crisis while some of the rest admitted that efforts are done and others that they consider crisis management only to follow the safety and security regulations imposed by the government and the independent agencies. The results of this study offered knew knowledge to the hotels' managers as it is giving an excellent opportunity to examine crisis management through another perspective and identify the best strategies and practices to confront future crisis events. The application of Crantall's [8] framework may be helpful for hoteliers not only to design a crisis management strategy but also, to be a basis to improve their services and differentiate themselves from their competitors. This study contributes to extant literature and practice, adding to the body of knowledge by providing a notion for further research related to the field of Crisis Management within the hospitality industry and more specifically in hotels. The research provides a new theoretical model based on a framework which outlines the process required to be followed by the hotels to be prepared to react effectively in crisis within the organization or at the broader environment. The limitations of this study are the limited resources (there was not enough time for data collection) and the negativity of the hotel managers to participate. The timing of the data collection coincided with the end of the touristic season in Greek hotels, where managers claimed that there was no time to participate. Moreover, using the specific framework but, using a sample of all types of hotels that is covering the entire country, may help to generalize the results. Accordingly, it was unveiled that crisis management frameworks can be employed in tourism field, but further research is needed. Crisis management is essential to retain the confidence of travelers and the tourism industry, and, also, to lessen the negative impacts of a crisis or a disaster on a destination. Similarly, hotels as single entities need to design their crisis management plans after scanning their external and internal environment to be ready to deal with a crisis and operate within a safe and secure environment both for their employees and guests.

References

1. Pan LS, Pan G, Leidner ED (2012) Crisis response information networks. J Assoc Inf Syst 13:31–56. https://doi.org/10.17705/1jais.00283
2. Ritchie BW (2009) Crisis and disaster management for tourism. View Publications, Bristol
3. Glaesser D (2006) Crisis management in the tourism industry. Elsevier, Oxford
4. McCool BN (2012) The need to be prepared: disaster management in the hospitality industry. J Bus Hotel Manag 1(2):1–5. https://doi.org/10.4172/2324-9129.1000101
5. Sawalha IHS, Jraisat LE, Al-Qudah KAM (2013) Crisis and disaster management in Jordanian hotels: practices and cultural considerations. Disaster Prev Manag 22(3):210–228. https://doi.org/10.1108/DPM-09-2012-0101
6. Speakman M, Sharpley R (2012) A chaos theory perspective on destination crisis management: evidence from Mexico. J Destin Mark Manag 1:67–77. https://doi.org/10.1016/j.jdmm.2012.05.003
7. Malhotra R, Venkatesh U (2009) Pre-crisis period planning: lessons for hospitality and tourism. Worldw Hosp Tour Themes 1(1):66–74. https://doi.org/10.1108/17554210910949896
8. Crantall RW, Parnell AJ, Spillan AJ (2014) Crisis management leading in the new strategy landscape, 2nd edn. Sage, Thousand Oaks
9. Chong JKS (2004) Six steps for better crisis management. J Bus Strateg 25(2):43–46. https://doi.org/10.1108/02756660410525407
10. Pearson C, Mitroff I (1993) From crisis prone to crisis prepared: a framework for crisis management. Acad Manag Exec 7(1):48–59. https://doi.org/10.5465/AME.1993.9409142058
11. Kulatunga U (2010) Impact of culture towards disaster risk reduction. Int J Strateg Prop Manag 14:304–313. https://doi.org/10.3846/ijsmp.2010.23
12. Tekin E (2015) The impacts of political and economic uncertainties on the tourism industry in Turkey. Mediterr J Soc Sci 6(2S5):265–272. https://doi.org/10.5901/mjss.2015.v6n2s5p265
13. Yu Y, Byun WH, Lee TJ (2014) Critical issues of globalisation in the international hotel industry. Curr Issue Tour 17(2):114–118. https://doi.org/10.1080/13683500.2012.761678
14. Ritchie BW (2004) Chaos, crises and disasters: a strategic approach to crisis management in the tourism industry. Tour Manag 25:669–683. https://doi.org/10.1016/j.tourman.2003.09.004
15. Limousin P, Tixier J, Bony-Dandrieux A, Chapurlat V, Sauvagnargues S (2016) A new method and tools to scenarios design for crisis management exercises. Chem Eng Trans 53:319–324. https://doi.org/10.3303/CET1653054
16. Zech N (2015) The role of stakeholder relationship management – crisis management processes within the hotel industry in a tourism context. Expert J Bus Manag 3(1):27–37
17. Maj J (2015) Diversity management's stakeholders and stakeholders management. In: Proceedings of the 9th international management conference "Management and innovation for competitive advantage", Bucharest, pp 780–793
18. Mcmullan C, Baum T (2011) Crisis management: towards a model of good practice for small to medium sized hotels. http://doras.dcu.ie/20913/1/Crisis_Management_in_Hotels.pdf
19. Ioannou A, Andrianopoulos A (2015) Essential steps for crisis management and crisis containment. http://www.acg.edu/ckeditor_assets/attachments/1568/essential_steps_for_crisis_management_and_crisis_containment.pdf. Accessed 11 Nov 2017
20. Drupsteen L, Guldenmund FW (2014) What is learning? A review of the safety literature to define learning from incidents, accidents and disasters. J Conting Crisis Manag 22(2):81–96. https://doi.org/10.1111/1468-5973.12039
21. Boukas N, Ziakas V (2014) A chaos theory perspective of destination crisis and sustainable tourism development in islands: the case of Cyprus. Tour Plan Dev 11(2):191–209. https://doi.org/10.1080/21568316.2013.864995
22. Taneja S, Mildred MA, Sewell S, Recuero AM (2014) Strategic crisis management: a basis for renewal and crisis prevention. J Manag Policy Pract 15(1):78–85
23. Rittichainuwat BN, Chakraborty G (2012) Perceptions of importance and what safety is enough. J Bus Res 65:42–50. https://doi.org/10.1016/j.jbusres.2011.07.013

24. Tănase DI (2012) Procedural and systematic crisis approach and crisis management. Theor Appl Econ 5:177–184
25. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. J Tour Res Rev Tour Sci 18:121–131
26. Siakalli M, Masouras A, Papademetriou C (2017) e-Marketing in the hotel industry: marketing mix strategies. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing, Springer proceedings in business and economics. Springer, Cham. https://doi.org/10.1007/978-3-319-33865-1_15

A Literature Review of Smartphone Geolocation Technologies

Theodoros Oikonomidis and Konstantinos Fouskas

Abstract The advent of Global Positioning System (GPS) has revolutionized the way modern businesses are working and dealing with their customers, existing or potential ones. Taking that into consideration the fact that all the modern digital electronic devices are coming along with GPS receiver, (e.g. smartphones, laptops or even digital cameras), we can understand the potential of utilizing location technologies. Indoor location systems are a part of the location technologies that can assist people on indoor environment-based map navigation. Hindering location data have been exchanged for a while even if people were not aware of it, but new legislation and rules that have arrived from commissions such as the European, forced them to disable the geolocation tagging by default on those apps. It seems though that there is lack of new research on new geolocation technologies where smartphones are involved such as Visible Light Communication (VLC) for indoor location purposes. There are also major updates given to new smartphones such as the availability of raw Global Navigation Satellite System (GNSS) data that have not been fully scientifically researched and utilized, on how they can have a positive effect on the improvement of location based-systems.

Keywords GPS · Indoor location systems · Geolocation data

1 Introduction

Academics have successfully published the technological advancements and innovations that have been implemented the past years regarding location-based services for smartphone applications. The private sector along with researchers have put huge effort on the improvement of location accuracy services for the shake of an overall better user experience over the years. The goal of this research is a holistic approach

T. Oikonomidis (✉) · K. Fouskas
University of Macedonia, Thessaloniki, Greece
e-mail: t.oikonomidis@uom.edu.gr

1085

of mapping all the aspects and affiliation of smartphone geolocation technologies on both people's activities and businesses implications. By exploring many different aspects of the geolocation used by smartphone technologies we can have a better picture of the social impact of recent geolocation technologies that are applied on smartphones.

2 Triangulation Techniques

2.1 Cellular Network Triangulation

Since the period of the ancient Greeks where geolocation was invented by making observations via taking measurements of the stars of the sky until today that this process has simplified, and the measurements are taken through the GPS antenna, their approximation is having the shape of a triangle and that's why this method is called triangulation. Even with the GPS antenna there is a small amount of false inside the measurements which means that the location shown on the GPS is inside a small triangle. The smaller this triangle is the higher the approximation of the taken GPS signal [1].

There are two specific kind of triangulations when it comes to a mobile phone. The first one is the network provider triangulation which is very difficult to establish. It usually needs a warrant from the authorities to be utilized by third parties, but the sim carrier providers are having them into their possession, which is a grey area whether they are utilizing them for promotion-based offers or not. GSM carriers are having the opportunity even when a phone is not on call to locate it between the area of three cell phone towers. On rural areas, this is easier to happen because of the high demand of the population regarding GSM signal. When it comes to urban areas this is a less effective method and makes it unusable because of the low accuracy of the estimated location. So, an overall the appropriate location estimation that can be achieved here is from hundreds of meters up to some kilometers [2].

2.2 GPS Antenna

The second kind of triangulation is the GPS based that has a better accuracy depending on the producer company and the mobile device that is being used. Most of the devices can offer around 4.9 m of approximation when it comes to location accuracy. There occurs a highly intense problem when a user tries to use GPS service via mobile phone inside a close place. The problem that exists in such a case is due to the existence of pitfalls between the GPS antenna and the satellites, usually it is a roof or a big wall that is highly degrading the receiving signal. This is where indoor location technology is benefiting the companies that are utilizing the geolocation technology to improve the customers' experience [3].

3 Indoor Location Techniques

3.1 Geofencing

Another triangulation technique that can be used additionally to the first one to improve the GPS signal is the one called Geofencing. Geofencing is a way of marking virtually the borders of a business's building and makes impossible for someone that wants to enter the Wi-Fi network to do it if he is not inside these specific borders. Although it seems non-useful from the first sight it is extremely beneficial. It separates the people that are customers for the company from the people that happen to pass by outside of their building and entered the Wi-Fi signal for some moments [4].

3.2 Bluetooth Low Energy (BLE)

On the same perspective, the most recent technology of location signal that utilizes another aspect of smartphones is the one called beacon. BLE is the new Bluetooth technology that came upon the advent of 4.0 Bluetooth and is assisting smart devices to connect to each other in a more energy efficient way [5]. This is a huge benefit because smartphones can utilize their Bluetooth to connect with beacons inside the stores. Once the end-users are connected into these devices they can better estimate their movements and separate the people that are moving outside of a building from those that are inside the actual building [6]. Another crucial advantage that beacons are offering is that they can separate the signals that are coming from people that are moving in different "height" level. These devices that exploit incoming data have been utilized by big retailers for many years to better explore customers' intentions by monitoring their instore activity with accuracy of some centimeters [7].

3.3 Visual Light Communication (VLC)

An alternative new recent launched solution for Beacons can be Visual Light Communication (VLC) which enables a better indoor surveying that leads to a greater positioning accuracy. Li-Fi is a technology powered by Led Based lamps that can be synchronized with smart-devices and provides an estimation of the indoor location of the user. It allows from 100 to 150 Mps data transfer within a medium distance of 5 m. It is capable of consuming low energy, so it constitutes an efficient solution when it comes to places such as big malls or closed buildings. Since lamps are available in every single building, it makes the installation of a VLC system an easier process [8].

4   Opportunities by New Smartphone Capabilities

The opportunities that are coming out from the new smartphones are tremendous in terms of fast and reliable geolocation accuracy signal. Most of the new smartphones are coming with evolved specification in all their parts. The new cameras can have both analog and digital zoom making the impossible of 10 or 20 times camera zoom possible. This has major benefits such as image recognition inside buildings which can make the indoor location process a lot easier. Multiple lens cameras are making the user experience even better with improved image stabilization [9].

Big Lithium Based (Li-ion) batteries are the trend when it comes to smartphones, although other companies choose to provide a lighter software by keeping the same capacities. In both cases the outcome is that new smartphones can provide a full day of heavy use without any problems. This is also a major step towards the extended use of indoor location and AR technologies which is known for the heavy battery requirements that they have [10].

The evolution of the smartphone screens is also something that can't be left unnoticeable when speaking about location services. Bigger and bezeless screens is what consumers are requiring these days and companies have managed to reduce the unused part of the screen by less than 5% of the front surface. Another improved aspect for the screen is the high-quality graphics among with the highest resolution that exceeds the 4k [11]. The high resolution of this scale might not seem so important at first sight, but it becomes necessary when the view of the phone is projected on a larger screen as an assistance. Also becomes helpful when zooming into a photo or a map, hence it makes the AR experience even better [12].

A very crucial aspect of geolocation that has arrived is the advent of Bluetooth 5.0 on every new high-end smartphone of the market. It helps the IOT connection to become even greater. The value proposition of 5.0 against the previous versions of Bluetooth is the wider range of connectivity that offers which can be extended to more than 100 m and the speed of four times faster data transfer than the previous 4.0 [13].

The GPS antenna that is being used by the new smartphones is a powerful tool for navigation in both urban and rural environment, and thanks to mobile application such as Google Maps, both GPS sensor and the Internet Data from the network providers are utilized for mapping navigation. The sensor along with the Internet provider are contributing into an accuracy that comes around some meters of location estimation [14].

The Global National Satellite System is being upgraded and is providing Raw GNSS measurements to some of the new devices. Most of these devices own the Bluetooth 5.0 capability and cameras that can implement AR capabilities which is promising for the future of Indoor and Outdoor Location technology [15].

5 Data Collection

The impact of Location Analytics into Business intelligence has been confirmed by the fact that more than 60% of the big data on the internet has georeferenced component. Hence Location Analytics is a new area that was merged by Business Intelligence. The combination of Geolocation Analytics with Location Intelligence has brought the advent of Intelligence analytics. Intelligence analytics can enhance the user experience by verifying the optimal site for the nearest restaurant or ATM, can optimize the number of locations that a market can support, and the business effect that the potential competition will bring [16].

Before the spread of digital technologies, businesses had to refer to previous data for decision making. Nowadays, the adoption of digital technologies such as the use of AI, leads to real-time decision making, which is highlighted in BlueMetal [17]. The development of AI will bring changes in both the market share and the dynamics that competitors will have to face. For example, in the commerce sector, physical stores are far behind from e-stores in terms of data collected by customers [18]. This gives an opportunity for e-shops to track changes quickly, make the right decisions, and change the balance inside an industry. By utilizing beacons, businesses aim to better identify the exact location of the customer within the store at any time, by promoting timely messages and offers to influence consumer behavior. To ensure greater participation, retailers reward users by using gamification techniques. Expanding this technology will result in adoption by all sizes of businesses. For this purpose, large chain stores have installed electronic beacons into their physical stores to collect data for customer-related behavior and patterns [19].

6 Marketing Aspects

For many years, all the established social media are offering their services inside a geolocation range so that the advertising will be better targeted into the requested audience. Some special offers are having added value Digital influencers are offering their digital advertisement-based services by targeting a specific audience usually within a country and more usually between the boundaries of a city. Different geographic areas have demand for different services. Online sites and social media are customizing their offering products and services by taking into consideration the user's indicated location. Switching cost varies from customer to customer and is also highly correlated with the location of the customer along with his digital "wish list" regarding products and services [20]. All the gathered data from digital enterprises can be utilized for advertising and marketing promotions. Remarketing loyal customers of a business can bring tremendous outcomes to a digital enterprise. Keeping track of visualized data in a form of map or GIS based database is also benefiting. Many enterprises are offering free shipping to potential customers that are from the same city, due to the lower shipping rates that logistics companies are

offering. Enterprises can pinpoint their customers location inside big malls and send them special offers with digital coupons via mobile marketing. Location based marketing reach better their target group, because they are calling them in the nearest possible position to the point of sales [21].

7 Legal Aspects

Geolocation data is considered sensitive data so as every other kind of it, is strictly prohibited by law worldwide, which may vary from one continent to another and one country to another [22]. A nice paradigm is the case with Facebook where its CEO were found suspicious for the company's data collection and utilization of its customers, when people were repeatedly reporting that they were being subjective of advertisements that they were never searched for on the Internet, but they had discussed privately in person with their friends and family members. There was an indication that Facebook and specifically the mobile application "Messenger" was recording peoples' voices to better target them with relevant advertisement content. This is something that is forbidden by law and is also illegal in U.S.A. especially for underage kids that are using the social media. Facebook has also suspended 200 applications that work in collaboration with the social media due to the low compliance with the prementioned regulations [23].

European Union had already predicted these issues for the digital media, so they had signed different laws that restrict the unauthorized use and collection of end-user's data under any circumstances since 1995. This specific agreement was renewed back in 25th May of 2018 where additional aspects were added to make things clearer. Specifically, it is not allowed for people that are under the age of 18 to being monitored for collection of their digital private data [24].

Europe has also monitored other giant companies for the shake of their citizens. Since Google has owned a great percentage of digital services worldwide they are trying to control the way they are evaluating customers' data. Google has many different mobile applications such as Google Photos, Google Drive and Google Maps. So, they have intervened and asked them to separate their different mobile applications into separate companies to ensure the fact that data from one application are not utilized to another one, because this is considered unfair competition [25].

8 Conclusions and Future Work

With all the development that has been done over the smartphone industry all these years and seem to continue for the next years due to the high demand from the customers it seems that Geolocation Analytics have a long way and future for business analysts and marketers. With the evolution of the specification of the new upcoming phones people will have the opportunity for more services related to

location. Digital Companies and influencers will have to be prepared for a new data driven age where restrictions and limitations will also apply as well. Multiple lens cameras and evolved Bluetooth technologies will make real-time AR technologies faster and people will seek for companies that can utilize those aspects and bring to their new phones added value. Companies that can utilize big data for the benefit of their customers will watch their market share being increased in the next years, and due to the regulations that EU is enforcing to big companies, new opportunities will come up for new start-ups and entrepreneurs. Business models also will be different because of the large amount of data that are gathered from service providers. Anyway, both consumers and enterprises will have to adapt to the new age of location-based data for reasons of convenience for the former and for profitability factors for the latter.

References

1. Dilworth D (2013) A brief history of geolocation. http://www.adweek.com/digital/a-brief-history-of-geolocation-infographic/
2. Locke P (2012) Cell tower triangulation. https://wrongfulconvictionsblog.org/2012/06/01/cell-tower-triangulation-how-it-works/
3. Djuknic GM, Richton RE (2001) Geolocation and assisted GPS. Computer 34:123–125. https://doi.org/10.1109/2.901174
4. Deva B, Ruppel P (2015) Location analytics as a service: providing insights for heterogeneous spatiotemporal data. In: 2015 IEEE international conference on web services, pp 353–360. https://doi.org/10.1109/ICWS.2015.114
5. Ensworth JF, Reynolds MS (2015) Every smart phone is a backscatter reader: modulated backscatter compatibility with Bluetooth 4.0 low energy (BLE) devices. In: 2015 IEEE international conference on RFID (RFID), pp 78–85. https://doi.org/10.1109/RFID.2015.7113076
6. Ronny Max (2018) 12 Technologies to track people. https://medium.com/@RonnyMax/12-technologies-to-track-people-f39d9473c1ae
7. Leddy P (2017) 10 Things about Bluetooth beacons you need to know. http://academy.pulsatehq.com/bluetooth-beacons
8. Khan LU (2017) Visible light communication: applications, architecture, standardization and research challenges. Digit Commun Netw 3:78–88. https://doi.org/10.1016/J.DCAN.2016.07.004
9. Delail BA, Weruaga L, Zemerly MJ (2013) Indoor localization and navigation using smartphones augmented reality and inertial tracking. In: 2013 IEEE 20th international conference on electronics, circuits, and systems (ICECS), pp 929–932. https://doi.org/10.1109/ICECS.2013.6815564
10. Ding N, Wagner D, Chen X, Hu YC, Rice A (2013) Characterizing and modeling the impact of wireless signal strength on smartphone battery drain. ACM SIGMETRICS Perform Eval Rev 41(1):29. https://doi.org/10.1145/2494232.2466586
11. Mehta I (2018) Smartphone trends of 2017 USB C, Bezel-less screens, and dual cameras. https://www.huffingtonpost.in/2017/01/03/smartphone-trends-of-2017-usb-c-bezel-less-screens-and-dual-c_a_21646114/
12. Kovach S (2017) Apple and Google to bring AR to million of smartphones. http://www.businessinsider.com/apple-arkit-google-arcore-2017-8

13. Hernández-Solana Á, Perez-Diaz-de-Cerio D, Valdovinos A, Valenzuela JL (2017) Proposal and evaluation of BLE discovery process based in: new features of Bluetooth 5.0. Sensors 17 (9):1988. https://doi.org/10.3390/s17091988
14. Using GNSS raw measurements on android devices towards better location performance in mass market applications. https://doi.org/10.2878/449581
15. Nair S, Seignez E (2016) A-contrario modeling for robust localization using raw GNSS data. IEEE Trans Intell Transp Syst 17:1354–1367. https://doi.org/10.1109/TITS.2015.2502279
16. Chen H, Storey VC (2018) Business intelligence and analytics: from big data to big impact. Bus Intell Res 36:1165–1188
17. Jolly I (2016) Data protection in the United States. https://uk.practicallaw.thomsonreuters.com/6-502-0467?transitionType=Default&contextData=(sc.Default)&firstPage=true&comp=pluk&bhcp=1
18. Ransbotham BS, Kiron D (2017) Analytics as a source of business innovation. MIT Sloan Manag Rev 1–21. http://sloanreview.mit.edu/projects/analytics-as-a-source-of-business-innovation/
19. Deterding S, Dixon D, Khaled R, Nacke L (2011) From game design elements to gamefulness: defining "gamification". In: Proceedings of the 15th international academic MindTrek conference: envisioning future media environments, pp 9–15. https://doi.org/10.1145/2181037.2181040
20. Djordjević S (1997) Fundamentals of database systems. Microelectron J 28:603–604. https://doi.org/10.1016/S0026-2692(97)80960-3
21. Kotler P, Keller KL (2009) Marketing management. https://doi.org/10.1080/08911760903022556
22. Nadeau M (2018) What is the GDPR, its requirements and deadlines? https://www.csoonline.com/article/3202771/data-protection/general-data-protection-regulation-gdpr-requirements-deadlines-and-facts.html
23. Kaser R (2018) Facebook suspends 200 apps in post-Cambridge Analytica clean-up. https://thenextweb.com/facebook/2018/05/14/facebook-suspends-apps-cambridge-analytica-clean-up/
24. EU GDPR Information Portal. https://www.eugdpr.org/
25. Waters R (2018) Google under fire over tactics for EU data regulation. https://www.ft.com/content/898c812a-4640-11e8-8ee8-cae73aab7ccb

Entrepreneur Without Intention with Websites as a Communication Tool: Current Trends in Romania

Felicia Constantin and Androniki Kavoura

Abstract The aim of this study is to explore the role of entrepreneurship in relation to dentistry in order to examine aspects of entrepreneurial approach in the profession of dentists taking Romania as a case study. The job of a dentist is one that attracts Romanians more and more, just as the competition between the academic faculties shows. After many years of studies that offer academic and practical skills, graduates enter a saturated and highly competitive market. Physicians who manage private practices that are associated with a specific treatment unit or those who run more complex clinics, with several specializations and employees, compete for the same pool of patients. Success is assured not only by medical mastery, but by taking advantage of certain qualities that are associated with those of an entrepreneur. Nowadays, things have changed, especially thanks to the access to internet and the facilities offered to web users. Doctors can benefit from the expertise of companies specializing in medical marketing, but they can also use tools that can give them the assets of real entrepreneurs, such the website. Managerial implications are discussed.

Keywords Entrepreneur · Dentist · Doctorpreneur · Training

1 Introduction

In the Dictionary of Contemporary Economics [1], the entrepreneur is defined in the ordinary sense as every man (or woman) of business, every entrepreneur who owns or has no capital. Based on literature the entrepreneur is endowed with three qualities—power, knowledge, will—to accomplish three tasks on a daily basis—manage, predict and anticipate. There is today a very rich literature that presents

F. Constantin (✉)
University of Oradea, Oradea, Romania

A. Kavoura
University of West Attica, Egaleo, Greece

definitions, approaches, success stories and tips on how to build your business project, develop the first draft of your project and validate your concept [2, 3].

This does not necessarily mean that one in order to be entrepreneur should open a new business but that he/she will apply ideas to his/her profession. For example, in relation to the profession of dentists, the fact that some passengers in need of medical dental treatment while travelling led to the provision of dental services in major airports [4]. Putting the evolution of the behaviour of the entrepreneur in the perspective of societal changes, the new challenges facing the entrepreneur today are associated with the new skills, new market opportunities, issues of growth, to better support entrepreneurship and business creation in the twenty-first century in order to adapt to a world in permanent change [5, 6]. An entrepreneur must be a catalyst, who loves his mission as an entrepreneur and works tirelessly; capable of accepting and managing uncertainty, risks and opportunities, the entrepreneur must be the demanding client of his own project and always be surrounded by people whose experience and knowledge he must value. We are talking about "entrepreneurial stance" and even about "entrepreneurial ecosystem" [3].

In regard to professions, a recent trend towards new forms of dental practice has been observed where research on dental practice in the European Regional Organization zone found that self-employed dental practice is the most common type of practice since they can work immediately after graduation and in that way, the dental profession may employ marketing strategies [7]. Since not much work has been done on Romania, the aim of this study is to explore the role of entrepreneurship in relation to dentistry in order to examine aspects of entrepreneurial approach in the profession of dentist.

The study employed the search of databases offered by the official authorisation institution in the field; research is exhaustive for the city examined and aims to present which is the case of entrepreneurship in dentistry at the moment of the research. We will focus the specificity of Romanian dentistry field—the case of Oradea, main city of Bihor county and we will observe how the dentists employ entrepreneurship, based on the websites' approach on the perspective of entrepreneurial strategic improvement.

2 Entrepreneurship and Dentistry: From "Doctor" to "Doctor Entrepreneur"—"Doctorpreneur"

In the medical world there are new terms that appear, such as "e-health" or "doctorpreneurs". Sites already known on the American continent, like the one that brings together the global community for medical entrepreneurs [8] are becoming more and more known in Europe, even if the community of doctorpreneurs is still at the beginning in Europe [9].

The site for medical practitioners from around the world presents many examples of doctors who have succeeded as entrepreneurs. Every month, a doctor presents

his/her experience and in May 2018 was presented Dr. Myles Holt a Melbourne-based Dentist, founder of an online marketplace for healthcare services and also a dentistry academy, editor of a dentistry magazine. His testimony underscores the specificity of a medical entrepreneur, who must overcome inertia and fear, and strive to succeed. "It is more of a journey; trial and error; you come up with an idea that you think is good . . . taking advantage of opportunities when they arise, that you never expected would; and then, one day, you stop and think, 'Wow, I guess I'm an entrepreneur'" [10].

The quality of the doctorpreneur refers instead to more sophisticated companies, related to new health care. We could also put them in relation with what Annabelle Jaouen and Walid Nakara call "2.0 entrepreneurs", from the famous "Y generation", and adopting new behaviours under the influence of new technologies [5]. We can observe that one of the major assets of the medical entrepreneurs is in the area of computing and the valuation of the potential offered by the Internet. The aim of this study is to examine the way dentists in Romania and more specifically all officially registered dentists in Oradea use the facilities of online communication in order to make themselves known on a very competitive market and bring innovations in their day-to-day business.

The concern for entrepreneurship in dentistry is not very strong. In the early 2000s, a well-known American dentist adviser and researcher put dentistry in the light of entrepreneurship. At the question "Is the dentist an entrepreneur? Yes or no", he concluded that "dentists may have an entrepreneurial spirit, they are not true entrepreneurs" [11]. Ten years later, he argued that a successful dentist needs to be both a clinician and an excellent business leader, in other words, to have business skills, to measure performance and seek for results from his/ her profession but also to be able to advise his/her team in order for the company to be successful. If we take into consideration this definition, we can consider that the dentist is obliged to become an entrepreneur. If he does not know, he must surround himself with professional economists, but he must gradually learn to manage himself the financial aspects of the firm, to establish contractual relations with some suppliers of utilities or professional materials, to approve marketing strategies, maintain an image in the virtual space, etc. "A dentist who owns a practice is its Chief Executive Officer. We may not think of it that way, because the focus is on providing excellent clinical care. . . Yet the practice must also function as a business, and that business must have a leader—the dentist, as CEO. . . To be successful in today's world a dentist has to be both an excellent clinician and an excellent business leader. . . This means mastering basic business skills. . ." [12].

3   The Case Study of Romania

In an article of the journal *Viata medicala* (2017), Prof. Dr. R. S. Câmpian, the Dean of a prestigious Romanian faculty [14] analyses the need for stomatologists and the question of numerus clausus. It makes a detailed picture of the dynamics in the field,

observing that "In Romania 20,000 active doctors are registered and the natural loss by retirement, renunciation to the profession, emigration and other causes is approximately 500 people annually... Every year we have 1250 graduates from the faculties of dentistry. About twice as much as needed" [13].

In the western part of Romania there are, besides Oradea, two other recognized university centres in Cluj Napoca and Timisoara. Despite this, competition in the entrance examination to the faculty profile of the University of Oradea is increasing every year. Why would one want to become a stomatologist when talking about an inflation of dentists? There are in principle three great motives: by passion, by financial interest or by error/indecision. When the first two merge and are accomplished, this is the ideal situation. To acquire the right to grant professional services in a medical field it is necessary that the competence is certified by diplomas, internships and various formations. The interest is in practical and academic skills, mastering new techniques, materials and technologies that allow modern and effective interventions on patients.

At the end of studies, graduates of the Faculty of Medicine and Pharmacy, specialization dentistry become dentists. They can practice their profession in several places: in private clinics, hired by bosses, in medical offices of schools, abroad to earn a better living, because of a saturated local market; or in their own office, which is not easy, but represents the dream of every student and his family. The existence of several faculties of medicine and pharmacy in a region has direct consequences, each year, on the increase in the number of physicians. Most of the students come from the region, so the local faculty provides a few dozen graduates every year who want to stay in the urban environment and more specifically in Oradea. We are therefore in a situation of permanent competition, with reduced mobility and little follow-up, which forces doctors to think of new ways of expanding the patient base.

The doctor provides two types of assistance: basic medical services, supported by public funding (very limited) and optional stomatological services, depending on the needs and financial possibilities of the patient. The goal of any doctor is to have patients, especially for the second type of benefits, respectively to earn enough money to lead a good life. And for that it's not enough to be a good dentist, but you have to think and act like a businessman.

4 Assumed or Unsupported Entrepreneur Role

At some point, stomatology is not only medicine, but it is also about economics, and especially about marketing and sales techniques. It also involves strong notions of patient psychology and even interior design elements. In a word, success in any type of dental practice depends on the respect of certain requirements specific to the entrepreneurial world. More specifically for the medical field, the testimonies of young Romanian entrepreneur dentists have the value of a lived lesson but also situate the discussion in a historical perspective.

Dragos Popescu co-founder and general manager of the luxury clinic DentalMed, supplier of the Royal House of Romania, observes that "Dentists were among the first medical entrepreneurs in Romania 1990, when they set up their first private practice" [14]. Favoured by a practice not conditioned by sophisticated hospital logistics, dentists with courage and financial means were able to open a private practice usually equipped with an armchair threshold. If at the time it was perceived as "a proof of courage", today the landscape has changed and evolved to increase the number of chairs in a cabinet. According to the medical entrepreneur, the dental market is still very attractive to those who are prepared to attract patients. He considers that the entrepreneur has a specific quality: the freedom to choose his program, the amount of work and the way of working. While recognizing the power of patient demand, Popescu affirms the need to offer quality services "Compared to the dawn of stomatological entrepreneurship, the quality level has evolved considerably, making admission conditions more difficult, but putting pressure on existing practices and clinics, for permanent improvement" [14]. In the same article, another entrepreneur, Anca Pătru, general manager of a Romanian-Israeli clinic, Glamor Dent, gives advice to young people "in any business, not only this one, the beginning is more difficult. when we create an appropriate strategy, the best way to attract customers and gain their trust, until we make a name, and then, of course, it is very important to maintain the standards at a high level, to always bring something new, not to reduce the quality of benefits and services" [14].

There are a number of qualities common to entrepreneurs, says Marius Ghenea, a well-known Romanian businessman and author of *Antreprenoriat* (2011); to succeed, they must first have a vision, intelligence and creativity, mastery of the field of activity, perseverance and determination, charisma, persuasiveness and sense of responsibility. The entrepreneur is a decision-maker and a problem-solver, with entrepreneurial flair, positive thinking, passion for his own business, personal ethics and trust in people. But among the qualities required for a medical entrepreneur is the ability to create a strategy, communicate and use new technologies is vital [15].

Dentists with practical and academic skills certified by diplomas, are authorised by the local professional authority to have a free practice and/or to open a business (an individual dental office). The private practices are going from a simple dental office with a medical unit and a nurse to more complex clinics, with several specializations and employees. They compete for the same patients, on a saturated and highly competitive market, which is increasing every year. Success is assured not only by medical mastery, but by taking advantage of certain qualities that are associated with those of an entrepreneur. Could the doctor become a doctor entrepreneur/doctorpreneur (meaning "member of the global community of doctors interested in healthcare innovation and medical entrepreneurship", cf. http://www.doctorpreneurs.com)? The answer can be affirmative if the school prepare them for the real market competition, by adopting special courses. On the second hand, they can become entrepreneurs if they make special trainings; unfortunately, on the national level we found only two offers related to the Entrepreneurship for dentistry: The Dental Office Managers Society of Romania offers a "program aimed at those

who have a cabinet or dental clinic and want to expand or improve their activity, but also to those who are preparing to start a business in the field" [16].

The second offer is the AMSPPR Entrepreneurial Education Program started in March 2018 and conducted by Dr. Vlad Deac, as "a response to the dental and medical need in order to benefit from quality information in the economic field. It should be understood that a medical cabinet is an economic entity on the free market. This means that the doctor next to the vast medical culture must be able to juggle and with economic terms, understand the real economy, integrate information into business and thrive" [17].

5   Methodology

An analysis from 2015 identified trends in Romanian dentistry [18], focused on the particular case of Oradea, a major Romanian city situated in the north-west of Romania. The web facilities were interpreted as innovative communication tools in medical tourism and the methodology used in 2015 led to specific results, giving an overview of the field and opening up additional research tracks. Based on three sites portals that Romanian dentists use their practices and taking into account Google ranking algorithm for Oradea's dentists' online presences, the authors selected to content analysis of these sites that were in the first 10 positions for a period of 5 months.

In 2018 the authors examined the dynamic, the new trends and the changes in the field of dentistry in urban areas, taking the case of the same Romanian city, the main city of the department of Bihor, a region which brings together several localities with more than 570,000 inhabitants [19]. The present study provides a practical contribution regarding the dental practitioners who operate in the city of Oradea by examining their communication activities on the web, for a 3-year period. To the authors' best knowledge, an analysis on dentists' websites and Facebook profiles in Oradea, as communication tools of their profession, has not taken place before.

6   Websites in the Perspective of Entrepreneurial Strategic Improvement: Results and Findings

The dentists who have a website updated and maintained professionally with a qualitative information, prove the behaviour of an entrepreneur. Even for the offices which have a modest interest for the information provided on the websites, certain innovations could be applied easily, without financial effort, making a difference between offers in a highly competitive market.

There are two types of professionals who play the role of entrepreneur: on the one hand those who work alone, in a single chair/unit in their own private practice,

endowed according to the financial resources of the doctor to a high level, medium or modest. On the other hand, there are those who have created complex dental clinics, with a multidisciplinary team and sometimes with a laboratory of dental technique.

Research found that they promote complementary business (as radiology, laboratory or learning), and there is partly multilingual communication. In addition, it was found that regarding a time framework, there are dentists who work on Saturdays regularly. As far as tariffs are concerned, 65% of the sites examined disclose tariffs while the possibility to pay using many credit cards: Visa, Visa Electron, Maestro, Master Card is an option only for few dentists under study. It is typical to note that reading the list of licensed doctors in the city of Oradea in 2018, a real family effect is reported, which is in match with literature that states that entrepreneurship is a family matter [20]. There are otherwise many issues that remain to be presented for the entrepreneur [21–23].

After the comparative reading of the sites in the period 2015–2018, we observe that, with some exceptions, the doctors did not invest in the promotion of the dental offices. Instead, they participate in the portals that bring together all the doctors, with minimal identification data: type of medical services, address, phone, email. There are also notes and assessments made by patients, but in almost all cases they are getting the best grades, without the possibility to establish a classification or formulate a decidedly correct opinion about their competence.

In accordance with all medical codes of ethics, the activity of providing medical services is not and should not be treated as a business relationship. So, all commercial and promotional issues are forbidden. The doctors have the right to inform, not to promote. However, in Romania it is impossible to obtain motivating incomes for physicians without communication, because the dental problems are not covered by the national insurance and the dentistery is a liberal profession.

7   Conclusion

Entrepreneur without intention? Yes, nowadays it is the case for almost all Romanian dentists. Tomorrow it will be compulsory to have at least notions of entrepreneurship. He/she has to become a clever one, able to manage the tension between the law and the competitive market. All communication through websites or Facebook is permanently subject to a concern for the balance between information and advertising. In what the aim of the study is concerned, we conclude that dentists might employ in a more organized way the online communication tools on offer. Entrepreneur intentionally? Yes, but as the discussions revealed, only by formation (entrepreneurship general and specific for dentistry) at the university, by authorities or by marketing professionals.

References

1. Lakehal M (2001) Dictionnaire d'economie contemporaine. Vuibert, Paris
2. Willcocks S (2012) The entrepreneurial role in primary care dentistry. Br Dent J 21:213–217. https://doi.org/10.1038/sj.bdj.2012.177
3. Léger-Jarniou C, Certhoux G, Degeorge J-M, Lameta N, Le Goff H (2016) Entrepreneuriat. Dunod, Paris
4. Baron RA, Hmieleski KM (2018) Essentials of entrepreneurship. Changing the world, one idea at a time, 2nd edn. Edward Elgar, Northampton
5. Gomez-Breysse M, Jaouen A (2012) Introduction. In: Gomez-Breysse M, Jaouen A, Ansart S, Barès F, Berger-Douce S et al L'entrepreneur au 21e siècle. Reflet des évolutions sociétales, Collection: Stratégies et management, Dunod
6. Pellerin F (2013) Preface. In: Léger-Jarniou C, Arzeni S, Basso O, Boissin J-P, Boncler J et al (eds) Le Grand Livre de l'Entrepreneuriat. Dunod, Paris
7. Wolf TG, Seeberger GK, Callaway A, Briseño-Marroquín B, Rusca P, Frank M, Otterbach EJ (2018) Is liberal independent dental practice in danger? Assessing forms of dental practice in the European Regional Organization (ERO) zone of the FDI World Dental Federation. Quintessence Int 49:325–336
8. http://www.doctorpreneurs.com/
9. https://atelier.bnpparibas/health/article/medecins-choose-venture-entrepreneurial
10. https://www.doctorpreneurs.com.au/single-post/2018/05/07/Doctorpreneur-of-the-Week-18-Dr-Myles-Holt#!
11. Levin R (2004) Is the dentist an entrepreneur? Yes and no. J Am Dent Assoc 135:1733–1734
12. Levin R (2014) What dentists can learn from top CEOs. Levin Group, Owings Mills
13. Câmpian RS (2017) Nevoia de medici stomatologi. http://www.viata-medicala.ro/Nevoia-de-medici-stomatologi.html*articleID_13546-dArt.html
14. Georgescu A (2013) Miraj financiar vs. vocatie: numarul stomatologilor s-a dublat din 2000 incoace. https://www.wall-street.ro/articol/Companii/154199/miraj-financiar-vs-vocatie-numarul-stomatologilor-s-a-dublat-in-anii-2000.html
15. Ghenea M (2011) Antreprenoriat. Drumul de la idei catre oportunitati si succes in afaceri. Universul juridic, Bucuresti
16. https://www.dentalmanagers.ro
17. Deac VC (2018) Entrepreneurship education for doctors. https://www.facebook.com/vladcristiandeac/
18. Constantin F, Kavoura A (2016) Multilingual online communication in Romanian dental practices' websites and their application to health tourism. In: Katsoni V, Stratigea A (eds) Tourism and culture in the age of innovation, Springer proceedings in business and economics. Springer, Cham, pp 185–197
19. The Bihor County Council/Consiliul Județean Bihor (2014) Strategia pentru dezvoltarea durabila a judetului Bihor, pentru perioada 2014–2020 (Sustainable Development Strategy of Bihor County, 2014–2020)
20. Sahinidis A, Giovanis A (2014) Exploring the factors promoting entrepreneurial intentions among female university students. J Reg Socioecon Issues 4:6–25
21. Kavoura A, Sahinidis A (2015) Communicating corporate social responsibility activities in Greece in a period of a prolonged economic crisis. Procedia Soc Behav Sci 175:496–502. https://doi.org/10.1016/j.sbspro.2015.01.1228
22. Nousia A et al (2018) Governmental, entrepreneurial and social dysfunctions and responsibilities in terms of tourism development strategy implementation in Greece: Quo Vadis? In: Katsoni V, Velander K (eds) Innovative approaches to tourism and leisure, Springer proceedings in business and economics. Springer, Cham, pp 479–492. https://doi.org/10.1007/978-3-319-67603-6_36
23. Sahinidis A, Stavroulakis D, Kossieri E, Sdrolias L, Varelas S (2019) Entrepreneurial intention determinants among female students. The influence of role models, parents' occupation and

perceived behavioral control on forming the desire to become a business owner. In: Kavoura A, Kefallonitis E, Giovanis A (eds) International conference on strategic innovative marketing and tourism. Springer, Heidelberg

Digital Self in the Making: An Exploratory Study About Luxury Consumers on Social Media

Eirini Koronaki and Athina Y. Zotou

Abstract The increasing digitalization in contemporary societies has rendered the understanding of online consumer behavior into a critical part of a company's success. Undoubtedly, ongoing technological changes can influence the way we consume, or even the way we develop and see ourselves, through our digital presence. Building on the idea that consumers construct their selves based on their online behavior referring to both extended and core self, the present article sets to explore the processes and the mechanisms underlying luxury consumers' formation and representation of their self in the digital environment and the social media, through their participation in social media narratives. According to the self-construal theory, which distinguishes two different concepts about the self, the independent and the interdependent self, differences between independents versus interdependents will be analyzed and discussed, in the context of the digital environment as well. Prior research on the digital luxury consumer has focused on strategic issues and social media and on how branding can change in such an era, on how story-giving can function as a co-creation tool for brands, on the relationship between bloggers and luxury brand perceptions, on how digital storytelling can boost self-brand association, and so on. However, it has yet to be examined how the consumers' selves are formed, depending on their degree of independent or interdependent self, and the underlying processes accompanying this formation. As an initial stage of an ongoing research, through in-depth interviews conducted with luxury brand consumers engaging with social media, this article aims to shed light in this new research direction.

Keywords Digital self · Independent and interdependent self · Luxury consumers · Social media

E. Koronaki
University of Patras, Agrinio, Greece

A. Y. Zotou (✉)
Cyprus University of Technology, Limassol, Cyprus

1   Introduction

The increasing adoption of social media both from firms and from consumers has rendered them a critical part of contemporary's marketplace, with the luxury industry being significantly affected from the trend [1]. A significant percentage of the content created in such platforms stems from users [2], who attempt to represent their selves in the process [3]. Driven by the fact that consumers behave in a way to keep or boost their sense of self [4], they express different aspects of the self in different occasions [5]. Despite the fundamental role that the concept of the self has in the luxury context, its role has yet to be examined in the social media luxury field.

With the current research we aim to build on this literature by examining how consumers' construction of core and extended self through their social media content takes place. A relevant aspect to examine under such a scope is linked to the consumers' degree of independent and interdependent selves. We aim to contribute to existing literature by examining the concept of the self in the examination of social media content for luxury brands. Second, we aim to include the concept of the independent and interdependent self, which has yet to be included in the luxury social media context. The remainder of this manuscript is organized as follows: Next, we review the literature on luxury and social media and then we introduce the construction of the self within the field, to continue with some preliminary evidence from semi-structured interviews as a first step towards the understanding of the issue.

2   Literature Review

2.1   *Luxury and Social Media*

On a first level, existing research on luxury social media has identified effective tactics to be applied [6–10], proposed holistic frameworks [11], underlined the role of crowd-cultures [12], the desired characteristics of the created content [2] and how they can affect the way a brand is managed and delivered today [13–17].

On a second level researchers have examined how social media marketing activities can affect consumer-brand relationships, such as brand luxury, luxury brand value and brand-user-imagery fit [1], how brand consciousness can affect the attitude and subsequently behavioral responses and purchase intentions [18], brand equity and brand attitude [19], brand awareness and brand loyalty [20], intimacy and trust [21], interactions with brands [22] and how social media activities need to be in line with the needs that social media users have [23]. The degree to which social media activities lead to value equity, relationship equity, brand equity, customer equity, and subsequent purchase intention has also been identified [24]. The consumer's engagement with the page has been linked to awareness, wom activities and purchase intention [25], while the motives making consumers engage in wom activities has also been investigated [26]. An important dimension

within the field of social media communication is storytelling. It has been identified as a way to co-create content through narratives between managers and consumers, while simultaneously boosting the perceived closeness among participants through the things they share [27].

Furthermore, numerous researchers investigated whether those activities lead to purchase intention [1, 19, 25], level of trust, attitude toward online retailing and loyalty intentions via peer recommendations and website service quality [28], consumer engagement with the page [29] and with the brand and with other members of the community [30], ewom's influence on consumer decision making [31, 32] and customer metrics such as spending, cross-buying and customer profitability [2].

The individual's personal characteristics have been identified as a significant factor affecting the efficiency of social media marketing activities [33]. Kumar et al. (2017) underlined the role of their experience and familiarity with technology and social media [2], while Kamal et al. [34] examined the effect of materialism on social media usage. Further building in that direction, existing research has underlined the importance of further investigating how the individual's self is affecting and affected by the process [35]. Despite the increased importance that the self plays in the formation of the self online, it has yet to be examined how this is done for luxury brand consumers and users of their social media.

2.2 Construction of the Self

Literature proposes that the self is a very complicated and a multifaceted structure [36]. All these different sides of the self, have been played a significant role on consumer behavior throughout time [37]. There is research in consumer behavior that shows that individuals' construal of self (independent or interdependent) can affect brand meaning [5], the persuasiveness of various advertising appeals [38], and brand extension evaluations [39]. When a brand contributes to consumers' goal realization motivated by the self, then brands are truly connected to the self [5]. For example, brands can operate as implements for social integration or help people to link with the past. Brands can also help consumers' self-expression, publicly or privately, and may be used as symbols of personal achievement, offer self-esteem, and also provide one the opportunity to distinguish him/herself and also express his/her uniqueness [5]. Self-construction aims vary depending upon consumer's self-construal. The individual's self-concept has been described as the existing thoughts and feelings about oneself as an object [40]. This can refer to multiple dimensions, from which one or more are chosen in the process of self-examination in consumer research [41]. As consumers use brands to build or communicate their self-concept [5], while the motivations for doing so, differ for different aspects of self, in this research we will refer to two dimensions, described as the core and the extended self on one hand and the independent and interdependent self on the other. The core self has been described as "body, internal processes, ideas, and experiences", while the

extended self has been described as "persons, places, and things to which one feels attached" [42]. According to Markus and Kitayama [43], self-construal theory indicates the perceptions that people have about their thoughts, feelings, and actions in relation to others. The aforementioned theory suggests two concepts about the self: the independent self and the interdependent self. People whose independent self-perspective is striking ("independents") consider their self as autonomous and separate from others. On the other hand, people whose interdependent self-perspective is striking ("interdependents") consider their self as connected with others [44]. Independents are focused on self–others differentiation, while interdependents are oriented toward self–others adjustment. As Aaker and Lee [45] propose, these two states of mind coexist in a person's memory, and each mindset can be stimulated be different situational settings. Additionally, self-construal is often related to culture [43], but as it is mentioned before research has shown that self-construal can be triggered by situational priming [38, 39, 46]. It is claimed that diversity essentials differ along with situationally stimulated self-perspectives to affect decision making [44].

Moreover, people who focus to stress their exceptional personal traits and attributes and lean towards their internal domain and self-related goals, are the independents [43]. For those people detachment from others, non-conformity, and expression of personal taste are priorities, and they care less for other relational motives. For those with interdependent construals of the self, both the expression and the experience of emotions and motives may be significantly formulated and directed with respect of the reactions of others. Experiencing interdependence involves considering oneself as a part of a whole, in a social context. Within such a construal, the self becomes most expressive and complete when it is grouped in a fitting social relationship. This insight of the self and the relationship between the self and others shows that the person is seen as a part of the social context and more connected, rather than differentiated from others. People are interested to find a way to fit in with relevant others, and in general to become part of several interpersonal relationships.

Following the literature, it has yet to be examined how luxury consumers' form their selves through social media and through their digital presence, focusing on different aspects of self-concept, such as core and extended self, as well as independent and interdependent self. From the above the following research questions emerge:

1. How do luxury consumers construct their core and extended self through consumer generated social media content?
2. Does this relationship differ depending on their degree of independent and interdependent self?

3   Methodology

To answer our research questions, we applied a preliminary study, as a first step to an ongoing research project, in order to collect some qualitative preliminary evidence. These results will help the authors to design a second study that will provide quantitative results and also tests the correlation between the chosen variables, according to the research objectives and the research questions as well. To do so, semi structured in-depth interviews were conducted. Four luxury consumers who use social media (two men and two women) were interviewed. They included or referred to a luxury brand in at least 50% of their posts within a time period of 6 months. The social medium of Instagram was chosen as the medium of analysis, due to its suitability for self-depiction.

The authors based on the literature about the core and extended self [42], as well as the independent and the interdependent self [36, 43, 44], they formulated open-ended questions for the semi structured interview. Indicatively, some of the questions included in the interview were the following (1) "Do you include or depict yourself in your posts? (body, internal processes, ideas, and experiences)" to examine the role of the core self, (2) "Do you include other persons, places or things that matter in your posts?" to examine the role of the extended self, (3) What makes you post something of such a nature? Do you feel you gain something from such a post? to examine the role of the independent (internal and private) and interdependent self (external and public).

4   Results, Discussion and Conclusion

From our interviews the following themes emerged. Respondent 1, mostly used referred to his ideas and experiences and expressed the view that this satisfied his need to be unique and to express himself. This can be linked to an individual structuring the core self and satisfying the independent self. Respondent 2, on the other hand, referred to the inclusion of places and persons, while this satisfied her need to belong and to fit in. Respondents 3 and 4 had some interesting findings though, with both of them promoting both elements of the core and of the extended self, however, Respondent 3 satisfying an independent and Respondent 4 satisfying an interdependent self.

Our findings are an initial step towards understanding how individuals project the images of themselves based on impression management [47]. This process is undertaken via digital elements such as visuals and content, which illustrate the identity and self of the individual [48]. Our findings are in line with Kastanakis' and Balabanis' ones [49], who underlined the role that individual differences play in determining consumer preferences for connection- or uniqueness-oriented brands. They argue that an inter-dependent self-concept would be looking for bandwagon luxury consumption desire assimilation, while demonstrating a personal orientation

in luxury consumption focusing on self-expressive goals [50]. On the other hand, an independent self-concept would be looking for snob luxury consumption and desire to underline the contrast and care more about the social function of luxury consumption [50].

The implications from our study relate to the type of information and material a brand can provide to its users, in order to satisfy and boost their self-construction process, depending on their degree of interdependent and independent selves. The limitations of our study relate to the small sample used, as it is an initial stage of an ongoing research, and the role that other individual differences or relationship to the luxury brands could play in the outcome. Future research could further examine those concepts through quantitative research, after further examining qualitative approaches. The extent to which this content leads to the creation of an actual or an ideal self could also be investigated.

References

1. Lee JE, Watkins B (2016) YouTube vloggers' influence on consumer luxury brand perceptions and intentions. J Bus Res 69:5753–5760. https://doi.org/10.1016/j.jbusres.2016.04.171
2. Kumar V, Choi JB, Greene M (2017) Synergistic effects of social media and traditional marketing on brand sales: capturing the time-varying effects. J Acad Mark Sci 45 (2):268–288. https://doi.org/10.1007/s11747-016-0484-7
3. Hollenbeck CR, Kaikati AM (2012) Consumers' use of brands to reflect their actual and ideal selves on Facebook. Int J Res Mark 29:395–405. https://doi.org/10.1016/j.ijresmar.2012.06.002
4. Strizhakova Y, Coulter RA, Price LL (2012) The young adult cohort in emerging markets: assessing their glocal cultural identity in a global marketplace. Int J Res Mark 29:43–54. https://doi.org/10.1016/j.ijresmar.2011.08.002
5. Escalas JE, Bettman JR (2005) Self-construal, reference groups, and brand meaning. J Consum Res 32:378–389. https://doi.org/10.1086/497549
6. Dubois D (2017) Digital and social strategies for luxury brands. In: Thieme W (ed) Luxusmarkenmanagement. Springer Gabler, Wiesbaden, pp 327–337. https://doi.org/10.1007/978-3-658-09072-2_16
7. Highfield T, Leaver T (2016) Instagrammatics and digital methods: studying visual social media, from selfies and GIFs to memes and emoji. Commun Res Pract 2:47–62. https://doi.org/10.1080/22041451.2016.1155332
8. Tsimonis G, Dimitriadis S (2014) Brand strategies in social media. Mark Intell Plan 32:328–344. https://doi.org/10.1108/MIP-04-2013-0056
9. Annie Jin S-A (2012) The potential of social media for luxury brand management. Mark Intell Plan 30:687–699. https://doi.org/10.1108/02634501211273805
10. Dall'Olmo Riley F, Lacroix C (2003) Luxury branding on the Internet: lost opportunity or impossibility? Mark Intell Plan 21:96–104. https://doi.org/10.1108/02634500310465407
11. Felix R, Rauschnabel PA, Hinsch C (2017) Elements of strategic social media marketing: a holistic framework. J Bus Res 70:118–126. https://doi.org/10.1016/j.jbusres.2016.05.001
12. Holt D (2016) Branding in the age of social media. Harv Bus Rev 94:40–50
13. Kohli C, Suri R, Kapoor A (2015) Will social media kill branding? Bus Horiz 58:35–44. https://doi.org/10.1016/j.bushor.2014.08.004
14. Vernuccio M (2014) Communicating corporate brands through social media: an exploratory study. Int J Bus Commun 51:211–233. https://doi.org/10.1177/2329488414525400

15. Phan M, Thomas R, Heine K (2011) Social media and luxury brand management: the case of Burberry. J Glob Fash Mark 2:213–222. https://doi.org/10.1080/20932685.2011.10593099
16. Reyneke M, Pitt L, Berthon PR (2011) Luxury wine brand visibility in social media: an exploratory study. Int J Wine Bus Res 23:21–35. https://doi.org/10.1108/17511061111121380
17. Truong Y, McColl R, Kitchen P (2010) Practitioners' perceptions of advertising strategies for digital media. Int J Advert 29:709–725. https://doi.org/10.2501/S0265048710201439
18. Chu S-C, Kamal S, Kim Y (2013) Understanding consumers' responses toward social media advertising and purchase intention toward luxury products. J Glob Fash Mark 4:158–174. https://doi.org/10.1080/20932685.2013.790709
19. Schivinski B, Dabrowski D (2016) The effect of social media communication on consumer perceptions of brands. J Mark Commun 22:189–214. https://doi.org/10.1080/13527266.2013.871323
20. Shen B, Bissell K (2013) Social media, social me: a content analysis of beauty companies' use of Facebook in marketing and branding. J Promot Manag 19:629–651. https://doi.org/10.1080/10496491.2013.829160
21. Kim AJ, Ko E (2010) Impacts of luxury fashion brand's social media marketing on customer relationship and purchase intention. J Glob Fash Mark 1(3):164–171. https://doi.org/10.1080/20932685.2010.10593068
22. Rohm AD, Kaltcheva VR, Milne G (2013) A mixed-method approach to examining brand-consumer interactions driven by social media. J Res Interact Mark 7:295–311. https://doi.org/10.1108/JRIM-01-2013-0009
23. Zhu Y-Q, Chen H-G (2015) Social media and human need satisfaction: implications for social media marketing. Bus Horiz 58:335–345. https://doi.org/10.1016/j.bushor.2015.01.006
24. Kim AJ, Ko E (2012) Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. J Bus Res 65:1480–1486. https://doi.org/10.1016/j.jbusres.2011.10.014
25. Hutter K, Hautz J, Dennhardt S, Füller J (2013) The impact of user interactions in social media on brand awareness and purchase intention: the case of MINI on Facebook. J Prod Brand Manag 22:342–351. https://doi.org/10.1108/JPBM-05-2013-0299
26. Wolny J, Mueller C (2013) Analysis of fashion consumers' motives to engage in electronic word-of-mouth communication through social media platforms. J Mark Manag 29:562–583. https://doi.org/10.1080/0267257X.2013.778324
27. Üçok Hughes M, Bendoni WK, Pehlivan E (2016) Storygiving as a co-creation tool for luxury brands in the age of the internet: a love story by Tiffany and thousands of lovers. J Prod Brand Manag 25:357–364. https://doi.org/10.1108/JPBM-09-2015-0970
28. Nadeem W, Andreini D, Salo J, Laukkanen T (2015) Engaging consumers online through websites and social media: a gender study of Italian Generation Y clothing consumers. Int J Inf Manag 35:432–442. https://doi.org/10.1016/j.ijinfomgt.2015.04.008
29. Chauhan K, Pillai A (2013) Role of content strategy in social media brand communities: a case of higher education institutes in India. J Prod Brand Manag 22:40–51. https://doi.org/10.1108/10610421311298687
30. Dessart L, Veloutsou C, Morgan-Thomas A (2015) Consumer engagement in online brand communities: a social media perspective. J Prod Brand Manag 24:28–42. https://doi.org/10.1108/JPBM-06-2014-0635
31. Daugherty T, Hoffman E (2014) EWOM and the importance of capturing consumer attention within social media. J Mark Commun 20:82–102. https://doi.org/10.1080/13527266.2013.797764
32. Goodrich K, De Mooij M (2014) How 'social' are social media? A cross-cultural comparison of online and offline purchase decision influences. J Mark Commun 20:103–116. https://doi.org/10.1080/13527266.2013.797773
33. Naylor RW, Lamberton CP, West PM (2012) Beyond the "like" button: the impact of mere virtual presence on brand evaluations and purchase intentions in social media settings. J Mark 76:105–120. https://doi.org/10.1509/jm.11.0105

34. Kamal S, Chu S-C, Pedram M (2013) Materialism, attitudes, and social media usage and their impact on purchase intention of luxury fashion goods among American and Arab young generations. J Interact Advert 13:27–40. https://doi.org/10.1080/15252019.2013.768052
35. Ngai EWT, Tao SSC, Moon KKL (2015) Social media research: theories, constructs, and conceptual frameworks. Int J Inf Manag 35:33–44. https://doi.org/10.1016/j.ijinfomgt.2014.09.004
36. Singelis TM (1994) The measurement of independent and interdependent self-construals. Personal Soc Psychol Bull 20:580–591. https://doi.org/10.1177/0146167294205014
37. Reed A (2004) Activating the self-importance of consumer selves: exploring identity salience effects on judgments. J Consum Res 31:286–295. https://doi.org/10.1086/422108
38. Agrawal N, Maheswaran D (2005) The effects of self-construal and commitment on persuasion. J Consum Res 31:841–849. https://doi.org/10.1086/426620
39. Ng S, Houston MJ (2006) Exemplars or beliefs? The impact of self-view on the nature and relative influence of brand associations. J Consum Res 32:519–529. https://doi.org/10.1086/500482
40. Rosenberg M, Schooler C, Schoenbach C, Rosenberg F (1995) Global self-esteem and specific self-esteem: different concepts, different outcomes. Am Sociol Rev 60:141–156. https://doi.org/10.2307/2096350
41. Hong JW, Zinkhan GM (1995) Self-concept and advertising effectiveness: the influence of congruency, conspicuousness, and response mode. Psychol Mark 12:53–77. https://doi.org/10.1002/mar.4220120105
42. Belk RW (1988) Possessions and the extended self. J Consum Res 15:139–168. https://doi.org/10.1086/209154
43. Markus HR, Kitayama S (1991) Culture and the self: implications for cognition, emotion, and motivation. Psychol Rev 98:224. https://doi.org/10.1037/0033-295X.98.2.224
44. Ma Z, Yang Z, Mourali M (2014) Consumer adoption of new products: independent versus interdependent self-perspectives. J Mark 78:101–117. https://doi.org/10.1509/jm.12.0051
45. Aaker JL, Lee AY (2001) "I" seek pleasures and "we" avoid pains: the role of self-regulatory goals in information processing and persuasion. J Consum Res 28:33–49. https://doi.org/10.1086/321946
46. Swaminathan V, Page KL, Gürhan-Canli Z (2007) "My" brand or "our" brand: the effects of brand relationship dimensions and self-construal on brand evaluations. J Consum Res 34:248–259. https://doi.org/10.1086/518539
47. Leary MR, Allen AB (2011) Self-presentational persona: simultaneous management of multiple impressions. J Pers Soc Psychol 101:1033
48. Cushing AL (2011) Self extension and the desire to preserve digital possessions. Proc Am Soc Inf Sci Technol 48:1–3. https://doi.org/10.1002/meet.2011.14504801304
49. Kastanakis MN, Balabanis G (2014) Explaining variation in conspicuous luxury consumption: an individual differences' perspective. J Bus Res 67:2147–2154. https://doi.org/10.1016/j.jbusres.2014.04.024
50. Ackerman D, Chung C (2012) 'We' or 'Me' consumer goods: a cross-national look at self-construal and gender in product choice. J Glob Sch Mark Sci 22:70–82. https://doi.org/10.1080/12297119.2012.644036

Concept Hotels: Offering Unique Experiences to Travelers and Increased Profitability to Businesses

Maria Douvrou

Abstract Today's tourists are no longer mass consumers of travel product. They look to form an emotional connection to an instantly shared experience based on interest, relations and authenticity. Within this idea, accommodation product development is increasingly moving away from commodity stock and becomes differentiated and customer centric. Concept hotels are crafted to fit individual holiday needs, which differ greatly between adult couples, families, youngsters and solo travelers, with services and facilities, tailored according to the target customer. Hotels that meet a particular specification enjoy loyal customers who return twice as often, thus lowering the acquisition/conversion cost. These customers offer higher than average quality scores, enhancing the value-for-money perception of the accommodation. Finally, concept accommodation benefits from a longer booking cycle, avoids the great discounts of last minute yielding and enjoys low cancellation ratio, as customers have made an educated choice. Concept product targets high operating profitability, giving hoteliers a strong foundation for growth. An analysis of concept accommodation products indicates that recently, most of the development is about selling a unique and enticing experience to guests. Most travelers are willing to pay a premium if the hotel offers value that goes beyond what its competitors can offer. The recommendation of the analysis is to find a niche and dominate it with the primary goal of offering customers the greatest possible experience.

Keywords Hotel concept · Hotel development · Product differentiation · Hotels · Leisure

M. Douvrou (✉)
Cielotel, London, UK
e-mail: MDouvrou@cielotel.com

1 Introduction

Holiday time is considered as one of the most important period of the year by most people. Thus, when you offer leisure hospitality, you have a compelling and memorable story. How do you now make the seemingly intangible elements into a tangible business transaction? The link between emotional intelligence and hospitality is evident—caring for someone and anticipating their needs requires understanding of their emotions and the ability to react to them [1]. If you can harness the emotional intelligence of your customers and channel this into the product, you will make your product unique and irreplaceable and ensures clients will keep coming back for more.

Studies that have examined tourist satisfaction and market segmentation suggest that it is important and to the benefit of destination managers to develop better understanding of specific segments of consumers to accommodate their distinct needs and wants and establish efficient and effective marketing and promotion strategies [2]. Such strategies will endeavour to enhance the hotel's profitability, as they capitalize the benefits of meeting such consumer needs.

This is the reason why hotel development should focus more on concept hotels. These have specific characteristics in their facilities and services that address specific client needs. For example, a family concept hotel will undoubtedly have a well-equipped kids' club and children's swimming pool. It would have a range of family rooms and a kids' corner at the restaurant, as well as children's menu options. This differs to a generic hotel that can surely host a family but not offering a solution to room space, children facilities and entertainment.

This trend has been closely followed by hoteliers and tour operators across the world in recent times, as the financial benefits of such differentiation to the hotel business are evident.

This paper:

1. Talks about how the memorable holiday experience to tourists creates loyalty and other post consumption behavior, positive for the hotel business;
2. Endeavors to review some of the key concepts a hotel in the leisure industry can develop and adopt and demonstrates the different characteristics a concept can give in the software and the hardware of a hotel; and
3. Presents all the areas of the business cycle that this customer satisfaction and subsequent loyalty is capitalized to become profitability. The financial benefits relating to the development and operation of a concept hotel will be listed and discussed.

2 Tourism Experiences Explained

Tourism experiences can be defined as the "subjective mental state felt by participants during a service encounter" [3]. For the holidaymaker, the tourism experience is of high personal value and is accompanied with satisfying and pleasurable emotions. Emotional reactions to the tourism experience are fundamental determinants of post consumption behaviors such as satisfaction, intention to recommend, attitude judgments, and choice. The tourism experience is an extended service transaction in which consumption of the destination entails a sequence of episodes along which tourists and providers (e.g., hotel, restaurants, tour guides) interact at different points in the service transaction.

Taylor [4] conceptualizes the tourism product as "*a satisfying experience*" (p. 56), and further specifies that "*trips may be differentiated by the experience sought (product) and the discrete services necessary for its attainment (plant)*" (p. 57). Taylor emphasizes the importance of identifying and understanding differences in experiences sought among different segments of tourists, in order to determine which goods and services need to be provided to satisfy their needs.

The need for differentiation has become clearer in recent years. The ability to provide visibility, bookability and flexibility is the key to a successful concept, according to Cornell University's research [5]. The differentiation can apply to destination level as a whole and to the hotel level in particular.

By concept hotel we define an accommodation product that has been developed under a particular specification of services and facilities, or, the so called, "software" and "hardware" of the hotel. Concept names such as Adult-Only, Family Club, Splash-World etc., are distinctive titles next to the hotel name. These are the hotels that meet a particular product specification with value added services to enhance the customer experience.

Some of the key concepts a hotel can apply and its characteristics is presented below, in Table 1, although the list is not exhaustive:

Table 1 Key concept hotel types and characteristics

Concept	Software characteristics	Hardware characteristics
Adults-only	Great evening entertainment	Luxurious bedrooms, mainly for double occupancy Selection of bars and dining options
Family club	Daily schedule of kids' activities Children's menu Mascot of kid's club	Family high occupancy bedrooms Baby/child pool Separate dining area for kids Crèche/kid's club (split by age)
Splash-world	Water based activities' for adults and children	Room type mix to cater for families Water park with rides Variety of swimming pools
Golf resort	Golf tournaments	Luxurious bedrooms, mainly for double occupancy Golf court

3   Profits Arriving from Differentiation Strategy

To understand and profit from a differentiation strategy it is important to understand customer lifestyles and aspirations, so that the hotel's distinctive offerings are valued by customers. "Happy customers are more likely to return and recommend us to their family and friends" highlights Thomas Cook Group, one of the major European tour operator in one recent investor presentation [6].

How does the concept boost hotel's profitability? Thomas Cook's investor presentation has attempted a measured outcome for operating profit margin improvement. Brand features and tour operator sales focus leads to margin uplift:

Initial gross operating profit
+ 5% refurbishment
+ 5% quality and software
+ 5% sales focus
= *Uplifted gross operating profit* [6]

Further to the summary of profit margin uplift above, there are significant managerial implications to the hotel when following a differentiation strategy. The benefits of it are listed below in more detail:

3.1   Targeted Marketing

The hotel targets customers looking for its specific attributes. Promotional messages and advertisements are sent to those primary groups instead of mass marketing without regard to the specific characteristics of the audience. Printed advertisements will appear on different magazines for a Family Club than a Golf Resort, for example. Google similarly, AdWords spent is lower on "adult-only hotel Crete" search instead of "hotel Crete", for instance. There can be many examples of other means of marketing, where the concept attributes will provide focus on the marketing efforts.

3.2   Booking Cycle

Concept hotels have a much longer booking cycle than commodity hotel products. This is because they target a much more educated customer who has more specific needs to address and require better choice and availability in order to meet such needs. These travellers are not last-minute bargain driven and by booking early, they ensure to book what they want, instead of what is left which would not necessarily meet the desired standards. This leads to long lead bookings from committed guests.

3.3   Customer Loyalty

In a situation where the customers wish to fulfil more specific holiday needs, due to the more specific nature of the hotel services and facilities, they will most probably book again. Such repeat business gives the hotel a better than average customer retention ratio. Retaining customers costs less than acquiring new ones, and customer experience management is the most cost-effective way to drive customer satisfaction, customer retention and customer loyalty. Not only do loyal customers ensure sales, but they are also more likely to purchase ancillary, high-margin supplemental products and services, selectively offered to them by the concept of the hotel. Thus, loyal customers reduce costs associated with consumer education and marketing.

3.4   Positive Reviews

"The brain handles positive and negative information in different hemispheres," said Clifford Nass, a professor of communication at Stanford University, who co-authored "The Man Who Lied to His Laptop: What Machines Teach Us About Human Relationships". Negative emotions generally involve more thinking, and the information is processed more thoroughly than positive ones, he said. Thus, we tend to ruminate more about unpleasant events—and use stronger words to describe them—than happy ones. When a hotel product is tailored to the customer needs, the customers will inevitably be happy. Happy customers will give positive reviews with high scores on the various review sites. This is crucial to the hotel's reputation and booking pattern. High Clifford Nass, a professor of communication at Stanford University Higher review score will attract more bookings, so the hotel's reputation works towards its customer acquisition cost. This is because customer satisfaction is a strong predictor of customer repurchase.

3.5   Word of Mouth

Petrick and Sirakaya's empirical study suggested that repeat visitors were more satisfied with their travel experiences and were more likely to return and spread positive Word of Mouth [2]. Guests that enjoy their stay at the hotel will share and discuss about their positive holiday experience with their friends, family and colleagues. This could be over conversation, on social media or other means of communication, in any case however, other people are creating free Word of Mouth advertising. More recommendations mean more customers, which leads again to turnover growth.

3.6 Low Cancellation Ratio

Cancelled hotel rooms result to last minute yield actions such as heavy discount of distressed stock. The loss is particularly high with last minute cancellations and no-shows, when not enough time is left before the date of stay to sell the unsold inventory to other customers [7]. As customers booking a concept hotel are more certain that they get what they want, they will not look for alternatives after the booking and they are less expected to cancel a booking, a fact that offers the hotel a very beneficial low cancellation ratio.

3.7 Premium Rate Charged

Different customer groups have different expectations. If you target senior travelers, they might prioritize service and comfort before anything else. Families with children might be looking for child-friendly amenities. And business travelers want convenience. Setting the right customer expectations in hotels is a necessity if a hotel wants to stand out. The concept hotel addresses specific needs and the perceived added value service to customer attracts higher room rates. If you're offering a service your customers want and need, many are willing to pay the extra for the convenience.

3.8 Streamlined Operation

A streamlined operation improves the efficiency of the business by simplifying or eliminating unnecessary steps. Operating under concept allows the hotel to have more control over functions, service levels and quality standards. Operations that do not fit the concept will not be required. Key staff, trained to offer the services under concept, will be employed, specific dining options will be offered, entertainment will be focused on the hotel's client base and this will lead to operating expense efficiencies and cost saving.

3.9 Focused Capital Expenditure

This is a very important element on the hotel construction, maintenance and renovation plan. The development capital is only focused on the facilities required and not spread thin over catering for every type of client. By designing the product specification carefully, the hotel can be developed very efficiently from the outset. Common areas will be allocated as required, e.g. no kids' club space requirement for

Adults-only. The rooms will be constructed in the size needed and will be equipped according to the needs of the guests staying. Redeploying capital to the holiday experience will enhance capital return and will reduce the cyclicality of cash flow profile.

4 Research and Discussion

Studies have established that people can develop an affective connection with specific places or destinations. The place attachment construct consists of two distinct dimensions: place dependence (functional attachment) and place identity (emotional attachment). Place dependence reflects the importance of a place in providing features and conditions that support a person's goals or desired activities. This functional attachment is entrenched in an area's physical characteristics and is likely to increase as a result of frequent visits [3].

Tourists' emotional experiences have a positive influence on behavioral intentions. Destinations capable of offering tourist experiences that elicit strong positive emotions will be able to foster loyalty [8].

With such existing research, which evidence that tourist experiences affecting choice, we have reviewed recent hotel development efforts, both from the hoteliers' aspect as well as major leisure holidays tour operators, which sell such holiday experiences. This was done in order to ascertain the fact that the "experience providers" are following the trend of differentiation, in order to benefit from it.

From the hotel's angle, we used Greek holiday destinations as sample, given the importance and depth of the tourist industry in this country. We reviewed all articles announcing new hotel development in Greece between August and September 2018, on the business portal *etravelnews.gr* (Table 2).

The results show 16 new developments announced in just a 2-month period, all of them containing a key differentiation element.

In addition to the above, we looked at announcements from TUI Travel group and Thomas Cook group, the two major leisure tour operators in Europe, which both include substantial focus on differentiated, concept hotels in their product offering. The concept hotel portfolio will be controlled by the tour operators, in a way of hotel lease or management. There will be a dedicated product team to carefully prepare the specifications required for the concept and communicate these to the hotel operating team at the destination.

First, TUI Group has made a significant announcement that the group will be "Focusing on a high-yield, differentiated hotel portfolio in TUI Hotels and Resorts" as early as 2012, during the Group's investor presentation in Munich. TUI also added that, "The systematic expansion of TUI's profitable hotel business is a crucial cornerstone of the growth initiative foreseen by the Group-wide one TUI strategy program." [9]

Table 2 Sample of hotel development announced recently

Hotel	Location	Differentiation	Opening
Elefthere Seaside	Kavala	Thermal spa resort	2021
Olympos-Naousa	Thessaloniki	Boutique hotel	2019
Evreni Resort	Skiathos	Thalasso spa resort	
Robinson Club	Ierapetra	Family club	2020
Atalanti Hills	Atalanti	Luxury golf resort	2021
Nisi Marea	Corinth	Thermal spa resort	
Kilada Hills	Porto Heli	Luxury golf resort	2020
Abergo Gelsomino	Kos	Boutique hotel	2019
PT Hotelia	Thessaloniki	Sports club	Late 2018
VIP Exclusive Club	Skorpios	Exclusive residences	2020
Cape Tholos	Crete	Luxury resort	
Harpin Hotels	Crete	Water park	2020
Ikos Aria	Kos	Luxury resort	2019
Blue Lagoon Ocean	Kos	Adults only	2019
Angsana Corfu	Corfu	Luxury resort	2019
Mayia Exclusive	Rhodes	Adults only	2018

The trend of concept hotel development has been constant, as we see similar announcement during Thomas Cook Group's investor presentation in Rhodes, in 2017: "Customer focus through differentiated product as a group wide initiative" [6].

5   Conclusion

Customers look to enjoy unique holiday experiences and they attribute a significant value to this. How can this value be capitalized? Strategically thinking hotels and tour operators become customer-centric. They aim to offer differentiation in order to drive sales away from competitors with commodity products. Differentiation leads to a specific concept, close to the needs of each client category and this drives customer satisfaction and retention, valuable reputation, cost efficient marketing, capital expenditure and hotel operation. For this reason, the latest trend in hotel development is focused and observes the market demand.

References

1. Vierich W, Calver S (1991) Hotels and the leisure sector: a product differentiation strategy for the 1990s. Int J Contemp Hosp Manag 3(3). https://doi.org/10.1108/EUM0000000001673
2. Geng-qing Chi C (2012) An examination of destination loyalty: differences between first-time and repeat visitors. J Hosp Tour Res 36:3–24

3. Sameer H, Gilbert D (2009) Measuring tourists' emotional experiences toward hedonic holiday destinations. https://doi.org/10.1177/0047287509349267
4. Dolnicar S, Ring A (2014) Tourism marketing research – past, present and future. Ann Tour Res 47:31–47. https://doi.org/10.1016/j.annals.2014.03.008
5. Cornell University School of Hotel Administration (2011) The scholarly commons: competing successfully with other hotels: the role of strategy, 2011
6. Investor Presentation (2017) Thomas Cook Group
7. Chen C-C, Schwartz Z, Vargas P (2011) The search for the best deal: how hotel cancellation policies affect the search and booking decisions of deal-seeking customers. Int J Hosp Manag 30 (1):129–135
8. Sameer HG, Prayag G, Deesilatham S, Odeh K (2013) Measuring tourists' emotional experiences: further validation of the destination emotion scale. https://doi.org/10.1177/0047287514522878
9. Investor Presentation (2012) German investment conference UniCredit/Kepler. TUI Group, Munich, 26–27 Sept 2012

Sustainable Development of Skills for the Tourism Sector and Its Financial Impact

Sofia Asonitou and Chara Kottara

Abstract Tourism has proven internationally one of the most fast growing sectors of the global economy. It has a multiplex character and has established tight connections to the technological evolution and the digital marketing. Businesses and consumers ask for new kind of services and consequently new needs appear and new skills are required from the working population in order to satisfy current trends. This study examines the range of professional skills that should be reinforced in the Greek tourism business environment, along with the financial impact, by employing a secondary research method using data from a variety of resources. The framework of the study includes the "business, educational and academic research systems" with regards to skills development and employers' needs. Results confirm the necessity for deeper cooperation between education and market in order to improve graduates' professional skills.

Keywords Skills · Financial impact · Digital marketing · Tourism · Greece

1 Introduction

Global economy in the last decades exhibits continuous transformation especially due to digital technologies [1]. This transformation disrupts the existing structures and creates a new type of entrepreneurial development that impacts every sector of the economy [2]. In parallel, the modern digital technologies change the competitive and the working environment of firms [3, 4].

Tourism industry, through its multiple facets, has created tight connections to the technological evolution and the digital marketing [5]. Additionally, in the current

S. Asonitou (✉)
University of West Attica, Athens, Greece
e-mail: sasonitou@uniwa.gr

C. Kottara
Aegean College, Athens, Greece

market place, firms and consumers, demand new services which request new skills from the working population in order to satisfy modern trends [6].

Greek economy is characterized by high unemployment rate (~20%) while GDP has started to show some recovery signs [7]. One million unemployed citizens seek employment while enterprises complain that they cannot find the proper staff for high and middle technical positions that require candidates with knowledge and appropriate skills [8].

In Europe there is a trend of increasing employment in positions that require high skills while there is decrease in professions that require middle level skills [9]. However, there is an opposite trend in Greece in recent years; employment in positions of low and middle skills has increased while there is decrease in highly skilled professions [10].

2   Problem Statement

Main target in Greece nowadays is the recovery of the economy, however is doubtful whether this target can be achieved sustainably without the synergy of the educational world. Noticeably, a satisfactory connection between the Greek educational system and the market place is missing. This fact is a substantive problem for the country and the tourism industry which constitutes the basic pillar of the Greek economy. There is a trend for the Greek tourism industry to move towards e-tourism through digital marketing. Therefore, the development of digital skills has become a necessity that requires immediate satisfaction and this trend has become clear from current research [5]. The lack of staff with proper skills to cover positions of high modern skills, has been pointed by WTTC [10] worldwide and for Greece specifically by other researchers in the past who pointed to the need for parallel upgrade of studies and competences [11].

Research activities have increased compared to previous decades in an effort to find answers to the problems and questions created by the multidimensional and highly competitive global environment [12]. The fast changing of trends is obvious from studies [13] that show how the distance between Greece and the rest of Europe has increased in the high skilled professions (doubled) during the crisis period.

All previous data and research point to the need for a deep and exhaustive study of viable and long-term strategies towards the sustainable development of required skills and competences of Greek workforce.

3 Purpose and Value of the Paper

The purpose of the current study is to investigate the evolution of the professional skills that should be developed in the Greek tourism industry, especially in the sector of digital tourism marketing, and their financial impact. The authors in the present study used secondary research method, deriving data from multiple sources.

The study additionally has investigated the "entrepreneurial, educational and research systems" in reference to the sustainable development of skills and the needs of the employers in order to contribute to the viability of tourism industry.

4 Literature Review

The transformation of the economy and the fast development of skills is considered of critical importance [10]. SETE research [14], presents the necessity of upgrading the Continuing Professional Development (CPD), the timely preparation of training programs and provision of new skills to the workforce that will be influenced by the unavoidable elimination of various professions. Also the "megatrends" are presented for the Greek and international marketplace and the specific problems connected to the youth unemployment.

Further qualitative research [5] about the skills requirements, points to the necessity for the development and the evolution of competences, with regards to the workforce in the tourism industry and the digital marketing [15, 16].

Armstrong and Kotler [17] refer to the digital marketing as a type of direct marketing that connects consumers and sellers electronically through interactive technologies like e-mails, internet pages, online forums, chat and other forms of communication. Kavoura [18] highlights the need of theories and activities with regards to online communication, current trends and new technologies. Tourism digital marketing coincides with the digital marketing, and is directed specifically to the tourism sector.

Several reports [18, 19] indicate that tourism industry contributes 25 million work places in Europe which is about 11% of total employment while undoubtedly it is strongly affected and transformed by the new information and communication technology [20]. Reports about Greece [21] show that the employment positions in tourism have been 459,000 and represent 12.2% of total employment. Relevant forecasts [10] indicate that employment positions in tourism industry will increase by 5.2% within the next decade. Greece is the digital follower of Europe according to the Digital Economic Opportunity Index (DEOI) [22]. Also the role of tourism education and training is internationally recognized and its contribution and capabilities particularly important.

Adecco [23] points to tourism education and training also noticing that it contributes to the creation of job places and to the enrichment of workforce in knowledge and indispensable skills. Other studies [11, 24] refer to work placements and

internships that support the acquisition of skills in real work conditions. Work placements have proved valuable in supporting graduates to their transfer from the protected educational environment to the work setting and the incorporation of professional skills and competences. Asonitou [25] stresses the importance of professional skills for graduates like team work, time management and computer skills and investigates the barriers that the educational world should overcome in order to provide these essential competences.

5   Method

The authors used secondary research method, deriving data from multiple sources, global organizations, Institutions, educational research, professional chambers (WTTC, EUROSTAT, and OECD) and many others, in order to document safe results about the evolution of professional skills in digital tourism marketing in Greece.

6   Findings

The processing of data and the comparative analysis of secondary research sources have evolved around four axes that are described below.

6.1   Development and Evolution of Skills in Tourism Industry Workforce and Digital Marketing

Comparative study and relevant literature review [4] have indicated the necessity to digitize the tourism sector so that firms can maximize effectiveness and sustainability. Earlier studies of Assael [26] and Heath and Wall [21] have reached the same conclusions. Researching relevant literature the authors approached the dynamics of marketing and its strategic evolution through digital marketing [27] and have noticed remarkable efforts to transform the value chain in the wider spectrum of the economy and most specifically in tourism sector [28]. Modern theoretical approaches in tourism [10] intensify their assertions about the modernization and redistribution of tourism market share due to the impact from Information and Communication Technology. This can be achieved only through the development of sustainable skills with a future orientation.

Qualitative research about the skills of people working in tourism industry [5] has resulted that the average rate of citizens in Europe who use internet for trip

Table 1 Emerging skills in Tourism Digital Marketing processed by authors (source: INSETE 2015) [29]

Emerging skills
Increased perception and occupation with IoT (internet of things)
Development of entrepreneurial and mathematical skills (for investigation and analysis of big data)
Development of digital leadership (e-leadership)
Development of marketing automation skills

organizing, has reached 38%. One out of two Dutch and British, three out of five Norwegian and Finn and two out of ten Greeks use internet for this scope.

The same study has concluded that the basic skills (good knowledge of foreign languages, basic mathematics, capability to learn new things) and the professional skills (knowledge of digital marketing, digital advertisement, managing social media) are relatively covered by tourism employees, while emerging skills are much less developed as shown in Table 1.

6.2 Development of Skills in the Entrepreneurial System

Due to the economic recession from 2010 onwards, the establishment of new firms has been dramatically decreased from 39.9% in 1990 to 10.3% today. This fact has triggered research interest to investigate the present situation, the short-term trends and the forecasting of market needs in the skills of today employees. A gap was found [30] to exist between the skills demanded by the employers and the skills exhibited by the employees that will have to be covered by the new educational and training methods. Specifically, for the tourism industry (hotel management) the same study has shown approximately the same gap between required and offered skills by employees while it is impressive that there is no demand for specific digital skills by employers as shown in Table 2.

Multiple studies in Greece record similar results in reference to the skill needs for the market place [19, 31, 32]. Results conclude that a high percentage of firms in Greece (around 60%) faces difficulties to find appropriate staff due to skills shortages. In the same studies 33% of Europeans and 45% of Greeks believe that skills shortage creates significant problems in reference to costing, quality and time shortage in their firms. Results present an increase for middle and high skill level demand for jobs. In the Greek environment is impressive that firms themselves are behind with the establishment of digital work methods.

Table 2 Gap of skills in the employees of Tourism Hotel Sector (source: IOBE 2017) [31]

Skills	Required	Existing	Gap
Communication skills	4.79	4.25	−0.54
Teamwork skills	4.42	3.93	−0.49
Flexibility and adaptability	4.40	3.77	−0.63
Knowledge of foreign languages	4.37	3.88	−0.50
Basic digital skills	4.32	4.03	−0.29
Knowledge about the profession	4.19	3.75	−0.43
Taking initiative	4.11	3.55	−0.56
Solving complex issues	4.03	3.55	−0.28
Organisation skills	3.97	3.35	−0.44
Good knowledge and use of the Greek language	3.95	3.95	0.00
Skill of learning new things	3.91	3.43	−0.48
Mathematical skills	3.44	3.41	−0.03
Creativity	3.43	3.04	−0.39

6.3 Development of Skills in the Educational System

Results of various studies [5, 6, 33] report a gap of skills in the Greek market place. Knowledge is not adjusted to market evolutions and the new trends while there is notable gap of soft skills of graduates. The educational system does not ensure that graduates acquire those skills that are imperative to survive professionally within the fast changing global business environment. The only activities that lead towards this direction have been the reorganization of the post-secondary education Institutions (IEK, EPAS) that aimed to establish the practical application of theoretical courses, contributing directly to the tourism sectors. Reorganization of higher education program studies would contribute to the development of skills and knowledge and would create specialized executives that can become successful professionals within a globalized competitive environment.

The Accenture research [34] has shown that most needed skills are: (1) digital work methods (2) development of digital skills and (3) reserve of digital skills.

Researchers in the Greek [35] and the global level, work on the skills issue and the influences this may have in tourism industry. Impressive results [30, 36] report that 5.6 millions of young people are jobless and 7.5 million neither work nor are trained in eight countries (France, Germany, Italy, Portugal, Spain, Swede, U.K. and Greece).

6.4 Financial Impact of the Tourism Industry

A plethora of studies has proved that the tourism industry has a multiplex character, and its activities have multiplying impact on the employment, the economy and the education. Tourism industry affects positively the GDP of the country, the

employment and the Balance of Payments (BOP) of Greece. Specifically, the contribution of the tourism industry (direct and indirect) in the Greek GDP was 35 billion euros in 2017 (19.7% of total GDP). The number of positions employed in the tourism industry in 2017 was 459,000 (12.2% of total employment) [8]. Comparative analysis of data from different sources [15, 16, 29] referring to the services connected to the tourism industry activities, has shown an increase by 10.9% in the first semester of 2018, in the area of hotels and beverages, transportation and operating tours.

7   Conclusions, Limitations and Further Research

The present study reinforces the importance of tourism sector which has provided the highest number of employment positions from other sectors of the economy while at the same time one can distinguish the multiplying effects this may have for the Greek economy. The positive impact of the tourism activities creates the necessity to have an effective framework of operation in the market place, with appropriate human resources at the knowledge and skill level. The radical increase of the digital customers indicates that the digital marketing for the tourism industry is strongly associated with the sustainable development of skills and the viability of the tourism industry. The specific professional skills that need improvement are: knowledge of touristic marketing and e-tourism marketing, skills in the planning, development and execution of e-programs and campaigns of e-marketing and skills in the marketing analytics and reporting [37, 38]. Greece should become able to face the challenge of skills development by creating synergies between the market place and the educational and research community of the country.

A limitation of the present study is the number of studies that have been processed and analysed. The results of the present study could be further used in order to trigger research on specific methods, procedures, and approaches that could be used in order to create skillful workforce. Additionally, it would be interesting to research the barriers that prevent the country to enter the fourth industrial revolution.

References

1. Middleton V, Fyall A, Morgan M, Ranchho A (2009) Marketing in travel and tourism, 4th edn. Butterworth-Heinemann, Oxford
2. Koutoulas D (2009) Marketing design and implementation in tourist destinations. Notes M06 Department of Tourist Economy and Development. Educational Series. National School of Public Administration
3. Protopappadakis I (2013) Marketing at services with practical of Tourism. Stamoulis Publications, Athens

4. Buhalis D, Deimezi O (2004) E-tourism developments in Greece: information communication technologies adoption for the strategic management of the Greek tourism industry. Tour Hosp Res 5:103–110
5. INSETE (2015) The quality research of skills who needs on digital promotion for tourism. http://www.insete.gr/
6. OECD (2018) Tourism trends and policies. http://www.oecd.org/cfe/tourism/oecd-tourism-trends-and-policies-20767773.htm
7. ELSTAT (2016) The basic figures of education 2016. The Greek primary and secondary education. http://www.statistics.gr/statistics/env
8. Stergiou D, Airey D (2017) Tourism education and industry expectations in Greece: (re) minding the gap. In: Benckendorff P, Zehrer A (eds) Handbook of teaching & learning in tourism. Edward Elgar, Cheltenham, pp 3–16
9. Ruetzler T, Baker W, Reynolds D, Taylor J, Allen B (2014) Perceptions of technical skills required for successful management in the hospitality industry – an exploratory study using conjoint analysis. Int J Hosp Manag 39:157–164
10. WTTC (2018) The enhancement of employment in high jobs skills. https://www.wttc.org/economic-impact/country-analysis/country-reports/
11. Goldsmith A, Smirli E (1995) Hospitality education in Greece. Tour Manag 16(8):619–626
12. Lagos D (2016) The theoretical approaches of tourism. Kritiki, Athens
13. Eurostat (2017) European thematic semester letter about labor market skills. https://ec.europa.eu/digital-single-market/en/policies/scoreboard
14. SETE (2017) The employment long-term trends (1983–2016) in tourism and other branches of the Greek Economy. https://sete.gr/media/10887/2018_apasxolhsh_tourismos_2008-2017.pdf
15. Christou E (2014) Branding social media in the travel industry. In: 3rd international conference on strategic innovative marketing, Procedia – Social & Behavioral Sciences, Madrid
16. Sigala M, Christou E (2013) Connectivism and social media: a collaborative learning theory and practices for developing the new competencies of tourism and hospitality graduates. In: Proceedings of the 31st EuroCHRIE 2013 cooperative education and research for hospitality and tourism organised by the ANGELL Business School Freiburg, Freiburg, Germany, 16–19 Oct 2013
17. Armstrong G, Kotler P (2009) Introduction to marketing, 9th edn. Epikentro, Athens
18. Kavoura A (2016) How can mobile accounting reporting benefit from the imagined communities? Int J Mob Comput Multimed Commun 7:36–52. https://doi.org/10.4018/IJMCMC.2016040103
19. Bank of Greece (2018) Annual report of the Governor of the Bank of Greece. https://www.bankofgreece.gr/Pages/el/Publications/GovReport.aspx?Filter_By=8
20. ELSTAT (2017) The tourism turnover operation index. http://www.statistics.gr/statistics/-/publication/DKT51/2017-Q1
21. Heath E, Wall G (1999) Marketing tourism destinations: a strategy planning approach. Wiley, New York
22. SEB (2018) The modern skills for international competitive businesses. http://www.sev.org.gr/vivliothiki-tekmiriosi/special-report/anakampsi-kai-paragogikos-metaschimatismos-me-gnomona-tis-gnoseis-kai-tis-dexiotites-symperasmata-imeridas-synchrones-dexiotites-gia-diethnos-antagonistikes-epicheiriseis-3-4-2018
23. Adecco (2017) Employability in Greece 2017 – impact of employers' opinion on the labor market. Research, Athens
24. SEB (2017) The increase to the gap in workers' skills and payments. Wkly Bull Greek Econ 118
25. Asonitou S (2015) Barriers to the teaching of skills in the Greek higher education accounting courses: insight from accounting teachers. Int J Strateg Innov Mark 2(3):14–26. https://doi.org/10.15556/IJSIM.02.03.002
26. Assael H (1993) Marketing principle & strategy. Dryden Press, Orlando
27. Groutas J, Nikolaidis C (2000) The advertising, public relations, sales promotion in tourism. Propobos, Athens

28. Hgoumenakis N (2004) The marketing in tourism sector publications. Interbooks, Athens
29. SETE (2018) The contribution of tourism to the Greek economy for 2017. https://sete.gr/media/10888/2018_symvolhtourismou-2017.pdf
30. IME.GSEBEE (2015) General research of employers 2015. https://imegsevee.gr/%CE%B4%CE%B7%CE%BC%CE%BF%CF%83%CE%B9%CE%B5%CF%8D%CF%83%CE%B5%CE%B9%CF%82/%CE%B3%CE%B5%CE%BD%CE%B9%CE%BA%CE%AE-%CE%AD%CF%81%CE%B5%CF%85%CE%BD%CE%B1-%CE%B5%CF%81%CE%B3%CE%BF%CE%B4%CE%BF%CF%84%CF%8E%CE%BD-2015/
31. IOBE (2017) The tertiary education in Greece. The impacts of the crisis and challenges. http://iobe.gr/docs/research/RES_05_F_05072017_REP_GR.pdf
32. OECD (2016) Greece-country note-skills matter: further results from the survey of adult skills. http://skillspanorama.cedefop.europa.eu/en/indicators/making-skills-work-index3
33. IOBE (2018) The Greek economy. http://iobe.gr/research_a.asp
34. Accenture (2017) Digital Greece: the way to growth. Research, Athens
35. Asonitou S, Vitouladiti O (2015) Core skills as marketing and management tools: evidence from the tourism sector. In: Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing, 4th IC-SIM, Mykonos, Greece, Springer proceedings in business and economics. Springer, Cham, pp 45–53
36. McKinsey Global Institute (2014) Education to employment: getting Europe's youth into work, 4th edn. Butterworth-Heinemann, Oxford
37. Nechita F, Demeter R, Briciu V-A, Kavoura A, Varelas S (2019) Projected destination images versus visitor-generated visual content in Brasov, Transylvania. In: Kavoura A, Kefallonitis S, Giovanis A (eds) Proceedings in business and economics. Springer
38. MacLeod J, Kiriakidis S, Kefallonitis E, Kavoura A (2017) Strategic innovative communication tools in higher education. In: Kavoura A, Sakkas D, Tomaras P (eds) Proceedings in business and economics. Springer, Cham, pp 759–764

Participatory Design for Culture Change: The Case of the National Library of Greece Rebranding Process

Stephania Xydia

Abstract This case study focuses on the participatory rebranding process of the National Library of Greece (NLG), which was developed in the context of the 2015–2018 Transition Program for the institution's relocation to its new premises at the Stavros Niarchos Foundation Cultural Centre. Based on Design Thinking principles, the process engaged NLG staff, stakeholders and diverse user groups to co-create a strategic brief for the future of the institution, which served as the basis of an open, nation-wide design competition for the new brand of the NLG. The winning proposal questioned the need for a static logo, instead proposing a comprehensive visual language based on bold typography, defining the library as a "intra-liminal" space; a place where the past meets the future, the analogue meets the digital and the national meets the global. After extensive experimentation with NLG content, an open Brand Manual was delivered and a Communications Strategy was drafted, catalyzing the transformation of the Library from a mere collection of books to a timeless community of creators, researchers and explorers. The award-winning new visual identity of the NLG enabled culture change within the institution and proposed a radical approach to the nation branding of Greece. This paper outlines the context in which this experiment was enabled, presenting different stages of the rebranding process and its outcomes, documenting key challenges and exploring future opportunities to establish the NLG as a leader in the fields of education and culture in Greece and beyond.

Keywords Organizational change · Design thinking · Library marketing

S. Xydia (✉)
CultureMinds, Athens, Greece

CultureMinds, Luxembourg, Luxembourg

1131

1   Introduction

Since the advent of digital technologies, libraries around the world have been experiencing a profound identity crisis that requires a radical redefinition of their purpose, services and outreach strategies to respond to changing user needs. Without losing sight of their historic function, they are called upon to eliminate communication barriers and provide open access to inspiring content, reliable information, engaging programmes, innovative technologies and meaningful interactions. Public libraries are emerging as co-working spaces, innovation hubs, creative laboratories, community centers and cultural destinations. They constitute "social infrastructures" [1] that shape the way people interact today, forming "third spaces" [2] where community initiatives generate living cultures. National Libraries, in particular, are gradually turning into cultural leaders, shapers of nation branding and agents of cultural diplomacy. Qatar, Latvia, Israel and Greece are some of the countries currently investing in building major architectural landmarks for their national libraries, in an effort to symbolize cultural revival and communicate soft power. In this context, library marketing requires the new design of symbols, narratives, processes and strategies, in a constant experimentation about what future libraries might be. Design thinking for innovative strategic marketing solutions can substantially contribute to change management for libraries, opening up their premises, collections and services to a whole realm of new possibilities.

2   The Context

The NLG provides a case study of an institution under transition. Being the primary custodian of Greece's intellectual heritage, it has been safekeeping the Hellenic world's intellectual output since 1832, hosting a growing collection of more than one million items, including manuscripts, printed books, newspapers, magazines etc. However, decades of neglect, deficient funding and insufficient staffing had trapped the institution in an outdated modus operandi. Today, the NLG must rise to the challenge of digital transformation and employ contemporary solutions for the needs of the public. In this context, upgrading the Library's infrastructure, services and outreach is essential for the institution to fulfil its mission: organising, collecting, and preserving its content, while offering open and equal access to every piece of scientific and cultural work relating to the Hellenic world and its abiding impact. The construction of the Stavros Niarchos Foundation Cultural Centre (SNFCC) and its donation to the Greek State in 2017, offered a state-of-the-art building to the NLG within an architectural landmark of international caliber. In order to relocate and function in its new premise, the NLG had to undertake a major organizational transformation. An exclusive grant of 5 million euros by the Stavros Niarchos Foundation (SNF) enabled the implementation of the 2015–2018 Transition Programme, structured on five pillars: (1) Collections Transition and Development;

(2) Digital Services Development; (3) Public Library Department Design; (4) Audience Development; (5) Staff Training. An independent Transition Task Force was assigned the special mission of the Programme management, working between the funding body and the beneficiary, testing in practice triangular Public-Private-People partnership models [3] which engaged users, experts and multiple stakeholders in the service design process.

3   The Challenge

In the context of Action 4 of the Transition Program focusing on Audience Development, the NLG had to develop a Communication Strategy from scratch with external support, due to lack of relevant departments, staff, know-how or prior experience within the institution. Using outdated branding assets featuring the old building's facade, and paper-based user management, the NLG had no marketing materials or digital channels of communication and limited organized content regarding its history and collections. Therefore, the relocation offered a unique opportunity for complete redesign of services and organizational repositioning at physical and symbolic level. The NLG had to redefine the *who* it is, *whom* it serves, *what* it offers, *where*, *when* and *how* diverse collections, services and programs would be made available anew to diverse user groups and increased numbers of visitors at the SNFCC. At the same time, the NLG had to differentiate its identity from the SNFCC brand, in order to ensure independence and sustainability beyond the limitations of its new physical environment, valorizing anew its two older buildings and its digital architecture. For that purpose, an open, participatory process was initiated to radically redefine the role of the institution within the Greek society and the global community. This process utilized resources provided by the SNF grant in terms of time, funding and know-how, aiming to prepare the NLG for a new era of openness and social impact.

4   Methodology and Key Outcomes

4.1   Introducing Design Thinking

The rebranding formed the core of the Audience Development strategy, designed and executed by the author of the present paper, using tools such as the Design Thinking for Libraries [4] and the Library Marketing Toolkit [5]. The process lasted 18 months and it was divided into five stages encompassing implementation of the following intertwined sub-projects: (1) Empathizing: Internal Audit and Audience Research, (2) Definition: Brand Strategy, (3) Ideation: Brand Design Competition, (4) Prototyping: Brand Manual and Communication Strategy, (5) Testing: Pilot Marketing Actions. The experimental nature of the project required a circular

approach, considering the aforementioned processes as iterative loops within and across each stage. It soon became evident that the rebranding process was not just about changing the image or building a marketing plan, but rather about rethinking the very purpose, structure and operations of the institution. It served as a unifying thread across fragmented operations and facilitated the major organizational changes required during the relocation, providing an open space for exploration of possible futures.

4.2   Empathizing: Internal Audit and Audience Research

The process was initiated with a consultation with internal and external stakeholders, exploring the current public positioning of the institution and inquiring into the relevance of existing and new services. The project was led by Ioanna Elabd (Wabi&Sabi Brand Architects) in collaboration with Palmos Analysis, who engaged 100 members of staff and over 1500 citizens into defining needs, aspirations and ideas for the future of the NLG, through quantitative and qualitative research. The research began with internal stakeholders, through the anonymous submission of questionnaires by 100 NLG staff members and a series of semi-structured interviews with the institution's leadership. This aimed to define the values and strategic priorities for the organization, while fostering endorsement and ownership of the rebranding process. Participatory workshops were organized on a weekly basis and a series of simulation exercises took place in the new building, introducing employees to service design methodologies through analysis of user journeys, identification of problems, visualizations of touch points and workflows across departments.

Audience Research engaged over 1500 physical and online users of the NLG as well as randomly selected citizens, through phone interviews, online surveys and on site questionnaires at the old Vallianeio building. Participants were asked about their perception of Libraries and the NLG in specific, their views on the relocation to the SNFCC, evaluating and commenting on a series of proposed services. Twenty in-depth interviews were held with decision-makers and opinion-leaders in the field, including representatives of major libraries, foundations, Hellenic Studies centers and cultural organizations in Greece and abroad. A Competition Analysis was implemented to study the visual identity and communication strategy of 10 relevant Greek and international institutions, exploring differentiation points along with best practices that could be applied to the communication needs of the NLG. Subsequently, a Stakeholder Analysis was implemented in order to map 50 additional organizations from the fields of education, culture, social welfare active in the broader area of Athens, identifying opportunities for collaboration and exploring gaps in which the NLG could contribute in terms of service design and programming. Five focus groups were formed, engaging 40 randomly selected adults of medium-higher educational background living in the southern suburbs of Athens and the wider Attica Region. One special workshop was designed to explore the needs of students aged 15–17 living around the SNFCC neighbourhood. These

discussions enabled the mapping of diverse user needs and the development of 10 user profiles that the NLG should be serving. Following an initial analysis of the results of the qualitative and quantitative research, three design thinking workshops were held in the new NLG building, inviting 60 stakeholders to test concepts, provide feedback and collaboratively work on creative exercises for NLG Communications. The research phase provided the NLG with a breadth and a depth of data that did not only serve to produce a Strategic Brief, but offered valuable insights for the strategic planning of the institution in the long run.

4.3 Definition: Brand Strategy for the National Library of Greece

The Strategic Brief delivered by Wabi&Sabi Brand Architects identified communication objectives, competitors and key user groups. The brief provided a summary of current public perceptions and concerns, as well as concrete social needs that the NLG can serve through its infrastructure, services and programming. It described key personality traits of the NLG, through a list of keywords that emerged from the research process (i.e. open, transparent, bright, reliable, hospitable, authentic, timeless). It provided guidelines in terms of look and feel for the new identity, documenting colours (blue, white, black, gold) and symbols (treasure box, hug, eternity, home, masterkey, cell, gate, bridge) that prevailed among diverse audiences, as well as concepts that were rejected. The unique selling point was defined based on the wealth and significance of the NLG collections, its history, its geographical and symbolic position as a global hub for Hellenism, and a brand-as-person approach [6] was suggested, giving prominence to motherly characteristics. Throughout the rebranding process, the Brand Strategy was revisited, refined and adapted in order to distill key messages that were tested across multiple communication channels.

4.4 Ideation: Open Design Competition

The Strategic Brief served as the basis of the ideation phase, leading to an open, nationwide competition for the selection of a Brand Design contractor, engaging Greece's top designers. The competition followed six steps which shaped an open phase to ensure breadth in terms of outreach and one closed phase to ensure excellence in terms of output. These steps included:

1. Open call for interest [7] to the Greek design community, including overview of the competition objectives and procedures.
2. Submission of portfolios featuring brief team presentation and samples of three relevant projects, with a formal declaration confirming fulfilled eligibility criteria.

3. Selection of candidates for the second stage of the competition by an interdisciplinary Evaluation Committee.
4. Closed competition engaging five finalists in a creative brainstorming and design process of 45 days, to develop their proposals for the new visual identity of the NLG, offering a remuneration fee of 2300 € to each team.
5. Submission of creative proposals in print form, followed by a live presentation of each team to the Evaluation Committee and selected representatives of the NLG staff, the SNF, the SNFCC S.A and the GNO participating as auditors.
6. Winner selection, open publication of submitted proposals [8] and signing of contract for the implementation of the NLG Brand Design project.

The Evaluation Committee consisted of the President and Director General of the NLG, the President of the Greek Designers Association, the Brand Strategist who led the Audience Research as well as three senior designers who put emphasis on the aesthetics, originality and delivery capacity of the candidates. A total of 40 design teams submitted portfolios in the first phase. The five finalists included some of Greece's most prominent artistic directors, typographers and graphic designers, who were invited to participate in two guided tours of the Vallianeio and the SNFCC buildings in order to ask questions about the history, mission, the collections and the Transition Programme of the NLG. Following live presentations of the ideation outcomes, the Evaluation Committee opted for a rather radical choice, acknowledging the difficulties that it would entail in implementation and requesting political commitment by the NLG Leadership for long-term investment in order for the selected concept to release its potential. The official announcement on the competition results assigned the Brand Design project to the team of Dimitris Papazoglou, mentioning that the daring approach of the selected proposal fully matches the spirit of transcendence that marks the complex endeavour of the NLG Transition to the SNFCC.

4.5 Prototyping: Branding Design and Communication Strategy

The winning team [9] chose to question the brief of the competition, challenging the need for a static logo and arguing that the plurality of the content comprising the NLG cannot possibly be captured by a single symbol or style. Rejecting an image based on a representation of a physical building or object, the team defined the NLG as a "intra-liminal" space: a place where counter-balancing forces interact to create a unifying whole. In this space the past meets the future, the analogue meets the digital, the private meets the public, the material meets the spiritual, the national meets the global etc. The NLG is thus perceived as a timeless space encompassing those forces, being in a perpetual state of transition. The proposed (anti-)logo gives prominence to typography, as the common denominator of all library material, regardless of provenance and format. The full name of the institution is written in

Greek alphabet using classic Elzevir font and the English name is in Latin alphabet using modernist Neue Haas Unica font, interacting at the core of a bold yet flexible logotype which embodies the "intra-liminal" DNA of the institution. Two icons carrying the NLG–EBE initials, inspired by the stamp books receive upon library check-in, are used as tailor-made trademark signs within the logo structure and beyond. NLG marketing material becomes recognisable by this interplay of letters that embraces imagery, managing content as form.

Instead of providing a restrictive set of design rules based on a single logo-type, the Brand Manual was developed as a guide to a new type of *Logos*, offering insights to a new mindset of content curation. Just as the alphabet and the grammar of a language provide endless possibilities of expression, so does the developed visual language and design syntax, allowing future designers to create endless interpretations on its content, without altering the core identity of the NLG as transmitter of the message. The result goes against quick and easy marketing practices, successfully embodying the effort and focus required to attain knowledge.

Throughout the prototyping phase, the design team worked closely with NLG staff and different contractors, in order to gain in-depth understanding of each service's development and provide custom-made design solutions that strengthen the overall narrative of the NLG brand. The completion of the Brand Manual was followed by an additional study on the application of the new visual language to diverse marketing tools in the physical and digital realm. The design team prototyped a series of merchandise products inspired by the new brand and developed a comprehensive signage system for the new building at the SNFCC. The main website of the NLG was redesigned and a sub-branding system was developed for diverse digital services, exploring how elements found in print books (footnotes, indents, tables of content, drop caps etc.) can be transferred to the digital realm. Additionally, a sub-brand for the Public Library Department was created expanding the core visual language with additional keyboard characters (symbols, punctuation marks, numbers) that generate playful emoticons in the aesthetics of digital coding, thus embedding the "alphabet" of the future into NLG's core identity.

The new positioning of the NLG led to the identification of three overarching user profiles: the Explorer, the Researcher and the Creator. Those embrace all identified target groups, creating a circular user journey that allows personal development from one status to another, following an uplifting spiral of learning. Placing the library content at the core of this spiral, the institution's services are reorganized and developed to serve a triple mission: Collection, Curation and Dissemination of content, aiming to facilitate users in their journey from accessing data, to processing information, to gathering knowledge, to attaining wisdom [10]. This human-centered approach is adopted in the content curation process, giving prominence to photographic portraits of the authors "residing" at the NLG instead of book covers, thus catalyzing a strategic shift from a collection of books to a timeless community of creators, researchers and explorers. The ethical component was given prominence throughout the rebranding process, with internal and external stakeholders stressing the purpose of the NLG as a steward of the values that define Hellenism, which led to

the definition of a shared vision for the institution: the perpetual evolution of humanism.

4.6   Strategy Testing: Pilot Marketing Actions

The testing phase of the new Communication Strategy allowed for the development of pilot marketing actions and improvement of design ideas by making them physical. Although time and funding limitations did not allow for thorough user testing and feedback, substantial progress was made in building the foundations for integrated marketing that can reinforce the NLG brand in the future. The NLG developed channels across websites and social media, it established a press office and produced print information material for its users. Its first series of talks entitled *Logos* tested the potential of the NLG to become a publishing house, managing its printed programs as a series of collectible booklets [11] that physically convey the sight, the texture and the smell of quality printing and binding. Communication content was further enhanced by creative copywriting reflecting the attitude of the visual identity, as well as the production of short videos and enticing photographs to enhance marketing materials. Simultaneously, creative input generated throughout the participatory rebranding process was tested on pilot NLG communications and programming: crowd-sourced content was used for artistic installations; social media campaigns adopted copyrighting sourced from stakeholders' workshops; the Public Library collection was co-created by 21 experts through a participatory "best of" book selection process. Design Thinking was thus not introduced as a linear process within the new branding goals, but as a way to embrace open innovation and participation across Library operations through constant experimentation, prototyping, evaluation and redesigning of services and programs.

5   Conclusion

The new visual identity of the NLG received the Golden Prize at the 2018 Greek Design Awards, being acknowledged as an iconic project in the history of Greek design, partly due to the prototyping process that produced a powerful intellectual and visual statement. The Brand Manual constitutes the final output of the process, providing strong foundations for the establishment of a new Department focusing on strategy, communications and marketing within the NLG. If "marketing happens in a cycle which constantly repeats" [12], one can argue that the first cycle was traced for the NLG, yet it will require new rounds of funding and continuous expert support, in order to seize the momentum and harness the potential that the new brand has created.

The rebranding of the NLG offers a practical example on how libraries and cultural institutions can incorporate participatory methods into their operations,

while developing their marketing strategies on the basis of co-creation. It contributes to a collective redefinition of what the words "public" and "service" can mean for libraries and how they can transform their purpose from being introvert repositories of knowledge, to vibrant learning Commons for future societies. The extent to which the new NLG brand will survive the test of time, remains to be seen. Regardless of how the institution will decide to pursue the challenging path that was charted during the 2015–2018 Transition Programme, the collaborations that were enabled, the human relationships that were formed and the creativity that was unleashed during the NLG rebranding process will undoubtedly produce a ripple-effect, worthy of further research.

References

1. Klinenberg E (2018) Palaces for the people. Crown Publishing, New York
2. Oldenburg R (2011) Celebrating the third space. Da Capo Press, Chicago
3. Deserti A Rizzo F (2014) Design and organizational change in the public sector. Des Manag J 9:85–97
4. Design thinking for libraries. http://designthinkingforlibraries.com. Last accessed 23 Sept 2018
5. Potter N (2012) Library marketing toolkit. Facet Publishing, London
6. Aaker D (1996) Building strong brands. Free Press, New York
7. Open call for interest: brand design competition for the new NLG visual identity. http://www.ggda.gr/2016/11/ανοιχτή-πρόσκληση-εθνική-βιβλιοθήκη/
8. GRdesign Magazine. https://grdmagazine.gr/2017/02/23/optiki-taftotita-ethnikis-vivliothikis/
9. Presentation of NLG rebranding by Papazoglou D, Triantafyllakos G. https://www.youtube.com/watch?v=WPSmKQ6eDQw
10. Ackoff R (1989) From data to wisdom. J Appl Syst Anal 16:3–9
11. National Library of Greece design samples. https://issuu.com/nlgreece
12. Lackie RJ, Wood MS (2015) Creative library marketing and publicity: best practices. Rowman & Littlefield, Lanham

Resilient Tourism in a Resilient Cultural Heritage Site

Vanni Resta and Fabio Perossini

Abstract This paper explores the possibility to provide a new touristic offer related to Cultural Heritage conservation. A tour operator could create a new dedicated package offer which includes something more than a normal sightseeing a site. The fundamental is the creation of a new offer able to create a new of "resilient tourism" demand. This new concept descends from the approach of an ongoing H2020 named STORM (Safeguarding Cultural Heritage through Technical and Organisational Management). Its goal is to provide critical decision-making tools to multiple sectors and stakeholders engaged in the protection of cultural heritage from climate change and natural hazards. The evaluation of historical records with the log of any trouble occurred to a site, the real-time on-site monitoring of regional climate projections and the statistically downscaled time series for individual cultural heritage sites at risk supports the overall risk assessment methods on which these tools are based. Giving evidence to tourists about "STORM" remedial actions and which are the procedures set in case of an emergency with a simulation of an i.e. evacuation and a simulation on how to intervene to restore a damaged work of art could represent a new touristic offer. With this concept in mind it will be possible to customize the touristic packages with a deep segmentation. For example, the target group of people attracted by new technologies in the field of: prevention, intervention and policies definition related to CH have the to see how they are used in specific CH site and to better understand the climatic change challenges a site is cope with.

Keywords STORM project · CH resilience · Digital experience · ArcheoVirtual

V. Resta (✉) · F. Perossini
Kpeople Ltd, Enfield, Middlesex, UK
e-mail: resta@kpeople.com

1 The Resilience Experience Excursion

1.1 Definition

According to the World Tourism Organization (UNWTO) [1], definition, 'tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes' (UNWTO, n.d.a.) [2]. Introducing the resilient experience will involve mainly cultural and social aspects and it could be enjoyed both from a professional point of view (training/awareness purposes), and/or for pure leisure.

During 2017 G7 of Culture in Florence a declaration named "Culture as an instrument for dialogue among people" [3], reaffirmed the importance to keep the value of cultural patrimony safe by improving knowledge of citizens related to risks and resilience needs of Cultural Sites.

Following that direction STORM project concept could be the driver for a touristic offer based on Resilience of Cultural sites providing few strong contents which are nowadays not visible for tourists: Risks faced by the site, Existing preparedness related to both structures and people involved in the site management, Quick assessment procedures ready to be in place in case of disasters. A dedicated experience could be proposed around those contents addressing not only practical operations but also safeguarding of social values which could be affected by a disaster. The experience should cover a first part dedicated to knowledge transfer to tourist related to risks, preparedness and quick assessment principle and available data (sensor dashboard, procedures workflow, etc.), arriving to an on-field exercise in which professionals could involve tourists in a disaster simulation with the use of advanced technologies including Augmented Reality and 3D navigation. This paper aims to explore how a research project dedicated to cultural heritage resilience facing disasters caused by climate change could be the driver for the creation of an innovative offer for tourists around the resilience of cultural site themselves.

1.2 Capitalise the STORM Project Research Outcomes

The challenge to move from research outcomes to a business proposal in a complementary sector to ones considered in that STORM project deeply involves a capitalisation process that should be based on the collaboration between initial partners and external entities used to deal with tourism market.

Resilience of Cultural Heritage has been a priority for STORM project from its born; moving to resilient tourism intended as tourism flow interested in resilience of cultural sites implies a re-visit of achieved outcomes to create the proper information flow provided with a due communication pathway.

The experience we are proposing could be considered close to the area of "edutainment" where "the dissemination of this CH knowledge is performed in an appealing way, integrating interactive elements and a proper storytelling, which is an essential part of any CH application" [4].

The identified technical solution could be a dedicated immersive mean to give life to the idea: "AR is a powerful tool that should be strategically implemented at cultural heritage sites; not only to increase competitiveness and ensure sustainability, but to offer a valuable learning experience for its visitors" [5]; but it should be coupled in a transparent way to STORM project outcomes. This will create an ideal environment for resilient tourism.

2 Creating the Offer

2.1 Resilient Tourism Value Chain

A tourism value chain should be driven by the passion, pride and confidence of key stakeholders that visitors will experience the best that a destination can offer [6]. A tourism value chain is simply defined as a system which describes how private sector firms in collaboration with government and civil society receive or access resources as inputs, add value through various processes (planning, development, financing, marketing, distribution, pricing, positioning, among others) and sell the resulting products to customers. The specific resilient tourism value chain describes the full range of activities that are required to bring a product from its conception to its end use and beyond.

In Fig. 1 a clear description how, STORM project platform and its content could be part of a wider offer addressing an engaging experience for tourists, providing a full visibility view point of mitigation strategy apply to specific cultural sites.

Adapted Value Chain Model, Michael Porter 1985
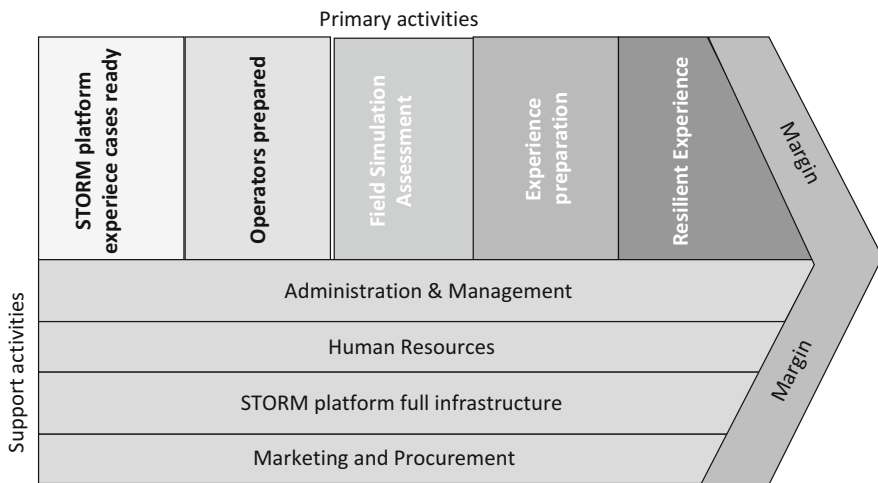
Fig. 1 Adapted Porter's arrow

Pre-requisites for the offer to be deployed are a populated STORM platform together with trained touristic guides and the right simulation site providing a high level of realism. The experience should be supported by technologies ranging from the use of own smartphone (low engagement), to the use of dedicated AR (augmented reality), devices to get a better experience.

A recent study [7], suggests that technology use as a complementary way to improve cultural site business. Indeed, as Arnaboldi, Scientific Director of the Observatory of Digital Innovation in Cultural Heritage and Activities in Italy said, "Cultural Institutions are today faced with a double challenge: it is not enough to attract visitors but you need to find a way to communicate your heritage in a new way, bringing it closer to the needs of citizens' knowledge and experience" [8]; the potential offer represented by the provision of information around cultural heritage resilience and the real experience which could be offer as a new touristic one is going to be help facing the double challenge identified.

2.2 Value Proposition and Business Canvass

In this section the offer definition in terms of value proposition is addressed using the Osterwalder Business Canvas [9] (Fig. 2):

Fig. 2 Business model canvas—STORM resilient tourism offer

If from one side it is clear the role of actual partners in the STORM project being the developers of the overall research, three additional partners are needed to create a sounding offer and they range from Tourism authorities, Tour operators and a key partner to identify the proper approach to tourist: the Communication (including A. R.), expert. Each of them should perform action for the common goal to have an enjoyable immersive experience directly linked with CH resilience.

In terms of value proposition the idea is to turn most of research outcomes into a leisure content while maintaining their high scientific value. The overall focus of the entire value proposition is how to improve the resilience of cultural sites with a drill down view from the entire site up to the single item. A.R. use will be an added value to allow tourists a personalized view of what has been done in the site. Nevertheless, the tourist could also participate in the resilient process in what has been defined as "explicit crowdsensing", providing the sensor capability of his own device to feed STORM platform monitoring data and/or providing specific pictures/clips when requested.

All these activities should follow GDPR's [10] regulation, so tourists will be asked to fill in an informed consent before joining the experience.

STORM project activated a stakeholders' engagement campaign at the very beginning of the project; anyhow appointed stakeholders are involving neither communication nor tour operators. This is a lack that should be considered in the following period of STORM activities.

In the following chapters themes of business models and related revenue streams will be addressed. From the marketing point of view, it will be important to introduce the idea during specific events dedicated to Tourism to check the interest of tour operators in such resilient tourism.

It is also interesting to see how new recovery projects involving cultural site includes, when it can be done in a safe way, the possibility to see how restoration are going on; the so called "live restoration", e.g. Reggia di Caserta IT call for tender, 2018 [11]: "*Given the importance of the asset on which it intervenes, the competitor must illustrate a proposal concerning the methods of documentation of all the executive phases of the building site, describing techniques and computer/multimedia equipment that it intends to use to provide updates on time real about the progress of the work, produce a detailed and complete documentation of the activities performed, aimed at verifying the treatments carried out as well as the scientific dissemination of the results*". The described approach could be the starting point to enlarge the availability of partial or whole information to tourists interested in how the site resilience is going to be addressed.

3 Target Market

3.1 An Indeterminate Market

Apart from what affirmed in the previous paragraph, by now, the problem is to have correct figures both from the supply and the demand for a rigorous market analysis.

In fact, taking into consideration the supply side, it will be necessary to count on a proper standard for defining a "Resilient CH site". Empirical evidence wants a non-uniformity in defining all the processes and measure adopted from a CH management. This consideration push to affirm the need of the creation of a proper "resilience brand" like is happening in other sectors (see what EMAS is doing in touristic sites for the certification of environmental compliance). As per the mentioned certification its potential of innovation could lies in the principles from which it draws inspiration, that is the sharing of responsibility in the management of conservation issues, the control of activities generating impacts and the use of market mechanisms that seek in CH preservation excellence a source of competitive advantage. The strong point of this potential resilience registration, beyond the creation of a solid structure capable of systematically controlling and managing climate change and environmental impacts on a CH site, lies in the search for communication and transparency, or in improvement of the relations between CH site's manager and control bodies, institutions, citizens one of the pillars on which the STORM project is based with.

Also, on the demand side of cultural tourism there are, in most of the cases, a lack of an aggregate analysis for "customers" of cultural tourism who visited popular CH sites in terms i.e. of gender, age, preferences and, most important, motivation for the visit itself.

Nowadays available data as per an example in Italy are: (4588 museums and similar institutions, both public and private, were open to the public, they included 3847 museums, galleries or collections, 240 archaeological areas or parks and 501 monuments or monumental compounds. In Italy, one museum or similar structure can be found in nearly one municipality out of three) [12].

Giving the presented situation the starting point of a research aiming at better analyse the demand is the conduction for a selected local area with a CH resilient site of a sort of "Traveller Survey" as a profiling exercise which gives important insights on tourist behaviour (pre-trip, during trip, and post-trip), levels of satisfaction with elements of CH tourism offer and overall tourist experience.

An effective methodology to be used could be the categorisation of cultural tourism based on "levels of interest" mentioned by the model which foresees four main categories [13] (Table 1).

Interested on categories 2–3–4 for the Resilient CH Tourism could attract other kind of motivation like the one of youth more interested toward new technology more than culture or certain kind of individuals with technical profile who can express motivation in having a visit of a CH site with new elements.

Table 1 Categories of cultural tourists

1. The greatly motivated	People who travel to a destination specifically because of its cultural opportunities, such as museums, cultural festivals and theatre
2. The motivated in part	Persons who travel both because of the cultural opportunities along with other motivations such as sun, sea and leisure
3. The adjunct	People for whom culture is an add-on to another more important motivation
4. The accidental	People for whom culture is not a motivation to visit a destination but engage unintentionally in cultural-related activities once at the destination

The research goal is to break down the total number of tourists by motivation of visit also allowing for overlap between motivations, considering that people may not always choose a destination based on one interest but may have several.

4 Business Model

4.1 B2B Players

The market of Cultural Tourism is dominated by the Digital Experience (Digex) as the most important way to enhance a cultural heritage through digital technologies i.e. the "Digital Twin" and the so called ArcheoVirtual. Digex showcase the latest technological solutions created to foster cultural tourism.

This trend is, of course, should be kept in very deep consideration. However, it is not the unique way to enhance the participation of certain categories of tourists like youth.

Actually, there are some shy attempt to increase Cultural tourism in B2B events reserved for the consultation between demand and supply of cultural itineraries between professional operators in the tourism sector. The aim is to provide a marketplace in which perform an exchange and benchmark dedicated to operators specialised in these important tourist segments.

In this event [14] the sellers are: Tour operators, tourism agencies, local authorities, foundations, associations and organizations that offer cultural tourism itineraries in Europe and abroad. On the opposite side, buyers are selected among travel agents, associations and organizations that commercialize cultural and archaeological tourist itineraries to the final customer and who are interested in strengthening their range of products and itineraries.

Another relevant example to be mentioned is the "Mediterranean archaeological Tourism Stock Exchange" [15] an original event and site of the only exhibition hall in the world of archaeological and "archeovirtual" heritage, the innovative International Exhibition of multimedia technologies, interactive and Virtual Place of deepening and dissemination of themes dedicated to cultural tourism and heritage; Occasion for meetings for the professionals, for the tourist and cultural operators, for the travellers, for the enthusiasts; Business opportunities with the buyers. A

successful format witnessed by the prestigious collaborations of international organizations such as UNESCO, UNWTO and ICCROM as well as from about 10,000 visitors, 120 exhibitors with 25 foreign countries, 70 between conferences and meetings, 300 speakers, 100 operators of the offer side and 100 journalists.

The two mentioned experiences underline more and more the importance of cultural heritage tourism as a factor for intercultural dialogue, social integration and economic development, and the need for study in dept the huge potential of the not properly explored market which characterize the Cultural Resilient Tourism.

4.2   Selling the Resilient Offer

One understood the market, supplier of CH Resilient site can sell admissions ticket with an add-on fee for the new offer for the "service" dedicated to show how the site is resilient. This new offer could vary from site to site and could be: a simulation of the processes and procedures which are in place in case of a hazard, a preparedness or quick assessment exercise, a demonstration of the features of the installed sensors, a mock-up of rescue method occurring a crisis, etc.

It is relevant to mention that even the business model is clear, the calculation of the add-on fee should be considered in respect of the "quantity of resilience" of the site in which it should be applied or rather the quantity the site could express or demonstrate. This amount is another unknown element which should be studied. In other words, also, the pricing schema should be part of an ad hoc research.

5   Conclusion

Resilient tourism is a new branch which need further investigation. There is a lot of work to do in defining details of the market's components both on the side of the demand and the supply. The STORM research project is a valuable attempt in creating conditions for a different fruition of the CH tourism in term of an extension of its figures and potential.

The research done clearly shows that cultural heritage offer needs an improvement in order to maintain its appealing and involve a wider range of tourists; the innovative offer provided by new means growing around cultural site resilience are emphasized also by the press interest in damages occurring to cultural heritage due to climate change and related disasters.

References

1. http://www2.unwto.org/
2. Nurse K, Stephenson S, Mendez A (2017) Tourism, trade in services and global value chains. Future Fragmentation Processes 145
3. http://www.beniculturali.it/mibac/multimedia/MiBAC/documents/1490881204940_DECLARATION-Dichiarazione.pdf
4. Martínez B, Casas S, Vidal-González M, Vera L, García-Pereira I (2018) TinajAR: an edutainment augmented reality mirror for the dissemination and reinterpretation of cultural heritage. Multimodal Technol Interact 2:33
5. Moorhouse N, Jung T (2017) Augmented reality to enhance the learning experience in cultural heritage tourism: an experiential learning cycle perspective. eRev Tour Res 8
6. Hawkins D, Nikolova M (2005) Knowledge applications for competitive destinations. WTO Education, Dakar
7. Panciroli C, Russo V, Macauda A (2017) When technology meets art: museum paths between real and virtual. Proceedings 1:913
8. https://www.osservatori.net/it_it/osservatori/executive-briefing/il-52-dei-musei-italiani-e-social-ma-i-servizi-digitali-per-la-fruizione-delle-opere-sono-limitati
9. Osterwalder A (2004) The business model ontology: a proposition in a design science approach
10. https://en.wikipedia.org/wiki/General_Data_Protection_Regulation
11. https://agcult.it/wp-content/uploads/2018/08/Disciplinare_RC-signed.pdf
12. Museums. Monuments and similar Institutions Survey. Istat 2011 at http://www.istat.it/en/archive/106183
13. Lord GD (1999) The power of cultural tourism. In a Keynote Presentation presented at the Wisconsin heritage tourism conference
14. http://www.tourisma.it/
15. A sector meeting point which will be held in one of the beautiful Italian archeological site Paestum as the XXI edition from November 15th to 18th, 2018. http://www.borsaturismoarcheologico.it/

Cultural Innovation Management: Pilot-Research in Production Units, Greece, 2017–2018

Olga Tsakirides

Abstract Many traditional units in the industry exploit traditional raw materials to produce modern innovative products. The chain production is as if unwinding a string of thread from the past into present and future. This paper examines the terms of innovation and cultural innovations brought by such production units that rely on tradition in order to create innovative products. The results of a pilot-research survey are presented methodologically, with regards to the importance of the implementation of innovation for the above mentioned units, their staff and the positive impact that bring to local societies, economy and sustainable development.

Keywords Innovation · Cultural innovation · Cultural innovation management

1 Introduction

Globally, many enterprises either factories or smaller units, get inspired, or even continue a long last tradition, from culture. Their production rely on traditional raw materials, continue traditional methods in the production processes, their production are unique and distinguished because in each country culture provides elements that cannot easily found elsewhere. Modern enterprises based many times in the local environmental resources and the cultural as well to create their own competitive advantage.

This paper focus on such production units and furthermore examines the methods followed in order these units survive in a highly competitive economic environment. The key element is the implementation of all types of innovations, which improves their production and overall appearance in the scene. It is based in a research-study carried out under the title: "Innovation Based on Tradition and Culture: Research in Production Units", yet unpublished in the National Center of Social Research. This overall study, as a basic research, includes a distant survey focusing in the above

---

O. Tsakirides (✉)
National Center for Social Research, Athens, Greece

mentioned units and scientific observation on their official websites. The survey is a distance desk research exploiting Google apps, hence is considered a pilot research aiming to bring some light on the field and take some information for further in depth research and analysis.

2   Innovation and Cultural Innovation

Innovation plays a crucial role in modern society and therefore to the economy as a notion, but also as a practice. Innovation brings something new, a fresh idea that causes crucial evolutions and improves in production, sometimes an idea coming from "out of the box" creative thinking. Etymologically comes from the Latin word "nova", meaning something new but this etymology comes from the ancient Greek term "kainotomia" coming from "kainos" (:new) + tomi<temno (:-cut, implement something new) [1]. Smith [1] mentions four known definitions in his book regarding the management of innovation. These definitions refer to the following characteristics: Innovation is considered as something new; it can be implemented by an individual, groups of people or organizations; the new idea is not enough, it has to be implemented and developed with continuous improvements in the procedures of production or creation. Innovations could be new products, new processes in production and in corporate culture, new ways of marketing.

An innovation occurs when a product is being grown, getting improved, widens its consumer base, is produced at a lower cost, improves the competitiveness of the enterprise or organization that introduces the innovation [2]. By studying the relevant literature, innovation can be seen throughout the production of a product, from its conception to its full exploitation. The National Documentation Center report states that there are four types of innovation: (a) Product Innovation, (b) Innovation of production process, (c) Organizational innovation and (d) Marketing innovation [3].

Innovation, however, nowadays is of great interest to both the Economy and the Management sectors. Several scientists examine the phenomenon of innovation, whether it is promoted individually or collectively—usually—and underline changes that need to be made in order to support it. These new experiences are increasingly summarized in a new topic called "the management of innovation and change" (management of innovation, management of change) [4]. Innovation is directly linked to the technological progress, the technological achievements, which bring about a variety of social and cultural impacts, sometimes intended or not. Strategic planning regards to innovation is a high priority objective for the European Union and its Member States [5].

Cultural innovation as a term has been known in North America since the beginning of the century, often combined with the introduction of technology into creation-production, rescue-preservation, but also for the spreading of cultural goods. It may also mean the introduction and development of innovative ideas in the management of cultural units and the exploitation of cultural resources

[6]. Doing simple desk-research on the internet in websites, a number of curricula at universities in the United States that specialize in this subject named exactly as "Cultural Innovation" are found. It is usually combined with entrepreneurship.

From the study of the available literature so far, the study and observation of authoritative sources at the internet, is concluded that the concept of "cultural innovation" refers to: (a) The transformations of culture before, during, but also after the application of innovations of all types in enterprises or organizations in general. (b) Innovations that apply to the wider cultural sector, including creative and cultural industries. (c) Innovations that include new technologies and digitization in the wider cultural sector regarding to creative and cultural industries or cultural heritage. (d) New institutional methods for organizing, managing, producing and publishing cultural products and services [7]. Innovation plays an important role in the cultural sector, being one of the goals of an effective organization of cultural activities [8].

In the first case it concerns the culture of the society as well as the corporate culture or organizational culture, known internationally as organizational culture and corporate culture. The transformation of new ideas into innovations is separated in two major stages: (a) The process of shaping innovation from the original idea. (b) The process of applying innovation to the environment. Innovation management plays an important role in these stages because it is required to protect the original idea and create the right climate for its development.

According to the above mentioned analysis based on the available data a working hypothesis is transformed; the term of "cultural innovation" nowadays has been increasingly used with an emerging emphasis on its cultural content; the production units that rely on culture and tradition need a different kind of management nearer to the cultural management, which gives emphasis on the human resources, the total quality management and preserves interactive dialogue with the local communities and culture in general. Hence, we could speak about a "cultural innovation management", an evolution in management based in the modern procedures.

3   Methodology

3.1   Aim of the Overall Study and Research

The aim of the study is to examine the theoretical aspects of innovation in brief and the new term of cultural innovation and then to highlight some key elements in the management of innovation in production units, which were based on tradition and culture and through innovations, they managed to create modern and innovative products. The design of the questionnaire was based on the principles of clarity and simplicity, so that it is easily be understood and does not take much time to complete it. It consists of 13 closed questions and simple alternative questions, and only one (1) open question. The questionnaire was sent to 59 production units/industries during December 2016 and January 2017. There was a repetition of its submission

during April and May 2018. According to the research, 70 units was recorded in the available time throughout Greece, but only 59 of them were accessible; thus, these 59 units consisted the final target-group of the survey. Twenty of them answered, meaning 33.8% approximately. According to bibliography for distant surveys is a quite good rate for a distant survey through internet. Such surveys most of the times show a significant response error. In order to gain more reliability, and getting closer to the reality, a methodology of Mixed Mode research was used, thus the first mode included survey through internet and the second mode referred to scientific observation in the websites of the units consisting the sample [9, 10]. The research was a pilot-research study, just to investigate the field for a first time under the above mentioned approach. Entrepreneurships, as well as industrial units, old or new start-ups, producing innovative products, which rely on tradition and culture of the country in general, using its cultural heritage, consist the sample of the survey. The research is considered a pilot-research because the total number of units throughout Greece under the above characteristics remains hidden in the darkness. Qualitative approaches were taken into consideration [11–13].

The duration of the whole project lasted 11 months. In the first 4 months a desk research was carried out, followed by research in available data bases and archives for another 3 months. The survey lasted 3 months. The observation in the websites lasted also about 2 months.

3.2   The Sample of the Survey

Fifty-nine (59) units have been recorded according to the purpose of the research and the goals of the survey, of which two are enterprises promoting traditional innovative products. It should be noted, that because the sample cannot be recorded as a whole throughout Greece, it is not known in a national basis how many units with these characteristics exist, hence, this research is considered to be a pilot research that will, principally, shed light on this field. The companies of the sample were identified through various sources, such as international databases, European and national archives and the internet. More specifically, the units under consideration belong to the following industrial branches: Wine-making industries and estates (wineries), Beer brewering industries, Distilleries of traditional liqueurs, Ouzo Manufacturing Industries (Ouzo is a unique traditional kind of liqueur with a flavor of anise), Beekeeping and craft industries, Fashion industry, Marble Industry, Cosmetics and personal hygiene industries, Manufacturers of sleeping goods, Businesses and cooperatives for the production of legumes (Santorin fava, Engluve lentils, Prespa beans), Mineral water industries, Bread makers-flour industries, Jewelry.

4   Findings of the Online Survey

Half the respondents are old units, that have been modernized and implement innovations as an effort to improve their products, production process and competitiveness. Older units rely on fewer workers. 57.1% of the units consider themselves as "Crafts" and 42.9% as "Industries". All are based on traditional raw materials, and more specifically 86.7% use raw materials, while 13.3% exploit the traditional production processes. Many units persist on the importance of training. All units of the sample have proceeded in innovations. The 88.2% has applied innovation in its final products, the 58.8% has applied innovations into the production process, the 41.2% applied innovations into the organization of the staff and 58.8% applied innovations in marketing. Most of the units started to implement innovations after 2011. All units agree that innovations were helpful in general. 58.8% of the units consider that they have become more competitive after implemented innovations, 17.6% are more well-known abroad, while 11.8% of the sample considers that the company has become better known in the domestic market. It is noteworthy, however, that no enterprise has stated that the company's profits have been increased due to the implementation of innovations. This answer requires detailed in-depth research, having particular interest, because its solution could help the units for their future investments. Almost all businesses (94.1%) believe that in order to apply innovations some relevant improvements are needed to change in the corporate culture. All companies believe that the implementation of innovations has benefited the employees. This answer also requires further in-depth research to see where exactly employees have been benefited. 88.2% of the units believe that there was a positive social impact in the local community, while 11.1% do not. All units agree that innovation needs renewal from time to time.

5   Discussion Points

Older and newer companies that base their production on tradition to make it more competitive and familiar to both domestic and foreign markets, use all types of innovations, mostly product innovations, innovations in organizing, but also in the marketing of products. The companies of the sample show strong tendencies in modernization, applying innovations in the organization, particularly in changing the business culture. For this reason, they hold seminars not only for their own staff but also for their suppliers and customers (see Porter's Five Forces Theory) [14, 15]. It is important that they realize that a modern business cannot rest on its laurels, as modern developments in the economy are now happening in a stormy way on the global market, so they consider innovation as a positive development and a continuous process of self-improvement.

In this paper, in a brief way, theoretically the terms of cultural innovation and cultural innovation management were examined as regard to the production of a

special category of companies that based on tradition and heritage in order to produce innovative modern products. The main questions are: how these companies manage to create innovative modern products although they follow traditional ways? How they manage to bring the past into the future? The survey and the observation of their websites revealed that the key to success is the adoption of all types of innovations harmonized with tradition and heritage under the deep respect of the principles of sustainable development and the open dialogue with the local society. These production units seem to be more "open" to synergies acting in an interactive way with the local communities, rely on research and modern scientific tools for a continuous process of improvements.

Some new research questions are revealed, such as:

How exactly the staff get benefits from the implementation of innovations?
Why profits are not increased, despite the implementation of innovations?
What exactly are the new training needs for the staff and the executives?
What are the new elements of the corporate culture that are necessary after the implementation of innovations? Are enthusiasm and positive atmosphere enough to support them?
How local communities could benefit more, without building barriers to local development?

6   Conclusion

The conclusions, both from the theoretical and the empirical analysis, but mainly from the combination of the theoretical with the empirical part, are summarized in the following: In Greece, there is a wealth of traditional raw materials, products and production processes, which with the help of research and innovation are improved gaining a significant competitive advantage as local traditional products. The tradition of each place is original and is perfectly combined with all types of innovations with the assistance of systematic research. The combination of tradition and innovation helps the production units to create export products, improve their image in the external and internal markets and contribute positively in local and social development. A basic prerequisite for the implementation of any innovation is the research, diversification and adaptation of the in-house culture.

Culture, in all its forms, either as a cultural wealth or as a cultural action, can effectively create cultural innovations by supporting all sectors of the economy (primary, secondary, tertiary). By developing synergies and collaborations between culture and business management, a new semantic dimension is given to the concept of "cultural innovation" for the image of a place to be created and promoted online as well [16–20].

Ultimately, culture can effectively support the economic activity of enterprises by demonstrating in practice how culture is both wealth and action, since all sectors of the economy and society are indissolubly linked as a single cultural phenomenon.

The concern raised by the previous conclusion is that cultural action, if linked exclusively to the economy, may undermine free creation and expression when there are no visible tangible results.

Several businesses now tend to develop parallel cultural activities such as establishing museums, rebuilding production sites so they can be visited, contributing to informal education and quality upgrade of the tourist product. Businesses which decide to implement innovations broaden their horizons and contribute more to the process of sustainable development.

International and European organizations and institutions such as UNESCO, the European Commission and the Council of Europe support modern entrepreneurship and innovation in the context of sustainable development.

References

1. Smith D (2006) Exploring innovation, 2nd edn. McGraw-Hill, London
2. Haner UE (2002) Innovation quality – a conceptual framework. Int J Prod Econ 80:31–37
3. Tsakirides O (2017) Innovation based in tradition and culture: research in production units, in socioeconomic dimensions of innovation in industry and labour market, package 4, chapter 9, pp 12–15
4. Spais G (2007) Introduction to the management of technological innovations. Kritiki, Athens (In Greek)
5. EU (2016) Strategy for innovation. http://ec.europa.eu/regional_policy/sources/docgener/panorama_en.htm
6. Healy K (2002) What's new for culture in the new economy? J Arts Manag Low Soc 32:86–103
7. Jelinčić DA (2017) Innovations in culture and development: the culturinno effect in public policy. Palgrave Macmillan/Springer, Cham. https://doi.org/10.1007/978-3-319-52721-5
8. Gantzias G (2017) Cultural management and cultural activities: the model dynamic perception of cultural activities. https://doi.org/10.4018/978-1-5225-2458-8.ch002
9. Dillman DA, Fhelps G, Tortora R, Swift K, Kohrell J, Berck J (2000) Response rate and measurement differences in mixed mode surveys. Using mail, telephone, interactive voice response and the internet. Social and Economic Sciences Research Center, Washington State University
10. Dillman DA (2000) Mail and internet surveys: the tailored design method, 2nd edn. Wiley, New York
11. Kavoura A, Bitsani E (2014) Methodological considerations for qualitative communication research. Procedia Soc Behav Sci 147:544–549
12. Kavoura A, Tomaras P (2015) Qualitative communication research methods and techniques. In: Ghorbani A, Amandeep T (eds) Market research methodologies: multi-method and qualitative approaches. IGI Global, Hersey, pp 156–171. https://doi.org/10.4018/978-1-4666-6371-8.ch010
13. Berg LB (1998) Qualitative research methods for the social sciences. Allyn and Bacon, Boston
14. Varelas S, Georgopoulos N (2017) Porter's competitive forces in the modern globalized hospitality sector – the case of a Greek tourism destination. Tour Res Inst 18:121–131. ISSN: 2241-7931
15. Papadakis V (2009) Modern issues about corporate strategy. Benos Publications, Athens. ISBN: 978-960-359-097-2
16. Constantin F, Kavoura A (2016) Multilingual communications in corporate websites: cases of Romanian dental practices and their application to health tourism. In: Katsoni V, Stratigea A

(eds) Tourism and culture in the age of innovation, Springer proceedings in business and economics. Springer, Cham, pp 185–196

17. Tsakirides O (2017) Innovation based on culture and tradition: research in production units. In the framework of the research project titled: socio-economic dimensions of innovation in the industry and the labor market, Package 4. National Center for Social Research, Athens

18. Martha L, Agaliotou C, Panos P (2015) Cultural festivals on sites of cultural heritage as a means of development of alternative forms of tourism. In: Strategic innovative marketing: 4th IC-SIM Mykonos, 2015, pp 455–462

19. Kavoura A, Tiago T (2016) Understanding online communities on social networks via the notion of imagined communities: the case of TripAdvisor. Int J Web Based Communities 12:238–261. https://doi.org/10.1504/IJWBC.2016.077759

20. Kavoura A, Nechita F (2017) An exploratory study of online destination images via user-generated content for Southeastern Rural Transylvania. In: Kiralova E (ed) Driving tourism through creative destinations and activities. IGI Global, Hershey, pp 45–66

Developing the Museum-Monumental Experience from Linear to Interactive Using Chatbots

Lazaros Toumanidis, Petros Karapetros, Christos Giannousis, Dimitrios G. Kogias, Michalis Feidakis, and Charalampos Z. Patrikakis

Abstract Under the general hypothesis that a museum or a monument can create qualitative learning experiences for their visitors by using the latest technology of Artificial Intelligence, this paper presents a proposal on the use of chatbots (e.g., digital co-speech emulators) in order to enhance a museum visitor's experience. Two examples, making use of real use cases for the Museum of Greek Folk Art in Athens, are presented where two chatbots are proposed, covering the needs of prior and during the visit, together with a reference implementation on a mobile device. A methodology for evaluating the results of application of the proposal, based on semi-structured interviews for experts is also provided, in order to assist the application of the proposed idea in different cases.

Keywords Artificial intelligence · Chatbots · Interaction · Museum · Mobile learning · Mobile application

1 Introduction

In the twenty-first century, the advances of Technology and their influence in many aspects of the human life is without question or doubt, especially regarding the production, storing, sharing, processing and managing of information data. In this context, Artificial Intelligence (AI), thus the field of computing that deals with the design of intelligent computer systems, has been developing the last 70 years. In addition, Machine Learning (ML) that is "the ability of Computers to learn using algorithms and program their next move without being programed for it [1]" is, also, considered as part of AI. Progress on the field of ML allowed the development of smart digital discussion partners or discussion interfaces, better known as chatbots

L. Toumanidis (✉) · P. Karapetros · C. Giannousis · D. G. Kogias · M. Feidakis ·
C. Z. Patrikakis
University of West Attica, Egaleo, Greece
e-mail: laztoum@uniwa.gr; bpatr@uniwa.gr

or, just, bots. Those are simple computer programs that take part in a conversation by using a digitally processed human voice.

Nowadays, it is commonly accepted that education is not only limited inside a classroom but, typical education continues to take place outside and, in fact, lasts during our whole life. Some of the areas where the education limits are extended include cultural heritage sites, e.g., museums, monuments, artefacts. In modern educational process this is identified as a non-typical education type and is directly connected with autonomous, participatory, interactive and non-linear learning of the visitor. Unfortunately, most of the cultural heritage sites manage to tire or bore the visitors resulting in small attendance numbers, short typical stops in front of the exhibits and, eventually, forgetfulness of this experience. This sad phenomenon can be dealt with by the smart use of technology in these sites, and one potential such use is that of the chatbots. Past recent experience, from the use of chatbots, especially in sites across Europe, has been really encouraging. The real reasons for this success are related with the enhancements that it delivers in productivity, entertainment, sociability, innovation and curiosity [2]. Therefore, if the chatbot is designed with respect to the peculiarity of the visitor, the culture and history whilst using the principles of modern museum education, it can enrich the visitor's learning experience and open up a new field of imaginative application of chatbots' technology to education. Several cultural organizations are already experimenting with bots as part of their audience engagement programming [3].

This approach is covered in this paper, by the design of two chatbots and a reference application for mobile phones, followed by a description on how to evaluate the results from this experience. To this end, the two chatbots will cover two different phases of the visit on a cultural heritage site (i.e., the Museum of Greek Folk Art was selected in our use case for reasons explained in Sect. 3): one for the preparation phase before the visit and one during the visit, in order to be able to compare the interest of the visitor before and after going through this interactive experience.

The structure for the rest of the paper is: in the following Section an overview of the way that the use of technology, and especially the use of chatbots, can enhance the experience of the visitor is described. In Sect. 3, the design steps for the preparation of the chatbots are presented, while in Sect. 4 description of the reference application is provided covering a new use case as an example. In Sect. 5, the methodology for the evaluation of the chatbots is described, followed by possibly extensions and improvements on the design and development on the chatbots in Sect. 6.

2   How the Use of Technology Can Enhance the Experience of a Cultural Heritage Visit

A visit in a museum or a monument can produce many qualitative learning experiences, especially when it is enhanced with solutions that take advantage of the novel technological characteristics of Artificial Intelligence, with chatbots being an excellent such example. The reason is that the use of chatbot technology from museums or monuments can overcome the traditional didactic, linear, purely informative museum-monumental experience of visitors and enrich it and develop it into dynamic, participative, interactive, creative, personalized, entertaining.

While the encyclopedic knowledge that museums offer is inherent in applications that attract the interest of the visitor, he/she is often degraded to a simple passive consumer of that information that prevent him/her from forming a more appealing and interesting cultural experience. Therefore, the visitor is only limited to dry knowledge of the exhibit without forming a "personal relation" with it [4]. Extreme solutions had no success since they lead to lack of communication [5]. Based on this experience, it was concluded that the problem should not be focused on whether information will be offered but rather to what kind of information will be offered from the museum, so that it could be of value to the visitors. This context created an entry point for the use of technology provided that it is not an end in itself but a means of enriching cultural experience [4].

Modern museum experience has, nowadays, access to a variety of digital means to enhance and offer an enriched experience to the visitor. To further advance on-situ experience, the development of mobile applications also is more and more preferred. Especially, the development of time-sensitive applications, which operate only inside the museum for which they have been developed, since they trace the location of the visitor, has been tested with many positive feedback results. The reason for the design and development of such time-sensitive applications stems from the fact that the visitors of a monument often find it hard to communicate with the exhibits [6]. The needed connection is established with the development of applications that work as interpretation tools focusing on the exhibit. Those applications are designed for smartphones and work in specific locations (e.g., inside a museum) by managing to track whether the user is positioned inside the programmed coordinates (of the museum/monument) by using, often, the GPS signal of the smartphone.

All these solutions allow for a free movement of the visitor in the museum/ monument area, surpassing the predefined linearity of successive passing-by the exhibits in a room. Examples of such time-sensitive applications include games, guides, interactive stories, soundwalks etc. All these manage to deliver a personalized cultural experience to the user that could be remembered long after it is concluded. In addition, chatbots can suggest certain exhibits to the user to see and adapt the provided information about them so that the language that is used, the level of detail and the context, is such as to match with the user's preferences, as those have been recorded during previous visits or through basic questions at the beginning of the tour.

In order to take advantage of the aforementioned features provided by the use of technology, along with A.I.-based, time-sensitive applications, two chatbots: one that should be used prior and one that is used during the visit will be designed. Also, a reference application that can support a visitor to communicate with the exhibits of a museum or monument will be developed.

The designed chatbots and the reference application aim to stimulate the interest of the visitor, to engage him/her emotionally so as to create the right conditions to get in touch with the exhibit features or with information about it. That way, the visitor is expected to spend enough time in front of the exhibit to observe it and integrate it into a broader context i.e. of an era [7].

In the following section, more details regarding the design of the two proposed chatbots and the mobile application is described.

3   Design of Two Chatbots and a Reference Application for Mobile Phones

For the design of the two different chatbots and the reference application, certain general principles should be followed, many of which are common in both cases. The main difference of the two approaches lies in the implementation choices that were selected in each case.

In more details regarding the design of the chatbots, initially the selection of a cultural heritage site should be made to provide access to official and authorized material and information of the exhibits. In our case, the Museum of Greek Folk Art in Athens was selected for the design of the chatbots, because it is a rather small and friendly museum with a character on its own. The exhibits are organized in sectors, rooms and floors while the way they are placed for the exposition offers the room to the visitor to make assumptions and build his/her own personal experience. On top of this, the exhibits are real objects (e.g., a plow that will be used as a use case for the chatbots), those that usually are the kind of exhibits where the visitors don't spend much time standing over, something that we wanted to deny by using chatbots, since the amount of time spent standing over an exhibit is considered as an indicator of the visitor's interest of it. Filing for a request at the Museum, they provided us access to the needed official digitized material, used to enhance the application, combined with material found in several external sources.

Having chosen to create two different chatbots, one that will assist on the preparation for the visit (before it takes place) and one that will be activated during it, next the way that those chatbots will be displayed to the user should be decided. In our case, both chatbots were decided that they should have a human character, personality and sense of humor. The chatbots before the visit was decided to be accessible via the popular application of Facebook Messenger, where the chatbot will be created following the guidelines in Richardson [8], while a mobile application will be used for the chatbot during the visit. The use of the reference application

for the chatbot during the visit will be implemented in following versions of the application.

In more details, for the chatbot used before the visit, many multiple-choice questions were selected, in an effort to allow the prospected visitor to choose what interests him/her most. That way, personalization of the experience can be achieved through the answers, by allowing the chatbot to propose a route to be followed during the visit at the museum, closely adapted to the interest as those have been provided through the answers. For the chatbot enabled during the visit, two different versions of the application were designed based on the pair of available abilities: the first is the one where the order of questions from the chatbots follows a predefined sequence (guided experience) and those questions are stored in a database, while the second is the one where the visitor converses with the chatbot freely, without guidance or restrictions. The latter needs to have access to an A.I. software to deliver the chatbots' dialogues from sources of information regarding each exhibit. In our case, it was decided that, both scenarios will be covered by different versions of the application, to study the pros and cons of each one. For the former approach, the decision regarding the displayed information should be taken in advance while for the latter there is no such need since it is the AI software responsibility to deliver the lines.

For the design of the guided approach, a careful bibliographic and networking research should be conducted which will provide enough data for the selection of the elements of the theory which should be included, especially those that could synthesize the theoretical framework for the design of the chatbots' dialogue feature. This would be the starting point for the structure of the possible dialogues, in the form of questionnaires. By answering correctly at a certain question, positive feedback should be provided to the user, while false answers or declarations of ignorance should quickly be followed by assisting feedback and encouragement to continue the effort. If everything fails, then the chatbot would provide the correct answer to the user. Since the conversation will be interactive, the visitor should also be able to have power over it, by being allowed to skip parts of the dialogue so that he/she can focus on others that are of greater interest to him/her. Especially for the most efficient delivery of this guided method, a heterogeneous group of people should be selected, that would work co-operatively to come up with the possible questionnaires to the chatbot but, also, from it to the visitors to produce a dialogue. The results should be evaluated and categorization of the questionnaires should follow so as to form an ontology, in the form of a database, that is used from the chatbot to draw information data for the conversation. Then, a development plan should be structured to select the sequence in which the information/questionnaire will be displayed to the user. With the information partitioned in small pieces, as is the case in any dialogue, its composition in a single narrative depends on the visitor. Information could be displayed either orally, as a text or a photo. In many cases, in order for the visitor to answer a question, actions are needed in the form of moving to a certain section of the exhibition to notice a detail about the subject. The whole procedure, small missions to specific areas of the museum included, increase the

entertainment of the visitor and provide for a playful way to educate someone (i.e., use of gamification in education).

For both the guided and the free approach, the process of transforming text into speech, to provide a direct oral conversation between the visitor and the chatbot, can be applied. Incase such process is programed by the developer, special care is needed not only to the natural language understanding and the constitutional axis (the correct morphology and grammatical structure) of the sentences but, also, at the exemplary axis (e.g., synonymous, identical or equivalent expressions). Otherwise, as is the case mainly for the free approach, the use of a special A.I software is recommended, trained to be able to make decisions regarding the possible questions and/or answers originated from the officially provided access to authorized material, regarding the exhibits, and the profile of the user based on the feedback from the (before the visit) chatbot.

At the following section, an implementation of a reference application is presented, highlighting the design decisions that were followed for it.

4 Implementation of a Reference Application

In this section, we will describe the development of the reference application, designed for smartphones running Android OS, that allows the user to speak with different exhibits in a museum, while educating them by presenting part of the history behind of what the they are seeing in front of them, by asking questions and receiving answers from the exhibits. For the reference application, text to speech conversion is available through it, while the use of Google AI software is used to select the correct answers in the dialogue.

The Museum App requires the use of Bluetooth Low Energy (BLE) Estimote beacons [9] for the communication with the exhibits to be achieved. Beacons are small Bluetooth devices that require low energy and can operate for approximately 2–3 years. The broadcast range of these devices can reach up to 50 m for the Bluetooth 4.0 version, while for the Bluetooth 5.0 version this range is four times larger, reaching up to 240 m. Figure 1a illustrates Estimote beacon's operation using BLE.

Each exhibit will be equipped with one such Estimote beacon, hidden from the sight of the visitors. These small devices will broadcast a small amount of information, crucial for the application to find out which exhibits are nearby and create a list for the user to interact with. That way, the information data need not be stored in a centralized database, but rather are present on the beacons of each exhibit.

On the other hand, the user by moving around the area can see on his/her smartphone screen all the available exhibits and, therefore, will be able to select the one they wish to communicate with. Visitors can use this mobile application to make question to the exhibits. Users can speak to their smartphone and the application will turn their voice input to text. After the user has made his/hers question it's up to the A.I. behind the application, to make the right choice for the answer. For the
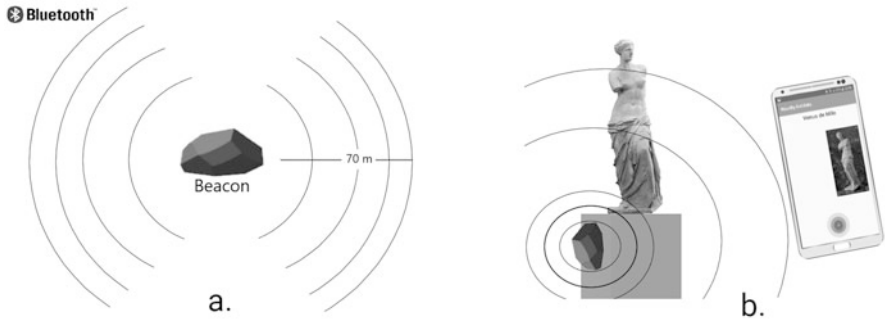
Fig. 1 (**a**) Communication of an Estimote beacon using BLE. (**b**) Operation of the application during "conversation" with Aphrodite of Milos

A.I. to learn about which exhibit the question is set, it requires access to the information received from the beacon. This information includes the Id of the exhibit and its Name. Using these, the A.I. will answer back providing to the user a suitable answer for the specific question regarding the specific exhibit. Addition of text-to-speech features were also needed for the voice of the chatbot to be heard by the user, a feature that in whole has resulted in quite realistic and authentic performance for the communication.

One use case that shows the way the application works includes a visit to see a famous exhibit that of the statue of Aphrodite of Milos, also known as Vino de Milo and a possible introductory question, like: "who are you"? The A.I. will know that the statue's name is Aphrodite of Milos thanks to the information received from the beacon that is placed on the exhibit. Thus, the A.I. will answer accordingly. In our example, a possible answer could be "I am Aphrodite of Milos better known as Vino de Milo". Figure 1b shows how the reference application operates when the user selects to converse with the Aphrodite of Milos, when in sufficient distance from the exhibit.

5   Towards Evaluation of the Proposed Approach

In order to assess the practicality and value of the proposed approach, when applied, an evaluation, including parameters reflecting the particular use case needs to take place. For this, we provide in this section of the paper some guidelines on how to prepare and conduct an evaluation study, starting from the methodology, to be adopted for the evaluation, many methods have been proposed in literature [10–12]. In our case, the evaluation method we consider more suitable is the use of a focus group, a technique where group discussion is conducted between a small number of selected people following a loosely-structured discussion about their experience and how this can be improved. These people must have knowledge on the subject to be able to express their opinion from their own perspective. In our case,

the reasons that have led to the selection of the focus group method are highlighted by the ability to explore and understand in depth the possibilities or weaknesses of the designed application of the chatbots from various perspectives and from the sensitive fact that the Museum of Greek Folk Art attracts mainly Greek tourists, while our chatbots, for the time being, are only available to speak English.

Regarding the people in the focus group, these should comprise of professionals working in cultural heritages sites with knowledge of the English language, archaeologists, historians, museum educator, art-conservator, guide, teachers on elementary and high-school, scientist and programmer. These constitute a characteristic group, able to offer their experience and their view at: (1) the evaluation of the application, pointing out the pros and cons of the approach and the displayed messages or conversations and (2) the evaluation of the experience from the interaction with the chatbots, raising their opinion in favor or against the introduction of this novel technological technique and how it enhances the cultural heritage experience of the visitors. To achieve this, meetings should take place, where all the members can express their opinion freely without having to answer any leading questions, in a loosely-structured discussion about the experience and possible extensions and updates that should be worked on.

6 Conclusions/Future Work

In this paper the use of Artificial Intelligence in the cultural heritage domain is studied. We present the introduction of novel technological techniques, through the design and development of an application that features A.I. capabilities and allows the user to conduct a dialogue with the exhibits of a museum or monument using his/her smartphone for this purpose.

The training of an A.I. algorithm developed by the researchers is also studied, along with the possibility of translating the text to Greek language to reach a larger audience and increase the participation. The reference application covers a basic use study and has, yet, to be tested with a live environment in a museum or monument, which will be the next step in its progress and study.

References

1. Samuel AL (1959) Some studies in machine learning using the game of checkers. IBM J Res Dev 3(3):210–229
2. Brandtzaeg P, Følstad A (2017) Why people use chatbots. In: Proceedings of the 4th international conference, internet science: INSCI 2017, Thessaloniki, 22–24 Nov 2017
3. Borda A, Gaia G, Boiano S (2018) Chatbots in museums: hype or opportunity? https://www.museweb.net/chatbots-in-museums-hype-or-opportunity-%E2%80%A8/
4. Hubard O (2007) Productive information: contextual knowledge in art museum education. Art Educ 60:17–23

5. Bourdieu P (1986) The forms of capital. In: Richardson J (ed) Handbook of theory and research for the sociology of education. Greenwood, New York, pp 241–258
6. Yiannoutsou N, Manoli V, Anastasaki S, Mavini C, Dimaraki E, Avouris N, Sintoris C (2014) On establishing contact with cultural objects: the role of a location based game in supporting visitors to engage with contemporary art. In: Proceeding of the 8th international conference on interactive mobile communication technologies and learning, IMCL 2014, Thessaloniki, November 2014
7. Worts D (1990) The computer as catalyst: experiences at the Art Gallery of Ontario. ILVS Rev 1 (2):91–108
8. Richardson J (2018) Creating a Facebook Messenger chatbot for your museum. https://www.museumnext.com/2017/07/creating-facebook-messenger-chatbot-museum/
9. Estimotes. https://estimote.com/
10. Denzin N, Lincoln Y (1994) Handbook of qualitative research. Sage, London
11. Creswell JW (1998) Qualitative inquiry and research design: choosing among five traditions. Sage, London
12. Rennie LJ, Stocklmayer SM (2003) The communication of science and technology: past, present and future agendas. Int J Sci Educ 25:759–773

E-Procurement in Public Hospitals in Greece

Charalampos Platis, Ioannis Karafyllis, and Georgia Kaoura

Abstract The recently new legal framework for public procurement in Greece adopts the mandatory usage of e-procurement systems for any open, negotiated or restricted procedure over 60,000 € (VAT excluded). The objective of the study is to investigate the degree of usage of e-procurement systems as well as the legal barriers and bureaucratic restrictions appeared in public administration. The paper analyzes the implementation of e-procurement systems in Greek public hospitals and describes also the primary impacts and problems observed in public entities/hospitals. The evidence show significant improvements on speed and accuracy of the follow-up of procurement procedure. On the other hand, the research proves that the majority of Greek public hospitals doesn't conduct their procurement through National System of Electronic Public Contracts (ESHDHS), the system that has been designed for this exact purpose and consequently transparency is reducing while the new e-procurement tool is not utilized on the most satisfactory degree and the management of procurement procedures is not supported thoroughly. It is the first time in Greece that evidence for the adoption of e-procurement systems on a daily basis operation of Greek public hospitals are presented and analyzed so as hospitals to find a useful tool for their own financial management.

Keywords E-Procurement · Public procurement · Public hospitals

C. Platis (✉)
National Center for Public Administration and Local Government, Athens, Greece

I. Karafyllis
University of Piraeus, Piraeus, Greece

G. Kaoura
University of Patras, Rio, Achaia, Greece

1   Introduction

The article presents the results of a research realized through ESHDHS platform on the degree the procurement of public hospitals comply with the European and national legislation. At the first part of the article the e-procurement procedure in European and national environment is presented and then is following the situation of the usage of e-procurement models across Europe. In a next part, it is presented the analysis of relevant data for e-procurement in public hospitals in Greece. The study methodology (Material and Methods), the theory and calculation (general observations) follow. The results and conclusions are presented to the last part of the article.

2   E-Procurement Procedure in European and National Environment

Public procurement—the buying of works, goods or services by public bodies—accounts for over 14% of EU GDP. It is regulated by law so as to assure that the public sector gets the best value for money and that the three (3) key principles of equal treatment, non-discrimination and transparency are respected [1].

The e-procurement strategy is driven by Europe 2020 and the digital European Union (EU) agenda for competitiveness. Within the EU, the Commission has been pushing to make e-procurement a rule rather than an exception [2].

Representing 2000 billion € every year, better managed procurement can lead to bigger investment and to significant savings in public budgets. For example, an efficiency gain of 10% could yield significant savings of 200 billion € per year, without cutting the level of service offered to European people. Procurement has also a major impact on the EU structural and investment funds, where almost half of these funds are spent via public contracts. Good contracting helps to get the best value for money from these EU funds [3].

With digital tools, public spending should become more transparent, evidence-oriented, optimized, streamlined and integrated with market conditions. This puts e-procurement at the heart of other changes introduced to public procurement in new EU directives.

The usage of electronic tools in public procurement offers a wide range of important benefits such as [4]: significant savings for all parties, simplified and shortened processes, reductions in red-tape and administrative burdens, increased transparency, greater innovation, new business opportunities by improving the access of enterprises, including small and medium-sized enterprises (SMEs) to public procurement markets.

Public authorities, having already made the transition to e-procurement, report savings between 5% and 20% [5]. In Greece the relevant percentage is estimated to reach approximately 9.49% of the expenditures of 2016 competitions conducted via

ESHDHS system; percentage corresponding almost to 300 billion € profit to Greek economy [6].

2.1 Tasks Based on Electronic Systems for Communicating, Handling, Treating and Storing Data: The Portuguese Case

There are various forms of e-procurement, such as e-market place, e-auction or e-catalogue that are best viewed as a more broadly end-to-end solution. This solution integrates and streamlines many procurement processes throughout the organization [7]. In this integrated and paperless context, the execution of contracts becomes easier and more rigorous since all relevant information is available through the electronic platform, and greater attention can be directed to non-operational issues [8].

E-procurement implementation models vary across Europe and in at least 10 countries the usage of a national platform is compulsory. The e-procurement platforms market is regulated and each member must comply with strict security and safety requirements, namely as to authentication and non-repudiation (adoption of advanced electronic signature), time-stamping confidentiality and secure databases [9].

Some countries, such as Portugal, Germany and France have a more decentralized approach [8, 10, 11]. Portugal was the first case of mandatory adoption for all open, restricted or negotiated processes [8] and is a country presenting similar size and socioeconomic conditions (population, MOU with troika, etc.). In general, the Portuguese phased e-procurement implementation strategy was positive and is, therefore, to be recommended. This positive momentum may have contributed favorably to the second and mandatory year of the e-procurement implementation strategy, which involved less receptive and later adopters, by generating an optimistic perspective on e-procurement implementation [8].

3 The Study Methodology (Material and Methods)

The study conducted through a web-based data analysis. The data and information of the total of public hospitals (139) in Greece were extracted and analyzed for the first almost three (3) years of platform's operation (*data from September 2014 to July 2017, 10/7/2017*). Within this time period all the competitions uploaded to ESHDHS system by public hospitals have been monitored, examined and categorized in one of the four (4) stages that the platform records (*"active", "in assessment", "in contract" and "postponed"*).

At the first stage of the study, there were made some controls at competitions' budgets level data and price-outliers (0 million € or 3 billion €) have been removed and replaced with the right budgets of the competition issue of tender attached to ESHDHS. Then, the data were categorized and summarized per year and competition stage as presented in the next sections' tables. Finally, a research was conducted on identifying the real stage of the competition, if the stage registered to the platform is the one that the competition has on real terms.

It is the first time in Greece that these data are examined in order to draw some useful observations and conclusions for the future.

4   Theory and Calculations

The new legislative framework foresees that any competition above 60,000 € has to be conducted via ESHDHS platform. Furthermore, the resources distributed by the Minister of Health are of essential importance as well as the numerical data for the use of e-procurement platform and for this reason they have been monitored and presented to the following tables.

Table 1 presents the public hospitals' budget amounts for medicines and other procurement as distributed by the Ministry of Health. Between Procurement Program of Health Services and Medicines (PPYFY) 2013 and 2015 the amounts distributed by the minister have been reduced; between Procurement Program of Health Services and Medicines (PPYFY) 2013 and 2014 the amounts distributed by the Ministry of Health for procurement have been reduced by 11.83% and between PPYFY 2014 and 2015 by 8%. The reductions of the amounts distributed for medicines are even bigger; between PPYFY 2013 and 2014, the amounts distributed by the Ministry of Health for medicines have been reduced by 14.5% and between 2014 and 2015 by 12.7%. The reductions between 2013 and 2015 (*year base PPYFY 2013*) approach 18.9% for the procurement and 25.4% for the medicines.

The first column of the Table 1 refers to Procurement Program of Health Services and Medicines (PPYFY in Greek) years and doesn't correspond to financial years (for example with the PPYFY 2015 the procurement of the year 2017 were conducted). Also, the amounts are not subtracted per year (due mostly to the immediate awards and to the not conducting of public competitions), as it should

Table 1   Hospitals' data in EURO 2014–2017 (10.07.2017)

PPYFY[a] (Year)	Procurement	Medicines	Sum
2013	1,106,841,899.87	659,260,417.18	1,766,102,317.05
2014	975,938,331.34	563,557,922.85	1,539,496,254.19
2015	897,729,291.64	492,089,430	1,389,818,721.64
Total	2,980,509,522.85	1,714,907,770.03	4,695,417,292.88

[a]Procurement Program of Health Services and Medicines

by PPYFY of previous years (for example 2013, 2014 it could be used for the procurement of the year 2017).

In ESHDHS system the competitions are categorized in four (4) statuses: "active", "in assessment", "in contract" and "postponed" competitions. Active are all the competitions from the day they are uploaded to ESHDHS until the day/time the supporting documents and the technical tenders are opened electronically. Since then and until the time of the completion of the assessment, the competition changes status and becomes "in assessment". If the competition is completed successfully and the tenderers have submitted all the necessary documents foreseen and the contract has been signed the competition appears "in contract". Otherwise the competition has to be cancelled and repeated, taking the status "postponed" in that case.

The next two tables followed, present the data for the competitions between the years of 2014–2017, collected from ESHDHS platform. The number of competitions registered in the system is presented as categorized in the four competition stages and derived from public hospitals. Table 2 refers to the number of competitions conducted while Table 3 refers to the number of hospitals conducting competitions. Table 2 presents the number of competitions registered in ESHDHS, categorized at the four (4) stages/status of competition per year and totally, as mentioned above.

The number of active competitions until the 10th of July 2017 (Table 2) approaches 91 announced by the 23% of hospitals (33 out of 139) (Table 3). The hospitals with "in assessment" competition for 2017 were only 66. Since 2014 (*beginning of ESHDHS in Sept. 2014*) the number and the percentage of hospitals seems to increase. Although the use of ESHDHS is increasing through years, however, fewer that the half hospitals have conducted their electronic competitions from 2014, when the use of ESHDHS platform became obligatory by law. The

Table 2 Number of competition per status

Number of competitions conducted by hospitals				
Year	Active	In assessment	In contract	Postponed
2014		8	4	1
2015		395	121	124
2016		438	165	77
2017	91	328	15	20
Sum	91	1169	354	222

Table 3 Number of hospitals conducting competition per status

Year	Active	In assessment	In contract	Postponed
2014	–	4	3	1
2015	–	36	40	32
2016	–	48	48	24
2017	33	66	11	12
Sum	33	80		50

[a]The sum corresponds to the number of different hospitals conducting competitions

number of hospitals that signed contracts through ESHDHS represents 2.1% in 2014, 28.9% in 2015, 34.5% in 2016 and 7.9% in 2017 (*10/7/2017*) of the public hospitals conducting procurement through ESHDHS.

The hospitals that updated the competitions through ESHDHS and showed postponed competition corresponds to 0.7% in 2014, 23% in 2015, 17% in 2016 and 8.6% in 2017 (% of the total hospitals). This can be justified by the legislation that has not been very austere at first allowing hospitals' staff to postpone, proclaim/announce a competition and then upload the repeated competition without the obligation of updating ESHDHS system at first place but only when then Management Board's decision is taken.

The data regarding the number of competition conducted through ESHDHS appear in Table 2. From 1.1.2017 to 10.7.2017 only 91 competitions were active, a very small number compared to the sum of 139 hospitals (*not even one per hospital*) which have already been obliged to conduct competitions above 60,000 € through ESHDHS.

The number of "in assessment" competition is increasing through years while 8 competitions appear to being assessed for over 3 years and 395 that being assessed for 2 years.

The upward course of "in contract" competition seems to fall in 2017. In almost 3 years, 354 competitions have been completed successfully by public hospitals with the relevant contracts to be signed.

Finally, Table 4, summarizes the value of competition per stage and per hospitals representing also the value of public contracts signed (*contracts between hospital and tenderer*).

In 2017 the value of the contracts signed by hospitals was 2.2 million € for competitions budgeted 90.18 million €, registered in "active" status 31.6 million € and "in assessment" status 65.2 million €. The increase of the value of competitions is due to the new procurement law 4412/2016 in force, a more austere law than the previous ones. The value of "in contract" competitions is increasing through years 2014–2016 while in 2017 (up to 10.07.2017) the value is presented low. The value of postponed competitions presents a negative course between 2015 and 2017.

Table 4 Competition value per stage and hospitals

Competition values in Euro (Conducted by hospitals)				
	Active	In assessment	In contract	Postponed
2014		5,932,135.8	628,548.78	105,691.06
2015		49,885,220.87	21,942,507.31	19,083,813.85
2016		80,316,273.8	24,714,938.30	12,856,919.45
2017	31,673,147.97	65,159,919.65	2,236,715	3,544,794.64
Sum	31,673,147.97	201,293,550.12	58,881,903.56	35,591,219.00

The amounts are in EURO (€), VAT not included

The amounts in contracts are as budgeted in the issue of tender, since it is not possible to calculate the real value of the contracts

5   Results and Discussion

From the above section of calculations, we may conclude as a result that budgets are restricted and the need for the use of ESHDHS system has become more necessary in a way to spend the money available not only with transparency but with efficiency too.

Additionally, at the first two stages ("active" and "in assessment" competitions) of ESHDHS the data and results registered to system are accurate and reliable as regard to the follow up of the competition procedure. Having all the actions to be taken electronically by the platform, the dates and the flow of actions and results are all registered, right and accurate.

However, from the data and calculations, it has been observed that some public hospitals when they proceed to a contract with a supplier they do not take the actions required by the platform to proceed to stage "in contract" electronically but invite by phone the supplier to submit the documents required for the award of competition and after the completion of controlling process they sign the contract without uploading it to ESHDHS. The phenomenon is frequent, reaching a percentage approaching 60% of public hospitals. As a result, the number of "in contract" competitions are presented in the platform lower than it actually is.

The time periods for "in assessment" competitions are considered very long even for the medical and technological equipment of the consumables. If consider the medical and technological equipment more frequently, it is becoming obsolete by the end of the procurement process. The lack of materials and consumables observed, it doesn't contribute to a satisfactory level of operation.

In 2017 the number or competitions completed is presented very low (only 15 competitions the first 7 months) due mainly to two reasons. The first reason is the very frequent changes in legislation concerning procurement and the parallel long procedural time for the competition completion.

For public interest reasons, public contracts in health sector have to be legalized almost every 2–3 months. Since 2009 until today, competition contracts have been legalized twenty one (20) times (*8 times the last 23 months*) and the contracts signed according to the valid legislation each time. The phenomenon is interpreted by hospitals' management and staff as a sign to exempt the registration of public contracts to ESHDHS platform, leading to frequent segmentations of public hospitals' procurement in amounts lower than 60,000 €.

However, many competitions are postponed and announced again independently from the fact that they are presented as "in assessment" in ESHDHS and as a result the same competition is presented as "active" and "in assessment".

6 Conclusions

The implementation of e-procurement systems in Greece and more specifically in health sector, 3 years now, has not been the one expected. Few public hospitals have already adapted successfully to e-procurement legislation. The advances on time and cost has not been confirmed, as expected. The culture of innovation has been proved weak and imposing mandatory e-procurement to public institutions without them being enthusiastic about the change, increases the risk of failure. The training of management and personnel of public hospitals need to be encouraged.

Additionally, as Soares and Carvalho [12] advocate, the contracting authorities need to understand the organizational changes they should perform and simplify their procedures when adopting e-procurement. At a next step top management should support the effort of this transition.

Based on these conclusions, it is relevant to emphasize that public entities should be aware of the importance of simplifying their decision making structures when facing innovation adoption, particularly the adoption of e-procurement, in order to achieve better results.

The paper also confirms the approach of Soares and Carvalho [12] that e-procurement has many advantages over the paper based process, including more and better information, faster procurement procedures, reduction of administrative costs and greater transparency on the procurement process. However, as the reduction of redundant administrative tasks and paper archive are generally rated among the less important benefits from e-procurement, which might be a symptom of poor adaptation to the electronic paradigm of many public entities or also the consequence of external factors to the procurement process which are not aligned with the digital environment. Finally, the study also verifies their opinion that in many cases the adoption of e- procurement boils down to comply with the law but the internal procedures and practices for managing information on public procurement have not changed much, being common the absence of implemented procedures for a systematic assessment of contract execution and supplier performance.

References

1. European Commission (2017) European Commission, The European Single Market, Single Score guard
2. European Commission (2012) Delivering savings for Europe: moving to full e-procurement for all public purchases by 2016. Press release IP/12/389
3. European Commission (2017) Making public procurement work in and for Europe Commission COM, 572
4. European Commission (2018) European Commission, Growth, The European Single Market. Public Procurement. E-procurement. https://ec.europa.eu/growth/single-market/public-procure ment/e-procurement_en
5. European Commission (2016) EU Public Procurement reform: Less bureaucracy, higher efficiency

6. General Secretary of Commerce and Consumer Protection (GSCCP), Yearly Edition 2017 of ESHDHS
7. Vaidya K, Sajeev AM, Callendar G (2006) Critical factors that influence e-procurement implementation success in the public sector. J Public Procurement 6:70–99. https://doi.org/10.1108/JOPP-06-01-02-2006-B004
8. Costa AA, Arantes A, Tavares LV (2013) Evidence of the impacts of public e-procurement: the Portuguese experience. J Purch Supply Manag 19:238–246. https://doi.org/10.1016/j.pursup.2013.07.004
9. Betts M, Black P, Christensen S, Dawson E, Du R, Duncan W, Foo E, Gonzalez J (2006) Towards secure and legal e-tendering. J Inf Technol Constr 11:89–102
10. Assar S, Boughzala I (2008) Empirical evaluation of public e-procurement platforms in France. Int J Value Chain Manag 2:30–42. https://doi.org/10.1504/IJVCM.2008.01612
11. European Commission (2009) Smarter, faster, better e-Government. In: European Commission (ed) Eighth benchmark measurement. European Commission
12. Soares L, Carvalho A (2017) E-Procurement and Innovation in the Portuguese municipalities: when change is mandatory. In: Schofield N, Caballero G (eds) States institutions and democracy. Studies in political economy. Springer, Cham. https://doi.org/10.1007/978-3-319-44582-3_16

Castel Lagopesole: From an Empty Shell to a Lucrative Venture. Digital Heritage and Community Empowerment

Dorothea Papathanasiou-Zuhrt and Aldo Di Russo

Abstract Innovation, social innovation rather, is not embedded into a technology per se, but is strictly connected to the enhancement of the quality of life: when it introduces health improvements for instance. Digital imaging technologies may have changed completely the way to deliver products in the last decade, but they had, up to now, very little positive impact on human behavior: the industrial production modus has changed, but not the contents. The Narrative Museum *World of Frederick II Hohenstaufen* in Lagopesole, Italy redefines quintessential aspects in the production and distribution of culture in heritage settings exploiting the infinite possibilities in image manipulation. It involves directly key stakeholders and residents, succeeding to enhance civic pride, and demonstrates how new skills applied in cultural communication generate mindful visitors and contribute to sustainable place making. By employing domain specific expertise in the production and delivery phase the Museum marks the end of the tourist gaze, enabling long-lasting cognitive, emotional and multi-sensory experiences for different audiences in situ. This paper examines the knowledge pattern established for non-captive audiences in heritage places through new digital artworks, and proposes an alternative way to impact the cultural heritage visit linking digital industries and cultural institutions.

Keywords Cultural communication · Multivision · Narrative Museum

D. Papathanasiou-Zuhrt (✉)
Hellenic Open University, Patras, Greece

Artifactory, Preveza, Greece
e-mail: papathanasiou.dorothea@ac.eap.gr; dorothea@artifactory.eu

A. Di Russo
Artifactory, Preveza, Greece

1 Introduction

The *World of Frederick II* is funded by the FESR POR 2007–2013 Basilicata. It is further developed by the SEE/B/0016/4.3/X SAGITTARIUS [SEE TCP 2007–2013] and the 699493/DIVERTIMENTO [COSME 2014–2020] [1, 2]. The Museum is hosted at the Castle of Lagopesole, in Basilicata, Italy, an impressive testimony of the thirteenth century on the road to Apulia.

The *World of Frederick II* is divided into two parts: the construction of a *Narrative Museum* in the interior, and an evening performance, based on AV languages which through the use of advanced multivision technologies are peopling the formerly empty Castle with stories from the world of Holy Roman Emperor Friedrich II Hohenstaufen (1194–1250). The *World of Frederick II* becomes thus a great living fresco repopulating the Castle with life, ideas, events and personalities of the Federician era, where its inhabitants narrate their lives: their hopes, fears, achievements, adventures, loves become the context in which historical information is embedded. Theater actors together with about one hundred selected local community members represent a story without indoctrination. The native Lucans, acting as film characters are the 'direct heirs' of those ancestors who helped the Emperor realize his vision by their labor sweat at the work and their blood in the battlefield. This praxis confirmed that when local communities are involved in cultural planning a reinforced collective identity claims heritage ownership [3, 4].

2 Literature Review

In the past it was assumed that the interpretive tools needed were already property of the public, part of their intrinsic wealth of knowledge provided by other cultural institutions: schools, first of all. In 1960, along the lines with the Aristotelian ἑρμηνεία (lat. *interpretatio*) Hand-Georg Gadamer postulates in his opus magnum *Wahrheit und Methode*, that when people are dealing with an artwork of historical and architectural value from the past, the greatest difficulty to interpret its value, is the distance between the knowledge necessary to arrive at an understanding of the artwork, even at the elementary level [5, 6]. Along the same lines, Bourdieu accentuates in 1979, that the cognitive gap of the public is growing and with it the losses in cultural capital [7]. In 2007 a study on cultural consumption of adolescents in 28 OCD countries, demonstrates that only movies and theater are the prevailing cultural activity [8: 4]. In 2013 the OECD report *First Results from the Survey of Adult Skills* measures an 8% among of adults in 24 countries with no ability to form concepts or solve simple mathematical problems [9]. If individuals in an advanced society are no longer able to reason, then inevitably the cognitive gap, when being confronted with artworks will grow and frustration will bounce back the public nourishing a motivational deficit: the cultural heritage system fails to activate the cognitive process of its members [10]. This lack of understanding is not solved by

providing information through a standard descriptive apparatus, because the human cognitive system is very complex [11]. Knowledge is not acquired, because low levels of abstract thinking capabilities and inability to formulate concepts interrupt the assimilation. Examples of museums or portals rich in information remain thus at a cognitive-emotional level unsuccessful [12, 13]. This last aspect has to be guided by a strategy of cultural policy and planning which would result, in a virtuous connection between the public-private sector and could provide an interesting contribution to an experience-driven culture [14: 5, 15: 18].

3 Methodology

Non-captive audiences at heritage places are multinational, multicultural, and multigenerational groups, exploring novel information potentially connected with their own pre-understandings and prior knowledge. The human working memory is limited in capacity with respect to the number of elements it can handle simultaneously, rehearsal is necessary to prevent information loss [16: 77, 17: 1159, 18: 889]. This condition, which cannot be met with time-scarce non-captive audiences at heritage places, had to be considered among others in order establish a new learning paradigm for non-captive audiences in the *World of Frederick II*. Thus six planning considerations have guided the design process: (a) which experiences shall take place during Museum visit; (b) how to facilitate visitors without prior knowledge bridge the spatiotemporal gap; (c) how to embed socio-historical information; (d) how to create a hermeneutic and participatory paradigm, where non-captive-audiences think contextually and act autonomously in a self-directed learning modus; (e) how to exploit the technology intense experience to impact the cognitive paradigm.

4 The Design and Delivery of Participatory Culture

To respond to the challenges aforementioned, the *Narrative Museum* is organizing its contents into deliberate stories that include the main message the audience shall carry. Instead of a chronological array of series and facts a clear focus for *connections* is demonstrating the cohesive development of relevant ideas across the different experiences acquired in the halls. The stories relate to Frederick's life with faces, places, ideas. They constitute moments of intellectual and emotional revelations, perceptions, insights or discoveries related to the meanings of Frederick's era and his achievements in politics, law, science and the arts. Each hall becomes a new experience with a different staging, background, mechanics, surprises, stories, and events embbeding visitors into physically and mentally connecting process, where an experience mix that involves visual, auditory; haptic; sensomotoric; cognitive and emotional stimuli. Each experience is designed with a different educational and

behavioral objective aiming to produce a reflective attitude through the power of emotion and cognition and the artistic surprise enabling thus the symbiosis of theory and pragmatism in the artwork [19: 205–220, 20: 176]. Stylistic choices are guided by domain specific experts, so that scriptwriters and set designers based their choices on solid historic knowledge that lead to a plausible world. The solid millenary rock of the Castle supports the projected multivision, as if it were the canvas of a screen: a dialogue between solidity and lightness that cannot but shape the artistic experience with a new digital heritage artwork.

4.1 The Sensomotoric-Tactile Experience

"*Sssss! If you meet the Emperor, don't be loud, be quiet. His head is full of worries*". Ali, an imaginary Arab from Lucera, is welcoming visitors at the staircase, which leads to the *Hall of the Sphere* where, three types of experiences connect historic personage, facts, places and time into a meaningful narrative:

- WHAT: an animated *Sphere* hanging from the ceiling shows *what happened*, focusing on the main events in the Emperor's life.
- WHERE: The antiqued *Geographical Map* provides for orientation in the historic space pointing exactly *where facts happened.*
- WHEN: Using the *Bar of Time* visitors get to know *when facts happened* in the life of Frederick II.

The *Sphere* is representing Frederick's short biography supported by an evolving visual narrative as it moves. A sensomotoric and haptic encounter takes place in front of the *Geographical Map* supporting the theory that the sensual bodily experience in tourism is a trait of a quality experience [21: 6]. The map is antiqued, but present day nominations are kept to free working memory from engaging in unnecessary processing.

The *Bar of Time* is a metal bar that handles the 12 most significant stages of the life of Frederick II. By moving the lighting bulb of the metal bar back and forth across the *Geographical Map*, visitors can select among the achievements and exploits of the Emperor. A certain amount of strength is required to move the bulb to each date, requiring visitors to "earn" their experience: when the bulb stops at a selected date, a narration related to the place and to the event is projected on the *Geographical Map*, supporting the narration with structured visual information.

The third encounter takes place in the *Crown Hall*, where a monumental octagonal structure in the form of a crown is dominating the space. Visitors are moving around the 15 m large*4 m high crown around interacting with its parts. The crown is decorated with seven gems, while the floor is covered with a manuscript from the era of Frederick II. At the opening of each gem seven audiovisual-stories are set, with references to the medieval life in the Castle. It is enough to move the gems adorning the crown openings and discover what looks like a treasure chest: the whole court life: blacksmith, doctor, carpenter, kitchen servants, tavern guests, court

Fig. 1 Castel Lagopesole. Crown and Touch Screen Kiosk

ladies, prison guards, market vendors that tell us what they think, feel and live. Contents and plot are chunked in clear, easy to process themes and are thus in accordance with the principles of human cognitive architecture and working memory limitations [22, 23]. To serve children and visitors with disabilities the gems are placed in the crown structure at various height positions building a symmetrical curve from the lowest to the highest point.

In the *Hall of the Crown* visitors can also obtain first-hand information about the design and production of the Museum using the backstage contributions provided by the *Interactive Touch Screen Kiosk*. Museum designers, experts and specialists from the most different domains, from historians to set designers, are sharing with the audience their personal experiences acquired during the production phase.

This entirely unexpected combination of haptic, tactile and sensomotoric experience, engaging the whole body to participate and enabling the mind to manipulate the historic time by touching the tangible structures, opens the window for determining the portion of individual knowledge to be acquired in a self-directed learning modus (Fig. 1).

In the *Hall of the Vestiges*, the value of the experience lies in the carefully designed tactile exhibits selected to represent main historical stages in the life and work of Frederick. However, it is not about a clueless array of items that means to document those distant times, but invites visitors to familiarize with every-day objects of Federician times. The most prominent touchable object is a copy of the illuminated parchment codex *De arte venandi cum avibus*, kept in its original version in the Biblioteca Palatina of the Vatican Library.

4.2   The Cognitive-Emotional Experience

In the *Hall of the Court* an immersive experience combines theatre and refined technology: a 360-degree projection surrounding visitors with narrations evolving on three walls. The Emperor, his wife and son share important aspects of their lives, confining their secrets as private persons. In the *Exhibition Hall* a 3 m. wide book, is mounted on the wall is reviving the debate on the new legal code, the *Constitution of Melfi* (Liber Augustalis, 1st of September 1231). The multivision format is a synthesis of visual elements from historic archives, artworks and collections, to

Fig. 2 Castel Lagopesole, History Book

underline and explain the traits visitors need to interpret the story (historic outfit, utensils, signals, items, sounds, language etc.) (Fig. 2).

4.3 The Digital Heritage Artwork

The experience concludes at night with a dramatic staging in the large rectangular inner courtyard with an AV production projected on the 80*20 m walls of the Court titled *Lagopesole, 1236*. The film belongs to the genre *multivision*, which is a complex audio-visual technology integrating different types of documents (photos, texts, manuscripts, objects, actors etc.) into meaningful narratives through comparisons, juxtapositions and contrasts continuously counter-placing contemporary elements incorporating rich media. Stories presented in *Lagopesole, 1236* are not made by a cluster of links between each document type that creates a bridge between objects and events generating multiple links between different elements. The technique commonly called projection mapping, is, at best, a very articulated and complex linguistic choice. In the inner courtyard, the stone wall used directly as image, confers solidity to images that, on the contrary, reflect on the architecture the lightness of their appearance in perennial escape. From the balance of these two aspects derives a new reading of both the story and history and the architecture itself becomes the screen and the mirror at the same time. Multivisions allow the use of very big screens with resolutions that cannot be achieved by any other media, i.e. they are producing vast screens with a resolution unattainable by any other means. This allows to fully potentiating animation, archives and documents of any kind and all real deposits of culture [24: 3–5]. The use of digital graphics and videos allows many possible changes, enabling to infer the unknown from something known within the horizon of the visitors, put together and reassemble.

The structure of contents respect human cognitive architecture, building on the mental lexicon with through the use of associations, connections, and through thematic related units at the visual, auditory and narrative level, succeeding to minimize visual uncertainty [25: 5, 26: 1301]. The story plot respects working memory limitations and category learning in the Aristotelian sense exploiting the artistic surprise through the composite multivision format: a spy sent by the Pope to the Court of the Emperor has the mission to collect and send all information

available. Disguised as hawk-trainer, Gottfried enters the Court and sends all the information he collects via bird messengers. One day he finds his birds shot and soon after the imperial soldiers are coming to fetch him. He does not have much choice to escape torture than to fall from the Castle's walls. The spy-story, able to attract and keep the attention of the audience becomes the medium to present Frederick's legacy for the humanity in only 36 min: his achievements, his beliefs and loves, his wars against ignorance and obscurantism, and the political struggle with the conservative popes, his dream to become master of every form of knowledge.

5   Conclusion

Communicating culture is a very complex activity that integrates many different disciplines and talents. It goes beyond the show, interpreting and providing elements that, while they create strong emotions, they retain a clear trace of a rational path. But outside the formal education context, an inspiring cultural experience is a set of relationships between documents, which are the bridges between one event and another, between a letter and an article, argumentative connections between the elements of a story. These reports become in the AV language transitions between shots, the very dynamics of the passage of audiovisual time. A new visual expression follows, that exploits the possibilities of digital systems not only to be produced but designed, manufactured and distributed.

This challenge is of cognitive-linguistic nature: it allows us to read as a single story, which is actually built with separate and discontinuous parts composed together. This is the starting point of the process to deliver culture with cognitive exploiting the infinite possibilities of new digital formats: to have disparate elements by type, origin and quality, with a common theme and transform them from discontinuous elements into a meaningful set interactively able to inspire the intellect and the imagination of the audience. What transforms the discontinuous elements in a perception of continuity is an extraordinary intrigue of codified rules, insights and common sense, in which interactivity between work and viewer plays an essential role both as a purely intellectual and fantastic. The new rules of use in which the spectator is accustomed by film and television, provide guidance to the design of the multimedia show. These rules have become, in the information society, a new competence, that we have to take into account in the design of cultural experiences. Even single elements can significantly contribute to the coordination of perception of the fragmented show and be reused and rebuilt afterwards. Thus reassembled fragments represent the most effective way to use the best of the element's ability. Properly organized, any archived document is enabled to leave the conservative area of a database and enter the world of multimedia production with the benefit of vast revenue, unthinkable some years ago. Transforming a civilization, cultural heritage and artwork into knowledge requires creativity, technology, production and organization, and culture oriented political approach. To present art and culture as experience in order to encourage identity development, social aggregation and critical

reflecting, is the *conditio sine qua non* for better citizens in a conflicting world. The *World of Frederick II* is dedicated to resuscitate the *genius loci* by capturing imagination and fantasy of the audience, and promote intercultural dialogue, critical discussions, abstract thinking and citizenship education.

References

1. Papathanasiou-Zuhrt D (2015) The SEE/B/0016/4.3/X SAGITTARIUS. Final report to the SEE Transnational Cooperation Programme 2007–2013. Budapest
2. Papathanasiou-Zuhrt D (2018) The COS/TOUR/699493/DIVERTIMENTO. Final report to the European Commission. Brussels
3. Hawke SK (2010) Sense of place in changing communities: the plurality of heritage values. In: Negussie E (ed) Changing world, changing views of heritage, heritage and societal change. ICOMOS International Secretariat, Paris, pp 37–45
4. Mifsud-Bonicci U (2009) The human right to the cultural heritage – the Faro Convention's contribution to the recognition and safeguarding of this human right. Heritage and beyond. Council of Europe, Strasbourg Cedex
5. Mandilaras V (2000) Aristotle. Organon. categories, on interpretation, 17. Kaktos Publications, Athens
6. Gadamer HG (1960) Wahrheit und Methode. Grundzüge einer philosophischen Hermeneutik. de Gruyter, Oldenbourg
7. Bourdieu P (1979) Les trois états du capital culturel. Actes Rech Sci Soc 30:3–6
8. Fernández-Blanco V, García-Diez M, Prieto-Rodríguez J (2004) Educational performance and cultural consumption. Some evidence from OECD teenagers. In: AEDE 2004, Donostia
9. OECD (2013) OECD skills Outlook 2013: first results from the survey of adult skills. OECD, Paris. https://doi.org/10.1787/9789264204256-en
10. Antinucci F (2014) Communicare nel museo. Laterza, Bari
11. Waxman S (1996) Correlative neuroanatomy. Appleton and Lange, Stamford
12. Antinucci F (2007) Musei Virtuali. Come non fare innovazione tecnologica. Laterza, Bari
13. Palombini A (2012) Narrazione e virtualità: possibili prospettive per la comunicazione museale. DigItalia. Riv Digitale Nei Beni Cult Anno VII 1:8–22
14. European Commission (2012) Promoting cultural and creative sectors for growth and jobs in the EU. COM, Brussels, p 537
15. European Commission (2017) Mapping of cultural heritage actions in European Union policies, programmes and activities. Directorate-General for Education and Culture (DG EAC), Brussels
16. Cowan N (1998) Visual and auditory working memory capacity. Trends Cogn Sci 2:78
17. Cowan N (2017) The many faces of working memory and short-term storage. Psychon Bull Rev 24:1158–1170. https://doi.org/10.3758/s13423-016-1191-6
18. Oberauer K et al (2018) Benchmarks for models of short-term and working. Memory 144 (9):885–958. https://doi.org/10.1037/bul0000153
19. Dewey J (1934) Art as experience. Perigee Books, New York
20. Di Russo A (2005) Nuove opportunita a vecchi preguidizi per l'audiovisivo italiano. Arts and Artifacts in Movie. Technology, Aesthetics. Communication (AAM TAC) 2:175–187
21. Crouch D, Desforges L (2003) The sensuous in the tourist encounter. Introduction: the power of the body. Tour Stud 3:5–22. https://doi.org/10.1177/1468797603040528
22. Baddeley A, Hitch GJ (1974) Working memory. In: Bower G (ed) Recent advances in learning and motivation. Academic, New York, pp 47–90
23. Baddeley A, Eysenck M, Anderson MC (2014) Memory. Psychology Press, Hove
24. Di Russo A (2006) Voices of the constitution. Storyboard and direction notes. Fondazione della Camera dei Deputati, Rome

25. De Deyne S, Verheyen S, Perfors A, Navarro D (2015) Evidence for widespread thematic structure in the mental lexicon. Paper presented at the 37th annual meeting of the cognitive science society, Pasadena, 23–25 July
26. Lerch RA, Sims SR (2015) Visual working memory as decision making: compensation for memory uncertainty in reach planning. Paper presented at the 37th annual meeting of the cognitive science society, Pasadena, 23–25 July

Lector in Fabula: Reinventing Digital Publishing to Attract the Youth and Strengthen Cultural Capital in Sites Museums and Collections

Dorothea Papathanasiou-Zuhrt and Aldo Di Russo

Abstract New digital publishing diversifies tourism offers in peripheral destinations with heritage-based products and services, addressing stakeholder alliances and improving professional skills to internationalize locally operating micro-enterprises, achieve excellence and facilitate their uptake by the global market. We present a composite tourism product created in seven peripheral destinations in Greece, Italy, Spain, Slovenia, Romania, Bulgaria and Turkey. The final product constitutes a digital publishing Trilogy (Cultural Route, iBook, Heritage Games) that is exploiting both the technology intense experience and the onsite condition in the territory. It is seamlessly connected with tourism consumption points at place level, facilitating authentic and multicultural experiences along with needed tourism services, accessible in real time, such as accommodation, facilities, transport, catering, souvenirs and traditional products, open, indoor and artistic activities. The product builds an unprecedented opportunity to terminate the vicious circle of generating and distributing low quality tourism commodities exchangeable by price.

Keywords Cultural communication · Narration · 4IR (4th Industrial Revolution)

1 Introduction

The 4th Industrial Revolution, a concept explicitly explained by Schwab in the homonymous book, has altered the production of various industrial sectors, mostly due to the fusion of technologies blurring the line between digital and physical,—the cultural market included [1]. New communication patterns define new markets and preferences, while the constant use of e-devices in daily life impacts the common sense through the interpretation of visual codes. ICT allows manipulating and animating the images repurposing the context in a composite process unthinkable

D. Papathanasiou-Zuhrt (✉) · A. Di Russo
Artifactory, Preveza, Greece
e-mail: dorothea@artifactory.eu

just a few years ago [2]. Digital Publishing 2.0 is marked by the conversion technologies that promise an unprecedented level of consumer interaction with content through smartphones, e–readers, and tablets, as well as an equally engaging experience through computers [3: 5–11, 4: 23–24, 5: 787–790]. But what kind of impact can this opportunity have on the ability to produce meaning beyond the technical aspect?

As per the EU AVMDS 2018/Article 16 [6: 1] it is necessary to develop immersive and pervasive solutions for AV, platforms, games, films and communication media and thus bring the quality of cultural content to unprecedented new levels. The focus is clearly put on cultural content aiming also and to protect the youth from violence contamination, which is deeply diffused in the digital world. In this respect the production of culture using new technologies, such as digital publishing, is opening opportunities and perspectives, declaring war to uncontrolled that give rise to a horror insensitive youth, hostage to bullying, war games, and contrived reality.

We defend the thesis that digital publishing is an exciting opportunity for the development of knowledge connected to heritage places, site museums and collections, as it is the only process that can support values and meanings. We define as digital publishing specific to cultural content, the value-driven, artistic multi-media narrative that impacts the mental process to create abstractions, leading to the cognitive reconstruction of an appropriate context: only then digital publishing becomes a carrier of creative ideas and a platform to exercise participatory culture. The articulation of complex semantic languages is a condition sine qua non for the creation of cultural contents: thus the creation of cultural contents that cannot be self-driven.

2   The Digital Revolution

Pietro Montani, in his treatise on technologies of sensitivity [7], points out that today there is a 'literacy' situation spontaneously offered by the possibilities of the technologies, disordered in the mode, rhapsodic and still linked to the default procedures offered by the seller. Scholars agree that the digital shift has not assisted our cognitive abilities to perform better due to the acquisition of digital literacies does not build the precondition for the creation of art works [8–13]. One should not think that only technology, is able to produce special effects and it is not vector graphics, but the poetics of the grands masters like Homer, Euripides, Sophocles, Aeschylus and Aristophanes, Dante, Shakespeare and Cervantes that have a deep impact on the audience. Mounting successive scenes in synchronous time does not refer to a multilayer digital editing system, but to the liberation of St. Peter in the Vatican by Raphael or the dream of Leonardo to fly. To perfectly shoot an actor on a perspective outside the scene is not motion tracking in blue screen, but it is again a grand master like Fellini or Bergman, the expressive paradigm that has generated meaning.

The digital revolution provides means to our ability to use symbols, which allows the audience set out on the path to a work of art, to history, to culture to appropriate a degree of knowledge he did not have before. Knowledge is always a traumatic process, caused by the condition of thaumazein, the existential upheaval of which Aristotle spoke. It means generating an imbalance and moving from a consequent imbalance to a new, more advanced and solid balance, reconfiguring the old information with the new in a new scheme. The digital publishing market, the one that is specific to the composite cultural communication is particularly blessed with the ability to reconfigure any type of static data, as it is heavily relies on multi image production and has a computer graphic-base. Its ability to synthesize an integrated interpretation of composite images reveals one of the hidden features not used by any other means of communication in the digital age: the ability to manipulate an image, the ability to write a story from a white page makes digital publishing one of the most interesting new products for the cultural and touristic market.

3   Methodology

Funded by the 2014-2020 COS/TOUR/694933 Project DIVERTIMENTO, the EUROTHENTICA Digital Collection is a new genre in the digital publishing focused to enhance the onsite-offsite experience in seven peripheral destinations in GR/IT/ES/SI/RO/BG/TR with a new pattern for cultural [14]. Two research questions prevailed, namely:

(a) how to terminate the vicious circle of generating and distributing low quality tourism commodities exchangeable on the basis of the price and
(b) how to incorporate the technology intense experience into the experience in the territory through a novel form of digital publishing, where higher skilled workers create and distribute an open access participatory space and where the audience participates in a multifaceted way, most notably by redistributing, commenting, re-editing and customizing contents.

3.1   The Survey

EUROTHENTICA has not been created in isolation: it has explored the views of 452 stakeholders in an effort to understand how new cultural consumption types are generated in the creative economy and how these changes are affecting the consumption pattern. A Pilot Project has been designed in each country with 70 geolocations in total. Stakeholders showed an interest in being involved in products/services development in the Pilot Project Area, which is declining in the more mature destinations: BG:100.0%, IT:80%, RO:75.0%, SI:70.0%, TR:50%, GR:45.5%. Stakeholders underlined in BG/GR/TR/IT:80%; RO:81.8%, SI:54.5%

that they are aware of the heritage included in the Pilot Projects and that those would help diversify the tourism offer in their communities: SI/IT:100%; BG:90.0%; RO:81.8%; TR:72.7%; GR:70%. The Pilot Projects inspire new business models in SI:100%; TR:90%; RO:81.8%; IT:80%, BG:50.8%; GR:36.4%: again the interest is declining in the 3S destinations Varna and Rhodes.

Guided by the stakeholder views and the particularities of each of the 70 geolocations, a new service with cognitive-emotional affinity has been modelled to attract the market with a new digital heritage narrative with onsite and off-site usability. This *lector in fabula*, incorporated in the EUROTHENTICA Collection and published as an iBook Collection at the Appstore aimed to demonstrate how heritage places could develop a *new asset value-driven* and *human-centric* communication policy with the public, while connecting with industry-related, experienced-based products and services to meet needs and requirements of the demand side. EUROTHENTICA has been tested as a service at the ITB Berlin 2017 not only as a Project-driven business model, but also as the proactive promoter of each participating region. Supported by Enterprise Europe Network (EEN), it has attracted 92 tourism providers in GR/IT/ES/SI/RO/BG/TR for further exploitation and has been selected as one of the three best practices of the COSME Programme 2014–2020.

3.2   Technical Features

EUROTHENTICA uses a fusion technology that includes various and different electronic formats in one format like, pictures, sound, music, text, video, multivisions and interactive pictures converging into a cohesive communication narrative. It embeds non-textual multi-media including interactive images and image galleries, videos, audio files and interactive animated graphic design. In this way EUROTHENTICA inevitably becomes an agent for experience-driven cultural heritage products and services that are not yet in place, but are needed in the context of the re-valorization of the territory.

Being a free downloadable book at the Appstore, EUROTHENTICA offers to onsite and dislocated audiences a significance chance to create their personal place-bonding through a digital publication, which consists of text, images, interactive images, videos and multimedia and a variety of shared practices (Bookry/Reader Cloud; Google+; Facebook; Twitter; Email; Web embedding). Mobile availability is provided for users with a mobile data connection, alternatively it a copy can be stored on the device. The whole Collection capitalizes on existing local resources to enable local businesses with proximity to the selected geolocations benefit by being present in the interactive Google Map that leads to the enhanced visitation. By being a pure digital publishing product, EUROTHENTICA can exceed its own life re-inventing itself, available for further updates and considering transformations in the connected consumer market.

4 The Design and Delivery of the EUROTHENTICA Collection

In an effort to create multisensory experiences at the 70 selected destinations, EUROTHENTICA has developed a multimedia cultural narrative evolving across 70 geolocations transnational route (ten geolocations route in each participating country) and a game, which are strictly intertwined, and where the narratives in the iBook hide the game clues, so as to motivate the youth engage in reflective reading.

4.1 Italy: Looking for Myths

The Narrative focuses on ten places in the south of Italy are filling the gap left by Goethe, who, shipping from Naples to Palermo, cut out of his Journey one of the most ancient parts of Italy, rich in history, heritage and culture. Enriched with texts, pictures, animations and audiovisuals, the history is recreated through deeply imaginary myths. The heritage game, Your Values, Your Choice, focuses on the human values and behavior of an immigrant from Padula who arrived in New York in the last century and fought against organized crime. It takes as a reference, the native house, today a Museum, of Joe Petrosino, not focusing on the character but on what he represents. The Museum has in place two key elements of the game, the story which is the narrative part and the game mechanics that are all the resources available to drive the visitor through the story. The game as it is designed to be "without walls" and opens the possibility to be played by both onsite and dislocated audiences, who play it in a different way, but interacting with the same content. The design of the game follows the structure of the Museum through the four rooms that are connected to four concepts related to the mafia and the anti-mafia struggle fear, courage, connivance, freedom. Each room makes the visitor reflect on a particular set of values. The game is played anonymously or by introducing a nickname, the choice is made by either the museum or the player. Two popular open access mobile apps, Mentimeter and Kahoot, collect visitor insights dropping in this way the ICT barrier. As a result, the museum can collect real-time information about the content and its impact on onsite visitors or offsite players.

4.2 Greece: The Unites States of Europe—Rhodes 1305–1522

A multimedia heritage narrative reveals stories connected to the UNESCO enlisted Medieval City of Rhodes, while a complementary game entitled Grand Master Challenge evolves around ten selected monuments. The game is designed to offer visitors a participatory heritage service with cognitive-emotional impact, where

validated expert knowledge matches the creative skills of experience seekers. Instead of attracting visitors by merely exposing asset visibility, the game links the tangible object with its intangible dimension, the hidden meanings and the stories in a cognitive-emotional way, embedding the technology intense experience into the onsite condition. Main goal is to inspire visitors get to know the Mediaeval City through and immersive approach by co-creating contents while having fun. At the same time, they can valorize local heritage as they are experiencing it in a playful way without alienating the socio-historical context. The Game tells a story at each play unit, where each monuments offers players a hero to identify with. Depth and complexity depend directly on the location-task correlation, which affects the time required perform the game tasks at each location. By mastering all relevant tasks, the winner is awarded the title of the Grand Master. To promote the game's ludic character, winners receive a diploma and a free meal/drink and his/her photograph is uploaded in the Facebook/GM-Gallery, Generation II.

4.3   Spain: Mazaricos, the Inner Journey on the Santiago Way

The heritage narrative is based on existing emotional personal experience of the visitor/pilgrim connected in the territory of Mazarics. It combines through a game the inner journey of the Pilgrim (inspiration, search, peace, journey, overcoming, deep, discover/findings, magic, connection, time, faith, respect, meetings, effort, implication, resistance, nature, silence, flow) with local heritage using the social media channels for creating a double experience of emotional co-creation real and virtual using different #hashtags. Each Pilgrim becomes an avatar of the game. While playing in a real scenario connected to the ten selected geolocations, the emotional experience collected in the social media channels is being shared through the networks of the participating "pilgrims".

4.4   Slovenia: The Last Conspiracy

The narrative *The Last Conspiracy* is based on true story about the conspiracy against emperor Leopold I Habsburg is evolving in ten geolocations in the proximity of the castle of Rače. Count Tattenbach, owner of the castle met in 1668 the with other two nobles and signed document of a conspiracy against the Emperor Leopold of Habsburg, who signed the shameful peace treaty of Vasvar in 1664 with the Ottomans returning to them Christian territories rightfully regained in battle. In the homonymous game played in the Castle, players have the mission to find the traitor among the six characters connected through a love story within the conspiracy. Love becomes the catalyst for the betrayal of the political cause and the conspiracy. Young

adults from the community (and alternatively professional actors) play a theater performance of 20 minutes prior to the game start to initiate visitors into the game plot. Visitors select to impersonate one of six historic figures, forming two groups competing with each other. Visitors move through the castle and follow QR codes that help reveal the clues, while the actors are assisting the players with hidden clues. But also raise the tension. When the game is over, visitors reassemble in the main hall and watch another short performance, an epilogue revealing the fates of each of the historic figures.

4.5   Romania: The People's Verdict—18th of December 1918

The heritage narrative displays all the historic stages of the Romanian Unification that has culminated after WWI on the 12/18/1918 in Alba Iulia. The game, entitle *A Day in Alba Iulia* is played locally within the fortified walls of the Alba Iulia Citadel narrating the Unification across the centuries. At each play unit forwards visitors to the next historic stage within an evolving narrative, whose clues are hidden in the iBooChapter *The People's Verdict*. By mastering all relevant tasks, the winner is awarded at the Alba Iulia Tourist Office.

4.6   Bulgaria: The Golden Anchor, Varna 1869

A heritage narrative connects ten monuments from the nineteenth century in the historic centre of Varna. The aim is to familiarize visitors with the efforts of Varna to connect to the European family after its successful decoupling from the Ottoman yoke. The narrative suggests the physical representation of Varna as an open-minded intercultural society, providing a sense of sensitivity, cultural recognition and emotional experience visitors can acquire during their stay. The Game called *The Magic of Time* evolves around the ten selected monuments communicating messages that reveal the socio-historic background of the society in Varna at that time through a jigsaw tapestry in paper version. Ten quizzes are performed at each monument, so that the players match each answer with the relevant monument, using the iBook as clue-finder. By answering all questions, the winner is awarded with the ancient song of Varna. The game consists of ten riddles, one of which is typically devoted to a specific local asset. Those, who answer properly and/or find the sequence between the riddle and the asset, gains a jig saw particle. Once reading all ten riddles, the gamer receives all particles. When all particles match, the old magnificent sign of Varna from the late nineteenth century appears on the back side.

4.7 Turkey: Connecting Cultures—A Truly Eurasian Story

The heritage narrative starts with the Argonauts and is evolving toward the Greek colonization of the Black Sea, the Romans, the Byzantines and the Ottomans until it reaches the Turkish War of Independence in the aftermath of WWI. A local high school community developed a story based on the heritage narrative, which connects ten selected monuments in the wider area of Trabzon with a read thread. The main game idea is not only to promote the local tourism but to engage other schools and stakeholders to replicate the video concept developing new stories based on heritage described in the Pilot Project. A theatrical representation is recorded and included in the iBook. Visitors demonstrate the evidence of the knowledge acquired at the game locations, which is shared through the social media channels.

5 Conclusion

The narration, that is to say the consolidated ways of cinema and theatre, reconditioned in an audiovisual language specific to cultural goods, helps to decode the symbolism behind which the artists hide reality and bring with them emotion, and the emotion helps the visitor to navigate within the own a wealth of ideas to search for and rebuild the meaning of the work of art. If a story is written and realized in a convincing way, it increases interest and curiosity and encourages integration which in turn supports the cognitive approach. The latter is the precondition for the knowledge to be processed, assimilated and placed in the above context. The awareness of having understood strongly influences the motivation to keep going forward, offering satisfaction, strengthening the attention in all future processing, activating the chain reaction cognitive-motivation and releasing new energies for learning.

Information, the raw material of a narrative structure, comes from the specific study of the work and from specialists, but it cannot build an experience per se. Narrations on the contrary derive from a creative approach to that information, and are articulated in an artistic language according to the advanced ways and consolidated in the public. History and narration are not synonymous: each figure, not whether imaginary or not, when it becomes part of a history, transforms into a value carrier who interacts with the one's conscience, passes from mouth to mouth, collects and shows knowledge. In this way each story is a vector of a narration woven within it, which is in turn the instrument which shapes our reactions, while the information is the raw material on which it is built. And 'on which', does not mean 'with which': it is not information in a row, but a fabric made using information as threads. For centuries storytellers have regulated the tone of life of the communities they met. They didn't make history, but built memory using history and embodied identity. This may be the role of the new narrative in the era of digital

reproducibility of the work of art where the composite digital publishing may become its carrier.

References

1. Schwab K (2016) The fourth industrial revolution. World Economic Forum, Geneva
2. Di Russo A (2014) Giurassico digitale, Il Sole 24 ore, pp 43–43
3. de Voldere I et al (2017) Mapping the creative value chain. European Commission, Directorate-General for Education, Youth, Sport and Culture, Brussels
4. Walkowski N (2016) Digital publications beyond communication. GOEDOC (Dokumente und Publikationsserver der Georg August Universität Göttingen), Göttingen
5. Hunter P (2015) Web 2.0 and academic debate. ENBO Rep Sci Soc 16(7):787–790
6. European Parliament (2018) The audiovisual media services directive briefing EU legislation on progress, pp 1–18. http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/583859/EPRS_BRI%282016%29583859_EN.pdf
7. Montani P (2014) Tecnologie della sensibilità. Estetica e immaginazione interattiva. Raffaello Cortina, Milano
8. Carr N (2010) The shallows: how the internet is changing the way we think, read and remember. Atlantic Books, London
9. Turkle S (2015) Reclaiming conversation: the power of talk in a digital age. Penguin, New York
10. Mousavi Y, Low R, Sweller J (1995) Reducing cognitive load by mixing auditory and visual presentation modes. J Educ Psychol 87:319–334. https://doi.org/10.1037/00220663.87.2.319
11. Bitgood S (2013) Attention and value: a key to understanding museum visitors. Routledge, London
12. Cowan N et al (2005) On the capacity of attention: its estimation and its role in working memory and cognitive aptitudes. Cogn Psychol 51:42–100. https://doi.org/10.1016/j.cogpsych.2004.12.001
13. Esposito A (2017) Research 2.0 and the impact of digital technologies on scholarly inquiry. IGI Global, Hershey
14. Papathanassiou-Zuhrt D (2018) COS/TOUR/699493/DIVERTIMENTO: Diversifying tourism offers in peripheral destinations with heritage-based products and services, stakeholder-skills alliances to internationalize locally operating micro-enterprises. Final report to the EC, COSME programme for the competitiveness for small and medium enterprises 2014–2020, Brussels

Location-Aware Technologies: How They Affect Customer Experience

Olga Pachni-Tsitiridou and Konstantinos Fouskas

Abstract The use of digital technologies in every aspect of tourism has caused the digital transformation of the industry. Businesses have to adopt a variety of digital technologies or a combination of them in order to optimize their operations, offer better customer experience, achieve better financial results, sense the changes and capture the preferences of customers. In the last few years, mobile devices or smartphones have attracted the attention due to high levels of adoption and personal data they produce. With this kind of data businesses are able to achieve a deeper understanding of customers' preferences and needs, to offer personalized services. In order to take advantage of these opportunities, businesses use location-aware marketing techniques, location-based social networks or applications. The combination of preferences, social media data and customer needs help businesses to attract better reviews and to achieve better campaign and firm performance. The purpose of this literature review is to compare the different mobile location-based techniques that are used to increase the value of their businesses and to offer a higher level of personalized experiences by examining the effects that these techniques have on customer experience.

Keywords Location-aware technologies · Location-based social networks or applications · Customer experience

1 Introduction

World Economic Forum [1] supports that in the next decade (2016–2025) the aviation, travel and tourism industry can create up to $305 billion of value for the industry through increased profitability. The reason for this enormous increase in profit is the digitization or digital transformation of the industry. Digital

O. Pachni-Tsitiridou (✉) · K. Fouskas
University of Macedonia, Thessaloniki, Greece
e-mail: olga.paxtsi@uom.edu.gr

transformation can be defined as changes that have been caused by the extended use of digital technologies (digital artifacts, digital platforms and digital infrastructure); which are capable to transform the customer experience, operation processes and business models. Due to digital technologies, there is a continuous transformation of aviation, travel and tourism ecosystem with the creation of Online Travel Agencies (OTAs), meta-search engines, Global Distribution System (GDS) and travel service platforms, which have caused a transformation in travelers' behavior [1]. In addition, the adoption of digital technologies from customers, forces businesses to continually adopt every technological change [2].

The changes in customers-travelers' behavior have been pointed out by American Travel Study; results that are represented by Xiang [3]. American Travel Study focus on American travelers' behavior when they plan a trip with the use of the Internet. The main observation is focused on the adoption of the Internet which is independent of travelers' age. However, there are differences in the way that Internet is used by different generations especially between Silent Generation, Baby Boomers, Gen X and Gen Y. The generation differences affect the way travelers collect their information about the planning trip. New technologies such as Social media (social networking sites, photo/video sharing sites), mobile devices and travel planning sites are capable to create and develop new behaviors. Travelers use their mobile devices for directions and maps due to the adoption of GPS system or location-based services or applications; so, they do not have to plan every detail in their trip which gives marketers and managers the chance to target them during their trip. Furthermore, they reinforce economies that are not directly related to the tourism industry by buying museum or event tickets, make reservations in advance etc.

From all the above, mobile devices or smartphones can be considered the digital technologies that have greatly influenced the travel and hospitality industry. Tussyadiah [4] associates higher smartphone usage with travelers who are younger, female, highly educated and have a higher income. Furthermore, travelers use their smartphones most often for navigation, online reviews, searching for deals and discounts, and focus on their smartphones for push recommendations. On the other hand, social media is widely adopted by customers-travelers and are a mean for businesses to collect knowledge about customers-travelers' preferences and behavior. These technologies improve businesses' targeting techniques and offer personalized experiences and information to customers. Similarly, Buhalis and Foerste [5] argues that businesses should invest in smart technologies and to coordinate their strategies and operations in order to provide better and more personalized services.

Except for businesses, Buhalis and Wanger suggest cities to invest and adopt ICT technologies as mentioned in Neuhofer [6]; in order to provide better information to visitors (Seoul), to offer customized maps (New Zealand) and to provide advanced experience to travelers by using interactive bus shelters and USB ports for charging mobile devices (Barcelona) [7]. The adoption of ICT technologies and the offer of similar services make cities smart destinations or smart cities. Consequently, smart destinations can be defined as the result of the extended use of big data in order to offer services that suit users' preferences in real-time. By visiting a smart destination, travelers create high-level expectations for real-time information and services before,

during and after their trip [8]. In conclusion, ICT or smart technologies have transformed every aspect of the tourism industry and are the cause of the smart tourism. Smart tourism can be described as an ecosystem with different components [7] or as a flow of tourist information services [9]. In the first case, there are three components: smart destination (the use of ICT technologies in physical infrastructure), smart experience (technology-mediated tourism experience) and smart businesses (the creation of ecosystem where there is information exchange and business co-create the tourism experience). In order to perform better the ecosystem collects, processes and exchanges data with the other components [7]. In the second case, the information flow is the most important part of this definition and integrated tourism information flow with traditional and new forms of information dissemination. Also, they pay attention to the accuracy and the personalization of information in order to meet the travelers' demand [9]. The aim of this literature review is to summarize the benefits that cities, businesses, and marketers gain using Location-aware technologies, Social Networks and Location-based Social Networks (LBSNs). The research paper follows the subsequent structure: first, we analyse traveler's centricity as a basis of the aforementioned technologies adoption from businesses. Then, we present the technological elements that combine LBSNs and the information that businesses or cities can collect. Finally, we conclude with suggestions for future research.

2 Traveler Centricity

The extended use of digital technologies has created a variety of data that businesses collect in order to offer personalized experiences. Fitzgerald [10] suggest businesses should start their digital transformation from customer experience because digital technologies are considered ideal for this type of transformation. Especially in aviation, travel and tourism industry customized experience and services are essential in order to achieve better results. However, it is important for businesses to transform their processes and adapt their culture for achieving better customer experience. For example, Hotel Lugano Dante adopted a digital platform which uses a variety of digital technologies in order to collect all the necessary information, in order to achieve high-quality customer experience and high level of customer enhancement [6]. The quality of personalized experience that a business offer is correlated with travelers' willingness to share their data. However, as mentioned on World Economic Forum [1], passengers are willing to share their data if they are going to receive a benefit like a personalized customer experience or service. The level of experience that a customer receives, is part of the data that are collected. In order to achieve high-quality customer experience, businesses have to use different technologies and collect a variety of data. A combination of advanced digital technologies, can provide better knowledge of customers' preferences, behavior patterns, connections etc. For example, a combination of Artificial Intelligence (AI) and the Internet of Things (IoT) will help business to offer a more sophisticated customer experience than a simple process such as data mining [11]. In addition, the

volume and the quality of data a business use will help to achieve better results in their marketing campaigns because they will have a deeper knowledge of customers.

3 Location-Based Social Networks

In order to provide personalized experience and promotions, businesses have to collect and combine different data. There are different approaches to tracking travelers. One approach suggests, direct observation, survey and interview-based methods (travel diaries or drawing on maps) and digital tracking (through GPS tracking using specialist devices, mobile applications tracking via Wi-Fi, Bluetooth, via geotags) [12]. Another approach points out that there are two main streams. In the first stream, researchers meet the participants and present the tracking device (primary GPS). In the second stream, researches collect data from networks that geo-refer their customers (mobile phone networks, Twitter, Flickr etc.) [13].

3.1 Location-Aware Technologies

A very simple way of tracking travelers is with the use of location-aware technologies which can detect or calculate the geographical location of a person, a mobile device or a moving object [14]. The use of location-aware technology like GPS with a mobile phone help researchers, businesses and marketers to study precisely and effectively the moving patterns [15]. An accurate moving pattern helps marketers to better target travelers and efficiently perform location-based marketing (LBM) [16]; since they can follow customers along their routes [15]. Also, the digital format of the data, the easy way to collect and process data and the increase of the tracking periods help marketers to advance their techniques [15]. As mentioned above, the willingness of travelers to share their position information, in order to receive rewards from a marketing program or to innovate with their experience, give the chance to businesses in this industry to perform LBM [17]. Furthermore, marketers can gain extra knowledge if they combine simple GPS technology with the creation of travelers' emotional profile in real-time. This combination is useful both for cities and businesses. Cities can improve destination and attraction management and businesses can achieve in real-time more sophisticated marketing campaigns, can track possible interventions and monitor their impact on customers' behavior [18].

3.2 Social Networks

Social media are considered a useful means for travelers in order to find information, to read reviews etc. Part of social media are social networks which can be defined as

a network of interconnected influencers and conformers who share recommendations and seek recognition from each other, respectively [19]. In the literature review about tourism and hospitality industry, researchers focus on social networks to identify the preferred routes of tourists [20] or the representation of areas with interest [21]. Especially, they focus on social networks in which users share geotagged photos such as Instagram, Panoramio, Flickr etc. For example, the data that combine a photograph in Flickr include user tags, data and time, GPS coordinates of the photo location and profile information [20]. Analyzing a geotagged photograph dataset help businesses to find the most representative areas of interest, to identify areas of highest tourist concentration. Also, tourists are capable to achieve better travel planning and to make decisions during the visit [21]. On the other hand, in destination marketing organization (DMO) level this information can be used to find the preferred routes and adjust tourists' maps [20]. The above information will improve city management [21] and public transportation management [20]. Furthermore, Önder [20] argues that geotagged photographs (in this case photographs from Flickr) are capable to provide better representation of a tourist number in a city level rather than in a regional level, due to the fact that the number of pictures/photographs are depending on the region of the country and the type of activities that can be done. So, Flickr can be a measurement for cities that cannot measure tourists' number in other ways. Consequently, this kind of digital footprint can be an indicator of tourism demand.

3.3 Location-Based Social Networks

The above two technologies (location-aware technologies and social networks), if they combine, can produce Location-based Social Networks (LBSNs or LSN). LBSNs is a geosocial service as they combine GPS and social networking platforms; the most known LBSNs platforms are Foursquare, Ubersocial, Yelp etc. [4]. In addition, they are considered a combination of a context-based recommender system, social influence and social gaming [19]. The game experience is, also, pointed by Tussyadiah [4] who support that they are based on travelers' or locals' motivation and enthusiasm to suggest and encourage other users to try the proposed location. Vu [22] underlines that the collected data through LBSNs are considered better due to the fact that they provide semantic tags on the location of the user, in contrast with check-in through social media or GPS loggers or geotagged photographs. The collected data from a LBSNs provide accurate information about time, location (GPS), business name, venue category, subcategory [22]. Also, they create opportunities for marketers, managers and destinations to generate context-specific solutions about each individual traveler in alignment with their preferences, social media interactions and behavior patterns [5]. Consequently, they can create a segmentation of tourists' consumption, activities [19] and behavior, in order to improve customer satisfaction and achieve better travelers experience [22]. The variety of this kind of data has attracted the interest in Location-based Social network marketing by tourist destinations and hospitality businesses.

On a broader level, the LBSNs marketing can be used by destination in order to promote their city. Examples of cities that use this kind of promotion are presented by Van Grove in Tussyadiah [19] and is about the City of Chicago (i.e., ExploreChicago) and the State of Pennsylvania (i.e., VisitPA). The main purpose of a destination marketing is to present an attractive destination which will be a better choice than a competitive one. In order to achieve this, LBSNs destination marketing has to promote a combination of lifestyle, attractions, and services. An enlightening example is given by Tussyadiah [19] about a variety of ways for promoting a destination such as the creation of theme-based tours or cities encourage travels to check-in or to review; these strategies can attract different segments of travelers who are willing to be rewarded at the end of the tour. However, this kind of applications can be used for improving city management, location management, transport management and tourist effect management. For example, providing travelers with better information about public transportation will reduce potential traffic and will help cities to achieve better traffic management. Creating a map with the most popular routes and the travelers' emotions during the routes will help marketers and managers make the appropriate decisions [22].

Except for destinations also, businesses are able to create marketing campaigns in LSBNs for their promotion. The combination of context-based marketing, social media, personalization and mobile devices can create SoLoMo marketing and SoCoMo marketing. These types of marketing strategies are considered ideal for unfamiliar travelers with the environment and the conditions at the destination, who rely on technical solutions [5]. In addition, Tussyadiah [4] underline that travelers who want to innovate with their experience are willing to use their smartphones to search for references-information while they explore the destination. Thus, they can be influenced while they are making decisions in real-time with real-time information. Consequently, push recommendation, contextual advertising can affect and shape travelers' behavior and experience; making this group of travelers the appropriate group for targeting with LSN/SoLoMo/SoCoMo marketing techniques. In the case of SoLoMo, they focus on location and create a virtual zone around businesses' location and alert customers about services and offers when they enter the virtual zone. In the other case of SoCoMo, it considers an advance systematic method of context marketing on smart mobile devices that integrate social media to empower co-creation of value. Particular, it selects information from user product suppliers and a wide range of information. It is based on the principle of co-creation (personalization, service-dominant Logic etc.) between travelers and industry and peer-to-peer communication [5].

4   Conclusion

The pervasive use of digital technologies and especially of mobile phones or smartphones can be considered one of the reasons that aviation, travel and tourism industry has been digitally transformed. Due to digital technologies travelers have

Table 1 Summary of the benefits of location-aware technologies

	Advantages	What can be achieved
Business	Marketing	Improve marketing campaigns results by running specialized campaigns and use appropriate delivery methods. Monitor travelers' emotions and interventions in order to influence their behavior [17, 18, 22]
	Business's location	Find the appropriate business location by identifying areas of interest and highest tourist concentration [21]
Destinations	Destination marketing	Adjust tourists' map in order to achieve sophisticated DMO [20]
	Destination management	Improve destination management, attraction management, city management, location management, public transport management, tourist effect management. Identify the tourist number [18, 20–22]

changed their demands and behavior in every stage of their customer journey, which forces businesses to adopt a variety of digital technologies in order to meet customers' demands, to offer high-quality customer experience and to forecast customers desires. So, businesses have to continually adopt new digital technologies in order to achieve high-level of customer engagement.

Businesses in the tourism industry adopt a customer centric strategy which implies that businesses have to collect data from different sources to improve their knowledge about their customers. An informative source of data can be the location-aware technologies, social networks and location-based social networks which can be useful both for businesses and destinations. Businesses can achieve better marketing performance, offer more personalized services and identify areas ideal for their businesses. On the other hand, this information helps destinations to achieve better city management and make destinations more competitive. Table 1 summarizes the advantages-results that businesses or destinations can achieve with these technologies.

Digital technologies will continue to transform businesses, so it would be interesting to identify the changes in other aspects of them and their effects. Furthermore, future research should focus on the effects that state-of-art technologies such as augmented reality (AR), robotics etc. will have on customer centric strategies and businesses processes, if they are combined with the above-mentioned technologies. These combinations can transform the customer experience in different ways and to affect the internal environment of businesses by redesigning the operations.

References

1. World Economic Forum. http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/wef-dti-aviation-travel-and-tourism-white-paper.pdf

2. Westerman G, Tannou M, Bonnet D, Ferraris P, McAfee A (2012) The digital advantage: how digital leaders outperform their peers in every industry. MIT Sloan Management and Capgemini Consulting, 2, pp 2–23

3. Xiang Z, Magnini V, Fesenmaier D (2015) Information technology and consumer behavior in travel and tourism: insights from travel planning using the internet. J Retail Consum Serv 22:244–249. https://doi.org/10.1016/j.jretconser.2014.08.005

4. Tussyadiah IP (2016) The influence of innovativeness on on-site smartphone use among American travelers: implications for context-based push marketing. J Travel Tour Mark 33 (6):806–823. https://doi.org/10.1080/10548408.2015.1068263

5. Buhalis D, Foerste M (2015) SoCoMo marketing for travel and tourism: empowering co-creation of value. J Destin Mark Manag 4(3):151–161. https://doi.org/10.1016/j.jdmm.2015.04.001

6. Neuhofer B, Buhalis D, Ladkin A (2015) Smart technologies for personalized experiences: a case study in the hospitality domain. Electron Mark 25(3):243–254. https://doi.org/10.1007/s12525-015-0182-1

7. Gretzel U, Sigala M, Xiang Z, Koo C (2015) Smart tourism: foundations and developments. Electron Mark 25(3):179–188. https://doi.org/10.1007/s12525-015-0196-8

8. Buhalis D, Amaranggana A (2015) Smart tourism destinations enhancing tourism experience through personalisation of services. In: Tussyadiah I, Inversini A (eds) Information and communication technologies in tourism 2015. Springer, Cham, pp 377–389. https://doi.org/10.1007/978-3-319-14343-9_28

9. Li Y, Hu C, Huang C, Duan L (2017) The concept of smart tourism in the context of tourism information services. Tour Manag 58:293–300. https://doi.org/10.1016/j.tourman.2016.03.014

10. Fitzgerald M, Kruschwitz N, Bonnet D, Welch M (2014) Embracing digital technology: a new strategic imperative. MIT Sloan Manag Rev 55(2):1–12

11. Ransbotham S, Diron D (2018) Using analytics to improve customer engagement. MIT Sloan Manag Rev, January

12. Hardy A, Hyslop S, Booth K, Robards B, Aryal J, Gretzel U, Eccleston R (2017) Tracking tourists' travel with smartphone-based GPS technology: a methodological discussion. Inf Technol Tour 17(3):255–274. https://doi.org/10.1007/s40558-017-0086-3

13. Shoval N, Ahas R (2016) The use of tracking technologies in tourism research: the first decade. Tour Geogr 18(5):587–606. https://doi.org/10.1080/14616688.2016.1214977

14. Gartner. https://www.gartner.com/it-glossary/location-aware-technology

15. Raun J, Ahas R, Tiru M (2016) Measuring tourism destinations using mobile tracking data. Tour Manag 57:202–212. https://doi.org/10.1016/j.tourman.2016.06.006

16. Gartner. https://www.gartner.com/it-glossary/location-based-marketing-lbm

17. Beldona S, Lin K, Yoo J (2012) The roles of personal innovativeness and push vs pull delivery methods in travel-oriented location-based marketing services. J Hosp Tour Technol 3(2):86–95. https://doi.org/10.1108/17579881211248772

18. Shoval N, Schvimer Y, Tamir M (2018) Real-time measurement of tourists' objective and subjective emotions in time and space. J Travel Res 57(1):3–16. https://doi.org/10.1177/0047287517176911

19. Tussyadiah IP (2012) A concept of location-based social network marketing. J Travel Tour Mark 29(3):205–220. https://doi.org/10.1080/10548408.2012.666168

20. Önder I, Koerbitz W, Hubmann-Haidvogel A (2016) Tracing tourists by their digital footprints: the case of Austria. J Travel Res 55(5):566–573. https://doi.org/10.1177/0047287514563985

21. García-Palomares J, Gutiérrez J, Mínguez C (2015) Identification of tourist hot spots based on social networks: a comparative analysis of European metropolises using photo-sharing services and GIS. Appl Geogr 63:408–417. https://doi.org/10.1016/j.apgeog.2015.08.002

22. Vu H, Li G, Law R, Zhang Y (2017) Tourist activity analysis by leveraging mobile social media data. J Travel Res. https://doi.org/10.1177/0047287517722232

Tourism Marketing Through Internet and Social Media, the Contribution of Smartphones and Virtual Reality

Anastasia Kastanidou

Abstract Internet is transforming the entire marketing mix and social media have an increasingly important role for travelers while the role of smartphones is catalytic since the average person is checking it 150 times per day on average. This research discusses the role of social media in tourism and to what extent consumers are affected by word of mouth communication (WOM) in tourism. At the same time virtual reality offers many useful applications for tourism that may need more attention from tourism researchers and professionals.

Keywords Tourism marketing · Social media · eWOM · Smartphones · Virtual reality

1 Introduction

1.1 Aims of the Research

The author was led to conduct this research because of her interest in new technologies in the hotel industry, her interest in the combination of new portable devices such as smartphones and social media (SM) as well as their importance in tourism.

1.2 Methodology

A combination of primary and secondary research was conducted to successfully accomplish the goals of the research. For the secondary research a study of recent electronic books as well as electronic articles (after the year 2010) was conducted in

---

A. Kastanidou (✉)
Independent Researcher, Thessaloniki, Greece

specific areas such as internet marketing, SM, WOM, smartphones and virtual reality in tourism industry (TI). The collection of the primary data of the research was achieved through an online structured questionnaire which was posted electronically to the author's profiles in SM. There were questions of quantitative research in some of which the respondent could add their own opinion, multiple choice questions and Likert scale questions. The questions of the primary research (PR) derived from the secondary research, the professional and personal experience of the author as a SM and portable devices user. The sample was a non-random, sample of ease and it was addressed to all SM profiles of the author of the PR (Facebook, Twitter, Linkedin and Google+) and specifically addressed to Facebook groups with interest in the TI. The questionnaire was anonymous, easy to understand, addressed to all users of SM and portable devices. There were a satisfactory number of responses since the total number was 193 within 2 weeks. The demographics of the PR show that the majority of respondents are women aged between 30 and 49 years old while their marital status is unmarried. The professional status of the respondents is private employee while the educational level is at postgraduate/tertiary level. Their main motivation for travel is 'holiday/leisure' while the respondents travel 'with my partner/husband' and they are traveling '1–2 times' annually.

2 Internet

The development of information and communication technology is a very dynamic field with the ability to record the presence and real-time human movement and behavior in space. Together with the spread of internet and wireless systems with the consequent increase of the use of SM by consumers [1] there is a need to review the traditional concept of WOM [2–6]. The ability of individuals to share their experiences with other people around the world [7, 8] removes power from businesses and gives it to the consumers [9]. The shift in consumer habits is supported by the phenomenon of the proliferation of SM and the use of smartphones and tablets that are being used to access SM [10]. Online user generated content (UGC) can be shared through published ratings, mailbags, online mailing lists, personal email chat rooms, instant messages and social media posts. Tourists contact with a tourist business (TB) using more than one portable and stationary device at the same time for travel planning. This is called the 'three screens' phenomenon because the person while holding a smartphone, watches TV, uses a tablet and potentially a laptop. This behavior has become an integral part of the consumer routine especially for social networking activity [11]. Based on the PR carried out by the author the new technology mobile devices which are being used mostly by the respondents are 'smartphones'. The most common combinations are the use of 'smartphones/laptops' and 'smartphones/tablets/laptops'. At the same time, the majority of the respondents use their portable devices for '3–4 h' per day and as for the use of SM the majority is connected '1–3 h' per day. Regarding how often the respondents check their portable device for SM notifications the majority responded 'whenever I hear a notification tone'.

3   Smartphones and Mobile Applications in Tourism Industry

Even if smartphones or portable devices allow one to use a company's desktop version of the website; creating a mobile version of the website optimized for small screens; as well as the creation of a mobile application (app) are very important. The TB can create an app for mobile phones with Apple, Windows Mobile and Android software that should be installed free of charge. The difference between mobile websites and mobile apps is that the app requires to be installed on the user's device creating in this way a direct business to user connection [12]. Based on the PR the majority has '1–3' TB apps installed on their mobile devices but they are 'neutrally' satisfied with their use. In 'how likely it is to install TB apps on your mobile devices in the future' the majority replied 'very likely'.

4   Social Media and eWOM in Tourism Industry

We encounter some challenges regarding information in the TI in electronic word of mouth (eWOM) communication and the most important is the authenticity of the reviews published on travel review websites (TRW).

There are two types of misleading tourist reviews (TR) the frivolous reviews that contain purely irrelevant text and the misleading reviews which are fraudulently expressed to appear genuine and not perceived by the reader as deceptive [13]. In fact tourists who are looking for information on the internet are smart and are aware of the bias of personal choice in online reviews of tourist products and services [14]. Another source of user biased information is the possibility of the deliberate manipulation of online TR, for example fake positive or negative reviews from the TB itself or a competitor or even tourists thanks to anonymity [13]. Professional manipulators can be also the provider of the tourist products/services who aims to improve his reputation or to damage his competitor's. The review verification policy applied to each site is responsible for the existence of genuine reviews since the anonymity of the message can increase the manipulation [12]. There are two categories of SM that allow users to distribute eWOM such as Facebook etc. and anonymous TRW such as TripAdvisor etc. [15]. Networks of friends/colleagues have the advantage of higher trust from anonymous TRW but the latter offers deeper knowledge and different perspectives [16]. Another frequent distinction in the TI is amongst the well known anonymous TRW such as TripAdvisor and online travel agents (OTAs) for example Booking.com. The different policy of these TRW determines a higher volume of reviews with a possible higher rate of manipulative TR compared to those of OTAs [17]. In fact, in OTAs in order to book a hotel room a credit card number must be provided and this generally discourages those who want to manipulate a TR but often even OTAs are also affected by fake reviews. In the PR carried out by the author when asked 'When are you more cautious about SM/OTA

TRs of a tourist destination/tourist business?' the majority responded 'when there are only positive reviews without negative comments and none of the representatives of the TB responds to the tourists'. Respondents also added 'There is a well-known profession "I write tourist reviews"' which proves the awareness of the respondents that they will find manipulative TR.

WOM is considered to be something different than advertising because it is independent and not paid by the company [18] and is therefore considered to be a genuine and more reliable source of information for the tourists [19, 20]. EWOM is the type of communication that is not just about brands, products or services but can be related to an organization, a destination etc. [3]. The difference between WOM and eWOM is that in WOM they can ask people who interact to create small groups while in the online environment millions of people unknown to each other have access to other people TR [21] for a long time [9, 22, 23]. For this reason in eWOM the one who reads the TR is difficult to determine the reliability of the message and this is because the information comes from people who they do not know personally [24–26], may have different culture and come from other countries [27] or belong to a different background [28]. Therefore, writing style analysis could be a way of detecting manipulative TR [13].

A recent study found that a genuine TR has fewer references to the person itself who criticizes than a misleading TR [13]. However, SM users know that they will find fake TRs within the highest volume and quality of UGC and they filter and interpret what they read examining this way the manipulative TRs. The reliability of eWOM is influenced by determinants of information such as the strength of the argument, the recommendations' framework, their resemblance, the credibility of the source and the confirmation of the recipient's previous belief [29, 30, 23] and other points such as the integrity of the recommendation and its rating as extra factors [30]. The usefulness of the information, its relevance and the reliability of eWOM has shown to positively affect its adoption and its influence on tourists' intentions in the market [6]. The quality of the argument on the internet and the reliability of the source have proven to be the most important in terms of adopting the tourist information [12]. In conclusion, TRs with both positive and negative information are considered as more detailed information and influence positively the power of arguments [30].

In the PR conducted by the author when choosing a tourist destination Booking. com and Tripadvisor are considered to be 'very much' important. Unlike Facebook which is considered 'not enough' important for choosing a tourist destination/tourist business, while Instagram, Twitter, Google+, LinkedIn, YouTube, and Expedia are considered to be 'not at all' important. When asked 'Which is the criterion for you to choose a SM in order to search a tourist destination/business?' the majority responded with 'what I have used before and I trust' and the respondents added 'the one which will show me the most objective comments and true photos'. In the PR conducted by the author regarding 'the most important element in the content of the posts of a tourist destination/business in order to stimulate the interest to watch it' the majority belongs to 'Photos/Text/Music/Video'. When asked 'Why would you share or comment, or would you 'like' a tourist post or would you 'like' a page of a

tourist destination/business?' the majority responded 'because I have visited it'. People who post a comment on the internet are either extremely satisfied or extremely dissatisfied, consumers with moderate satisfaction are not motivated to make their views public (undervalued bias) [31]. The above view is confirmed by the PR when asked 'In which circumstance would you make a review on TRW like Tripadvisor for a tourist destination/business from your mobile device such as a smartphone while you are still there?' the majority replied 'if I was very disappointed by the experience' and 'if I was very satisfied with the experience'.

All these trends could be opportunities for a TB to develop marketing strategies towards different target markets [8, 32, 33]. Tourists consult UGC for two main reasons [26]. The first reason is to collect information about a brand or a product and the second to learn through the experience of other tourists and to support the decision they made. The lack of training of employees involved in interactions with tourists in SM may affect negatively tourists [34], for this reason it is necessary to train employees who are directly related to the company's SM, such as SM managers, in order to have the appropriate interactions with tourists.

5   Virtual Reality in Tourism Industry

The convergence of SM, virtual reality (VR) and the physical space determines the development of a new perspective towards mobile social media (MSM). Augmented reality (AR) is considered to be the most common form of mixed reality (MR). Due to the latest developments in IT and internet connectivity AR has a wide variety and is growing constantly in natural products such as tourist attractions and mobile devices (smartphones) [35]. Therefore, due to the inherent characteristics of AR and recent technological developments the term mobile augmented reality (MAR) was designed to describe the combination of mobile technologies and AR. Among the various devices especially smartphones are combining in a small device all the necessary technologies for the AR. Considering their remarkable penetration in almost all modern countries [12] TB should look at the most appropriate ways of using smartphones as a communication channel with tourists. In the TI, QR codes are used by suppliers such as hotels and tourist destinations to improve customer service and provide additional information. The development of mobile devices connected to the internet along with SM, VR and physical space determines a change to ubiquitous social media (USM) [36] or MSM [37, 38] where mobile technology and SM change the way people communicate forming new kinds of socialization based on proximity, mobile phone tracking and services based on the location. The advantages of SM marketing in conjunction with social marketing and social context mobile marketing (SoCoMo marketing) is an opportunity for TB [38]. In an environment where SM empower users the increase of mobile SM and especially Foursquare, Facebook places etc. can return some of this power back to the TB [37]. In the PR conducted by the author when asked 'Do you know what virtual reality is?' the majority responded 'Yes I know and I want to try'. When asked 'What

do you think is the best VR form?' the majority responded with 'Interactive 3D graphics representing the tourist destination/business'. When asked 'Do you think that the use of VR would make you more interested in visiting a tourist destination/business?' the majority replied 'Yes, I would be interested in visiting a tourist destination/business'. When asked 'In your opinion how important will be the role of VR in the future for tourism?' the majority responded 'very important'. Therefore, we understand the great interest of VR in tourism by the respondents of the PR conducted by the author.

6 Conclusion

In conclusion, a TB has to take into account the need to combine traditional marketing strategy with modern internet techniques [12]. A TB needs to discuss regarding their tourist product/service not only on their blog and SM but also on third-party websites used by tourists [12]. A TB must monitor its reputation on the internet or on a website that makes an online chat about their tourist product/service so they can understand the 'feeling' the public has about its brand. While the most common way of interacting with those who make TR is the tourist product/service provider to respond to their feedback and moreover to respond strategically [39–41]. In problem solving situations online TR are being used to resolve tourists' complaints as quickly and efficiently as possible and a TB with strategy should use the information that derives from the UGC so they can improve and develop new services.

References

1. Organisation for Economic Co-operation and Development (OECD) (2012) OECD internet economy outlook 2012. Organisation for Economic Co-operation and Development, Paris
2. Stauss B (1997) Global word of mouth: service bashing on the internet is a thorny issue. Mark Manag 6:8–30
3. Buttle F (1998) Word of mouth: understanding and managing referral marketing. J Strateg Mark 6:241–254. https://doi.org/10.1080/096525498346658
4. Breazeale M (2009) Word of mouse: an assessment of electronic word-of-mouth research. Int J Mark Res 51:1–19. https://doi.org/10.1177/147078530905100307
5. Cheung CM, Thadani DR (2010) The state of electronic word-of-mouth research: a literature analysis. In: PACIS 2010 Proceedings, p 151. https://aisel.aisnet.org/pacis2010/151
6. Cheung CM, Thadani DR (2012) The impact of electronic word-of-mouth communication: a literature analysis and integrative model. Decis Support Syst 54:461–470. https://doi.org/10.1016/j.dss.2012.06.008
7. Dellarocas C (2003) The digitization of word-of-mouth: promise and challenges of online feedback mechanisms. Manag Sci 49:1275–1444. https://doi.org/10.1287/mnsc.49.10.1407.17308

8. Inversini A, Marchiori E, Dedekind C, Cantoni L (2010) Applying a conceptual framework to analyze online reputation of tourism destinations. In: Proceedings of the international conference in Lugano, Switzerland. Springer, Vienna. https://doi.org/10.1007/978-3-211-99407-8
9. Hennig-Thurau T, Gwinner KP, Walsh G, Gremler DD (2004) Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? J Interact Mark 18:38–52. https://doi.org/10.1002/dir.10073
10. PhocusWright (2013) In: Minazzi R (ed) Social media marketing in tourism and hospitality. Springer, Milan, pp 127–134. https://doi.org/10.1007/978-3-319-05182-6
11. Nielsen (2012) State of the media: the social media report 2012. In: Minazzi R (ed) Social media marketing in tourism and hospitality. Springer, Milan, pp 1–115. https://doi.org/10.1007/978-3-319-05182-6
12. Minazzi R (2015) Social media marketing in tourism and hospitality. Springer, Milan. https://doi.org/10.1007/978-3-319-05182-6
13. Banerjee S, Chua AYK (2014) A linguistic framework to distinguish between genuine and deceptive online reviews paper presented at the international multiconference of engineers and computer scientists. In: Proceedings of the international conference on ICWS
14. Banerjee A, Fudenberg D (2004) Word-of-mouth learning. Games Econ Behav 46:1–22. https://doi.org/10.1016/S0899-8256(03)00048-4
15. Tiwari A, Richards TJ (2013) Anonymous social networks versus peer networks in restaurant choice. Arizona State University
16. Cheung CM, Lee MK (2012) What drives consumers to spread electronic word of mouth in online consumer-opinion platforms. Decis Support Syst 53:218–225. https://doi.org/10.1016/j.dss.2012.01.015
17. Mayzlin D, Dover Y, Chevalier JA (2012) Promotional reviews: an empirical investigation of online review manipulation. Am Econ Rev 104:2421–2455. https://doi.org/10.1257/aer.104.8.2421
18. Stern B (1994) A revised communication model for advertising: multiple dimensions of the source, the message, and the recipient. J Advert 23:5–15. https://doi.org/10.1080/00913367.1994.10673438
19. Bateson EG, Hoffman KD (2010) Services marketing concepts, strategies & cases. South Western Cengage Learning, Mason
20. Ogden M (2001) Marketing truth: hearing is believing. In: Minazzi R (ed) Social media marketing in tourism and hospitality. Springer, Milan, pp 20–28. https://doi.org/10.1007/978-3-319-05182-6
21. Libai B, Bolton R, Bügel MS, de Ruyter K, Götz O, Risselada H, Stephen AT (2010) Customer to customer interactions: broadening the scope of word of mouth research. J Serv Res 13:267–282. https://doi.org/10.1177/1094670510375600
22. Hung KH, Li SY (2007) The influence of eWOM on virtual consumer communities: social capital, consumer learning and behavioral outcomes. J Advert Res 47:485–495. https://doi.org/10.2501/S002184990707050X
23. Park C, Lee TM (2009) Antecedents of online reviews' usage and purchase influence: an empirical comparison of U.S. and Korean consumers. J Interact Mark 23:332–340. https://doi.org/10.1016/j.intmar.2009.07.001
24. Chatterjee P (2001) Online reviews: do consumers use them? Adv Consum Res 28:129–133
25. Xia L, Bechwati NN (2008) Word of mouse: the role of cognitive personalization in online consumer reviews. J Interact Advert 9:3–13. https://doi.org/10.1080/15252019.2008.10722143
26. Schindler R, Bickart B (2005) Published 'word of mouth': referable, consumer-generated. In: Sigala M, Christou E, Gretzel U (eds) Social media in travel, tourism and hospitality theory, practice and cases. Ashgate, Farnham, pp 20–28
27. Gruen TW, Osmonbekov T, Czaplewski AJ (2006) eWOM: the impact of customer-to-customer online know-how exchange on customer value and loyalty. J Bus Res 59:449–456. https://doi.org/10.1016/j.jbusres.2005.10.004

28. Litvin SW, Goldsmith RE, Pan B (2008) Electronic word-of-mouth in hospitality and tourism management. Tour Manag 29:458–468. https://doi.org/10.1016/j.tourman.2007.05.011

29. Zhang W, Watts SA (2008) Capitalizing on content: information adoption in two online communities. J Assoc Inf Syst 9:73–94

30. Cheung MY, Luo C, Sia CL, Chen H (2009) Credibility of electronic word-of-mouth: informational and normative determinants of on-line consumer recommendations. Int J Electron Commer 13:9–38. https://doi.org/10.2753/JEC1086-4415130402

31. Hu N, Pavlou PA, Zhang J (2009) Overcoming the J-shaped distribution of product reviews. Commun ACM 52:144–147. https://doi.org/10.1145/1562764.1562800

32. Munar AM (2010) Tourist-created content: rethinking destination branding. Int J Cult Tour Hosp Res 5:291–305. https://doi.org/10.1108/17506181111156989

33. Xiang Z, Gretzel U (2010) Role of social media in online travel information search. Tour Manag 31:179–188. https://doi.org/10.1016/j.tourman.2009.02.016

34. Ramaswamy V (2009) Leading the transformation to co-creation of value. Strateg Leadersh 37:32–37. https://doi.org/10.1108/10878570910941208

35. Wang D, Xiang Z (2012) The new landscape of travel: a comprehensive analysis of smartphone apps. NA

36. Mandelli A, Accoto C (2012) Social mobile marketing. In: Minazzi R (ed) Social media marketing in tourism and hospitality. Springer, Milan, pp 127–134. https://doi.org/10.1007/978-3-319-05182-6

37. Kaplan AM (2012) If you love something, let it go mobile: mobile marketing and mobile social media 4×4. Bus Horiz 55:129–139

38. Buhalis D, Foerste MK (2013) SoCoMo marketing for travel and tourism. In: Xiang Z, Tussyadiah I (eds) Information and communication technologies in tourism 2014. Springer, Cham. https://doi.org/10.1007/978-3-319-03973-2_13

39. Chen Y, Xie J (2005) Third-party product review and firm marketing strategy. Mark Sci 24:218–240. https://doi.org/10.1287/mksc.1040.0089

40. Dellarocas C (2006) Strategic manipulation of internet opinion forums: implications for consumers and firms. Manag Sci 52:1577–1593. https://doi.org/10.1287/mnsc.1060.0567

41. Zhu F, Zhang X (2010) Impact of online consumer reviews on sales: the moderating role of product and consumer characteristics. J Mark 74:133–148. https://doi.org/10.1509/jmkg.74.2.133

Museums Brand Equity and Social Media: Looking into Current Research Insights and Future Research Propositions

Zoe-Charis Belenioti, George Tsourvakas, and Chris A. Vassiliadis

Abstract Extensive research has repeatedly acknowledged the link between traditional and digital marketing communication tools and branding performance. Particularly, both within For Profit Organizations (henceforth, FPOs) and Non Profit Organizations (henceforth NPOs), social media as the milestone of digital era have rebut the foundations of corporate and personal communication through the emergence of new participatory communication terms, such as "prod-user" and "co-creation". Consequently, a growing research trend has emerged towards e-e marketing tools and social media impact on destination branding, as well. Simultaneously, thanks to its multidimensional benefits both at communicational, educational and promotional level, social media is emerging as an essential feature on the branding of the new museum era. To date, within NPOs sector few studies have investigated the effect of social media on brand equity. Moreover, far too little attention has been paid to the link between social media and museums' brand equity. Based on the systematic qualitative critical review methodology, this paper attempts to identify the basic trends and research status by 2018. Drawing on a review of 76 papers that are the result of a systematic desk research, this study categorizes and presents, for the first time, the effects of social media use on museums' brand components. The study offers new and valuable insights into multidisciplinary research interests of research and industry community relating to communication and marketing, NPOs, tourism and museums context.

Keywords Social media · Museums · Brand equity · NPOs · Cultural tourism

Z.-C. Belenioti (✉) · G. Tsourvakas
Aristotle University of Thessaloniki, Thessaloniki, Greece

C. A. Vassiliadis
University of Macedonia, Thessaloniki, Greece

1 Introduction

Traditional and digital marketing communication tools have a pivotal role in branding process [1–8]. Thus, scholars have recently delved into social media impact on branding within FPOs or tourism destination marketing sector [9–14]. In the meantime, social media is becoming a prominent and essential tool on the branding of the new museum era, given its multidimensional benefits both at communicational, educational and promotional level [15]. However, given the infant stage few studies have examined the link between social media and brand equity [2, 7, 15–19]. Still, there is a scarcity within NPOs sector [15, 19, 20]. Upon the call within FPOs and NPOs sector [15, 19, 21, 22], the infant stage of research on the use of social media within museums [15]and on the relationship between social media impact and NPOs' brand equity [19], this consequent paper examines the role of social media within museums' brand equity. Based on literature review analysis, the study explores (RQ1) the link between social media use and museums' customer- based museum brand equity (CBBE), (RQ2) the link between social media use the museum visitors' engagement, (RQ3) the link between social media and museum visitors' satisfaction.

2 Literature Review

Undoubtedly, marketing communication tools are central to brand equity theory of FPOs and NPOs organizations [4, 19, 20, 23–27]. Particularly, the rise of social media has totally transformed museums' communication given its multidimensional effects [15, 17, 18]. Vassiliadis and Belenioti [15] identified three major ways in which social media affect museums; enhancement of museum experience, museums' communication, museums' learning process and boost of visitors' engagement. However, museums still lag into dialogical communication and don't extol the full potential of social media [15, 24, 25, 28–33]. Recently, while there has been an interest in museum branding [19, 34–36] still research on brand equity and NPOs— along with museums' customer-based brand equity-remains in its infancy. As Belenioti and Vassiliadis note in 2017 in their review ".... similarly, to FPOs context, again, the impact of social media on NPOs' brand equity is understudied [...] most scholars in the field have merely focused on the frequency, reason and way of social media use [25, 26, 29] [...] while other studies highlight common challenges that NPOs have to overcome, such as the lack of social media integration at a strategic and tactical level [1, 25, 26, 29, 31, 37, 38] or the lack of dialogic communication" [19]: 155, [25, 26, 29]. They also concluded that "harnessing the FPOs theory into NPOS, they social media use is expected to increase brand equity, that in turns increases brand loyalty and intention to repurchase" [19]: 157.

Table 1 Classification of studies on social media and FPOs'/NPOs' BE by 2018

Findings	Authors
SM boost FPOs BE	Bruhn et al. [2], Kim and Ko [39], Kuvykaite and Piligrimiene [40], Kananukul et al. [41], Pham and Gammoh [42], Kavisekera Satheeka and Abeysekera Nalin [43], Godey et al. [44], Adetunji et al. [45], Stojanovic et al. [8], Alam and Khan [46], Belenioti and Vassiliadis [19], Buhalis and Inversini [11], Leung et al. [10]
SM boost NPOs BE (healthcare and cultural NPOs)	Belenioti and Vassiliadis [19], Young [47], Bernritter et al. [48], Asorwoe [49], Lovejoy et al. [26], Nah and Saxton [25], Guo and Saxton [50], Constantinides and Alexiou [51], Parackal et al. [52]
SM boost cultural NPOs BE	Belenioti et al. [20], Hays et al. [53], Hoksbergen and Insch [54], Hudson and Hudson [55], Hudson et al. [56], Williams et al. [57]

3 Findings: Theoretical Underpinnings

In all the studies reviewed here, social media appears as a key term of branding. So far, the recent and scarce bibliography is classified into social media and branding, social media and FPOs brand equity, social media and museums, social media and NPOs. There is also a positive link between social media and brand equity both in FPOs and in different types of NPOs according to the table below (Table 1).

Findings also reveal a positive link between social media use and museums' CCBE. To Vassiliadis and Belenioti [15], social media boost dialogue, real time communication, visitors 'engagement and enhance museum experience. To Fletcher and Lee [31], social media increase brand engagement, brand recognition or crowd fundraising. Moreover, Chung et al. [58] identified three major outputs: boost of awareness, comprehension and engagement. Similarly, to Dudareva [59] social media increase brand awareness and engagement. With respect to the second question, again the review confirms the association between social media and brand engagement at FPOs, NPOs and museums' context [40, 60–64]. Within FPOs' context, social media facilitate customer brand interactions and thus engagement [65, 66]. Moreover, user engagement influence brand loyalty both directly and indirectly [67]. Similarly, [68] showed that social media build brand engagement, brand trust and brand loyalty. Within NPOs [19, 69], again social media build engagement and foster brand bonding from music festivals [54–57], food festivals [20] to different types of healthcare NPOs, such as OB/GYN [51], organ donation NPOs or NPOs with public health messages campaigns [52, 70, 71]. Moreover, there is a link between social media use and brand engagement within museums, as well [15, 19, 30, 31, 72–75]. Finally, regarding the third question, bibliography reveals a positive link between social media and museums visitors' satisfaction; they create satisfaction and the intention to revisit [76]. All in all, the recent literature confirms a positive link between social media use and brand equity, museum goers' engagement and visitors' satisfaction. As this part of this research study is the first part of an

ongoing research, further work needs to assess the adaptation of the results in different cultural and behavioral circumstances.

References

1. Berthon PR, Pitt LF, Plangger K, Shapiro D (2012) Marketing meets Web 2.0, social media, and creative consumers: implications for international marketing strategy. Bus Horiz 55:261–271. https://doi.org/10.1016/j.bushor.2012.01.007

2. Bruhn M, Schoenmueller V, Schäfer DB (2012) Are social media replacing traditional media in terms of brand equity creation? Manag Res Rev 35:770–790. https://doi.org/10.1108/01409171211255948

3. Hennig-Thurau T, Malthause EC, Friege C, Gensler S, Lobschat l RA, Skiera B (2010) The impact of new media on customer relationships. J Serv Res 13:311–330. https://doi.org/10.1177/1094670510375460

4. Kapoor PS, Jayasimha KR, Sadh A (2013) Brand-related, consumer to consumer, communication via social media. IIM Kozhikode Soc Manag Rev 2:43–59. https://doi.org/10.1177/2277975213496514

5. Keller KL (2009) Building strong brands in a modern marketing communications environment. J Mark Commun 15:139–155. https://doi.org/10.1080/13527260902757530

6. Erdoğmuş İE, Çiçek M (2012) The impact of social media marketing on brand loyalty. Procedia Soc Behav Sci 58:1353–1360. https://doi.org/10.1016/j.sbspro.2012.09.1119

7. Langaro D, Rita P, de Fátima Salgueiro M (2015) Do social networking sites contribute for building brands? Evaluating the impact of users' participation on brand awareness and brand attitude. J Mark Commun 24(2):146–168. https://doi.org/10.1080/13527266.2015.1036100

8. Stojanovic I, Andreu L, Curras-Perez R (2018) Effects of the intensity of use of social media on brand equity. Eur J Manag Bus Econ 27:83–100. https://doi.org/10.1108/EJMBE-11-2017-0049

9. Lange-Faria W, Elliot S (2012) Understanding the Role of social media in destination marketing tourism. Int Multidiscip J Tour 7:193–211

10. Leung D, Law R, van Hoof H, Buhalis D (2013) Social media in tourism and hospitality: a literature review. J Travel Tour Mark 30:3–22. https://doi.org/10.1080/10548408.2013.750919

11. Buhalis D, Inversini A (2014) Tourism branding, identity, reputation co-creation, and word-of-mouth in the age of social media. Tour Manag Mark Develop 1:15–40. https://doi.org/10.1057/9781137354358

12. Zeng B, Gerritsen R (2014) What do we know about social media in tourism? A review. Tour Manag Perspect 10(April):27–36. https://doi.org/10.1016/j.tmp.2014.01.001

13. Wozniak T, Stangl B, Schegg R, Liebrich A (2016) Do social media investments pay off?—preliminary evidence from Swiss destination marketing organizations. In: ENTER2016 eTourism conference, 2016-02-02-2016-02-05. Bilbao, Spain

14. Xu F, Buhalis D, Weber J (2017) Serious games and the gamification of tourism. Tour Manag 60(June 2017):244–256

15. Vassiliadis C, Belenioti ZC (2017) Museums and cultural heritage via social media: an integrated literature review. Int Multidiscip J Tour 12:97–132

16. Kuvykaite R, Piligrimiene Z (2014) Consumer engagement into brand equity creation. Procedia Soc Behav Sci 156(April):479–483. https://doi.org/10.1016/j.sbspro.2014.11.225

17. Belenioti Z (2015) A snapshot of Greek social media users. In: "Users across media" conference at University of Copenhagen, Conference Proceedings, Copenhagen, Denmark, 6–8 May 2015, pp 1–15. http://meaningacrossmedia.mcc.ku.dk/proceedings/. Accessed 05 Feb 2019

18. Belenioti ZC, Andronikidis AI, Vassiliadis C (2015) Classifying and profiling social media users: an integrated approach. In: Proceedings of the 2nd European conference on media and

mass communication, pp 183–204. http://iafor.org/archives/proceedings/EuroMedia/EuroMedia2015_proceedings.pdf

19. Belenioti Z, Vassiliadis C (2017) Branding in the new museum era, In Kavoura A, Sakas D, Tomaras P (eds) Strategic innovative marketing: 4th IC-SIM, Mykonos, 24–27 Sept 2015, Greece, Springer Book proceedings in business and economics, pp 115–121. ISBN 978-3-319-33863-7. ISSN: 2198-7246

20. Belenioti ZC, Gkarane S, Vassiliadis C (2017) The contribution of social media to small scale events: Boosting the city branding and tourism demand through Thessaloniki food festival. In: Sarmaniotis C, Wright G (eds) 5th international conference on contemporary marketing issues ICCMI, conference book proceedings, 21–23 Jun 2017 Thessaloniki, Greece, pp 224–229. isbn:978-960-287-156-0

21. Barreda AA, Bilgihan A, Nusair K, Okumus F (2015) Generating brand awareness in online social networks. Comput Hum Behav 50:600–609. https://doi.org/10.1016/j.chb.2015.03.023

22. Belenioti ZC, Tsourvakas G, Vassiliadis CA (2017) A report on museum branding literature. In: Kavoura A, Sakas DTP (eds) Strategic innovative marketing. Springer, Heidelberg, pp 229–234. https://doi.org/10.1007/978-3-319-56288-9_31

23. Keller KL, Lehmann DR (2009) How do brands create value? Mark Manag 12 (May/June):26–31

24. Hausmann A (2012) The importance of word of mouth for museums: an analytical framework the importance of word of mouth for museums: an analytical framework. Int J Arts Manag 14:32–43

25. Nah S, Saxton GD (2012) Modeling the adoption and use of social media by nonprofit organizations. New Media Soc 15:294–313. https://doi.org/10.1177/1461444812452411

26. Lovejoy K, Waters RD, Saxton GD (2012) Engaging stakeholders through Twitter: how nonprofit organizations are getting more out of 140 characters or less. Public Relat Rev 38:313–318. https://doi.org/10.1016/j.pubrev.2012.01.005

27. Villaespesa E, Kingdom U (2013) Diving into the museum's social media stream. Analysis of the visitor experience in 140, museum and the web 2013. http://mw2013.museumsandtheweb.com/paper/diving-into-the-museums-social-media-stream/

28. Srinivasan R, Enote J, Beevar KM, Boast R (2009) Critical and reflective uses of new media technologies in tribal museums. Museum Manag Curatorship 24:161–181. https://doi.org/10.1080/09647770902857901

29. Waters RD, Burnett E, Lamm A, Lucas J (2009) Engaging stakeholders through social networking: how nonprofit organizations are using Facebook. Public Relat Rev 35 (2):102–106. https://doi.org/10.1016/j.pubrev.2009.01.006

30. Whelan R (2011) The use of social media in museums. Final report/community based research project-ID 4157, Apr 2011. Peterborough Museum and Archives, Trent Centre for Community—Based Education

31. Fletcher A, Lee MJ (2012) Current social media uses and evaluations in American museums. Museum Manag Curatorship 27:505–521. https://doi.org/10.1080/09647775.2012.738136

32. Lemel R (2010) Social networking tools for marketing fine art. In: Social networking tools for marketing fine art, Allied Academies International Conference, vol 15, No 2, Las Vegas, NV, Conference Proceedings, 13–16 Oct 2010. DreamCatchers Group, Arden, NC, USA, pp 31–34. ISSN 2150-5187

33. Saxton GD, Guo C (2012) Conceptualizing web-based stakeholder communication: the organizational website as a stakeholder relations tool. Commun Sci J 18(December). https://ssrn.com/abstract=2189036

34. Belenioti Z, Vassiliadis C (2016) Branding in the new museum era. In: Kavoura A, Sakas DTP (eds) Strategic innovative marketing: 4th IC-SIM, Mykonos, Greece 2015. Strategic innovative marketing. Springer, Heidelberg, pp 115–121. https://doi.org/10.1007/978-3-319-33865-1

35. Camarero C, Garrido-Samaniego MJ, Vicente E (2012) Determinants of brand equity in cultural organizations: the case of an art exhibition. Serv Ind J 32:1527–1549. https://doi.org/10.1080/02642069.2011.567414

36. Liu C-R, Liu H-K, Lin W-R (2015) Constructing customer-based museums brand equity model: the mediating role of brand value. Int J Tour Res 17(3):229–238. https://doi.org/10.1002/jtr.1979
37. Lehman K, Roach G (2011) The strategic role of electronic marketing in the Australian museum sector. Museum Manag Curatorship 26:291–306. https://doi.org/10.1080/09647775.2011.585806
38. Hausmann A (2012) Creating "buzz": opportunities and limitations of social media for arts institutions and their viral marketing. Int J Nonprofit Volunt Sect Mark 17(April):173–182. https://doi.org/10.1002/nvsm
39. Kim AJ, Ko E (2012) Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. J Bus Res 65:1480–1486. https://doi.org/10.1016/j.jbusres.2011.10.014
40. Kuvykaite R, Piligrimiene Z (2014) Consumer engagement into brand equity creation. Procedia Soc Behav Sci 15:479–483. https://doi.org/10.1016/j.sbspro.2014.11.225
41. Kananukul C, Jung S, Watchravesringkan K (2015) Building customer equity through trust in social networking sites: a perspective from Thai consumers. J Res Interact Mark 9:148–166
42. Pham HM, Gammoh BS (2015) Characteristics of social-media marketing strategy and customer-based brand equity outcomes: a conceptual model. Int J Int Mark Adv 9:321. https://doi.org/10.1504/IJIMA.2015.072885
43. Kavisekera S, Abeysekera N (2016) Effect of social media marketing on effect of social media marketing on brand. Manag Mark J 0:201–216
44. Godey B, Manthiou A, Pederzoli D, Rokka J, Aiello G, Donvito R, Singh R (2016) Social media marketing efforts of luxury brands : influence on brand equity and consumer behavior. J Bus Res 69:5833–5841. https://doi.org/10.1016/j.jbusres.2016.04.181
45. Adetunji RR, Rashid SM, Ishak MS (2018) Social media marketing communication and consumer-based brand equity: an account of automotive brands in Malaysia. Malaysian J Commun 34:1–19. https://doi.org/10.17576/JKMJC-2018-3401-01
46. Alam MS, Khan BM (2015) Impact of social media on brand equity: a literature analysis. AIMA J Manag Res 9:1–12. ISSN 0974-497
47. Young J, (2012) VCU Scholars Compass. The current status of social media use among nonprofit human service organizations: an exploratory study. http://scholarscompass.vcu.edu/etd/2723
48. Bernritter SF, Verlegh PWJ, Smit EG (2016) Why nonprofits are easier to endorse on social media: the roles of warmth and brand symbolism. J Interact Mark 33:27–42. https://doi.org/10.1016/j.intmar.2015.10.002
49. Asorwoe E (2017) The diffusion of social media in nonprofit organizations. Dissertation, 6-28-2017, FIU electronic theses and dissertations, 3471. doi: https://doi.org/10.25148/etd.FIDC001925. https://digitalcommons.fiu.edu/etd/3471
50. Guo C, Saxton GD (2018) Speaking and being heard: how nonprofit advocacy organizations gain attention on social media. Nonprofit Volunt Sect Q 47:5–26. https://doi.org/10.1177/0899764017713724
51. Constantinides E, Alexiou M (2016) The efficacy of the internet and social media as medical marketing tools. In: 45th EMAC annual conference 2016, pp. 1–7
52. Parackal M, Parackal S, Eusebius S, Mather D (2017) The use of Facebook advertising for communicating public health messages: a campaign against drinking during pregnancy in New Zealand. JMIR Public Health Surveill 3:e49. https://doi.org/10.2196/publichealth.7032
53. Hays S, Page SJ, Buhalis D (2013) Social media as a destination marketing tool: its use by national tourism organisations. Curr Issue Tour 16:211–239. https://doi.org/10.1080/13683500.2012.662215
54. Hoksbergen E, Insch A (2016) Facebook as a platform for co-creating music festival experiences. The case of New Zealand's Rhythm and Vines New Year's Eve festival. Int J Event Festiv Manag 7:84–99. https://doi.org/10.1108/02656710210415703

55. Hudson S, Hudson R (2013) Engaging with consumers using social media: a case study of music festivals. Int J Event Festiv Manag 4:206–223. https://doi.org/10.1108/IJEFM-06-2013-0012

56. Hudson S, Roth MS, Madden Th J, Hudson R (2015) The effects of social media on emotions, brand relationship quality, and word of mouth: An empirical study of music festival attendees. Tour Manag 47:68–76. https://doi.org/10.1016/j.tourman.2014.09.001

57. Williams NL, Inversini A, Buhalis D, Ferdinand N (2015) Community crosstalk: an exploratory analysis of destination and festival eWOM on Twitter. J Mark Manag 31:1113–1140. https://doi.org/10.1080/0267257X.2015.1035308

58. Chung T-L, Marcketti S, Fiore AM (2014) Use of social networking services for marketing art museums. Museum Manag Curatorship 29:188–205. https://doi.org/10.1080/09647775.2014.888822

59. Dudareva N (2014) What makes social media relevant for arts and culture marketing: a study applied to Facebook pages of three museums in Copenhagen. Master thesis, May 2014. CBS Centre for Corporate Social Responsibility, Copenhagen Business School, Denmark

60. Kirçova İ, Yaman Y, Köse Ş G (2018) Instagram, Facebook or Twitter: which engages best? A comparative study of consumer brand engagement and social commerce purchase intention. Eur J Econ Bus Stud 10:279–289

61. Turri A, Smith K, Kempt E (2013) Developing affective brand commitment through social media. J Electron Commer Res 14:201–214

62. Triantafillidou A, Siomkos G (2018) The impact of Facebook experience on consumers' behavioral brand engagement. J Res Interact Mark 12:164–192. https://doi.org/10.1108/JRIM-03-2017-0016

63. Badell JI (2015) Museums and social media: catalonia as a case study. Museum Manag Curatorship 30:1–20. https://doi.org/10.1080/09647775.2015.1042512

64. Lobschat L, Zinnbauer MA, Pallas F, Joachimsthaler E (2013) Why social currency becomes a key driver of a firm's brand equity—insights from the automotive industry. Long Range Plan 46:125–148. https://doi.org/10.1016/j.lrp.2012.11.004

65. Barger V, Peltier JW, Schultz DE (2016) Social media and consumer engagement: a review and research agenda. J Res Inter Mark 10:268–287. https://doi.org/10.1108/JRIM-06-2016-0065

66. Davis R, Piven I, Breazeale M (2014) Conceptualizing the brand in social media community: the five sources model. J Retail Consum Serv 21:468–481. https://doi.org/10.1016/j.jretconser.2014.03.006

67. Zheng X, Cheung C, Lee LLMKO (2015) Building brand loyalty through user engagement in online brand communities in social networking sites. Inf Technol People 28:90–106. https://doi.org/10.1108/ITP-08-2013-0144

68. Pongpaew W, Speece M, Tiangsoongnern L (2017) Social presence and customer brand engagement on Facebook brand pages. J Prod Brand Manag 26:262–281. https://doi.org/10.1108/JPBM-08-2015-0956

69. Watkins BA (2017) Experimenting with dialogue on Twitter: an examination of the influence of the dialogic principles on engagement, interaction, and attitude. Public Relat Rev 43:163–171. https://doi.org/10.1016/j.pubrev.2016.07.002

70. Boote J, Telford R, Cooper C (2002) Consumer involvement in health research: a review and research agenda. Health Policy (Amsterdam, Netherlands) 61:213–236. https://doi.org/10.1016/S0168-8510(01)00214-7

71. Stefanone M, Anker AE, Evans M, Feeley TH (2012) Click to "like" organ donation: the use of online media to promote organ donor registration. Prog Transplant 22:168–174. https://doi.org/10.7182/pit2012931

72. Russo A, Watkins J, Kelly L, Chan S (2007) Social media and cultural interactive experiences in museums. Nordisk Museologi 1:19–29

73. Gainer B, Padanyi P (2005) The relationship between market-oriented activities and market-oriented culture: implications for the development of market orientation in nonprofit service organizations. J Bus Res 58:854–862. https://doi.org/10.1016/j.jbusres.2003.10.005

74. Kotler NG, Kotler P, Kotler WI (2008) Museum marketing and strategy: designing missions, building audiences, generating revenue and resources. Jossey-Bass, San Francisco, CA. 978-0787996918

75. Carvalho J, Raposo R (2012) O potencial dos social media como ferramenta de comunicação dos museus com o seu público através do digital [The potential of the social media as a digital communication tool for museums with their audience]. Revista Comunicando 1:223–234

76. Padilla-Meléndez A, Del Águila-Obra AR (2013) Web and social media usage by museums: Online value creation. Int J Inf Manag 33:892–898. https://doi.org/10.1016/j.ijinfomgt.2013.07.004

Consumer Segmentation Matrix and Variables for the Explanation of Binary Purchasing Criteria: Prices vs. Product Differentiation

Jose G. Vargas Hernandez, Elsa Patricia Orozco Quijano, Cesar Francisco Cárdenas-Dávila, and Julio Cesar Ceniceros-Angulo

Abstract This paper proposes a matrix with dimensions or blocks of consumer segmentation and simultaneously presents seven covariates synthesized and his importance thru the rating Rao, Chi-square, and Wald statistics, which shown how these and their bases of segmentation can be used in the construction of different marketing models using binary logistic regression models. For this, the authors considered as dependent variable the binary criterion based on consumer purchase price or its counterpart product attributes. Two demographic covariates were finally identified; a psychographic and three behavioral.

Keywords Matrix segmentation · Product differentiation and binary purchasing criteria

1 Introduction

The aim of working on the design of models for the business area and market studies, strongly focusing particularly in the field of product differentiation and segmentation variables in consumer decisions as conclusive evidence in discrimination, is made between the price criterion against the one based on the differentiation of attributes in the product, has correspondence with the organizations' task to distinguished from

J. G. Vargas Hernandez
Universidad de Guadalajara CUCEA, Guadalajara, Jalisco, Mexico

E. P. Orozco Quijano (✉)
Laurentian University, Sudbury, ON, Canada

C. F. Cárdenas-Dávila
Universidad de Occidente, Sinaloa, Mexico

J. C. Ceniceros-Angulo
Universidad Interamericana para el Desarrollo, Jalisco, Mexico

other competitors between companies and products involved and, in knowing the strategic variables segmentation of its market and, thereby achieve an effective positioning having as desirable corollary therefore a degree of monopoly control over the price of the goods offered in the market.

Thus, it is most significant activity to identify, select and specify the main characteristics (of consumers), which must be predicted and analyzed in the process of incorporating these elements in explaining the importance in the process in decision-making by the purchaser of commodities. For it, is emphasized in the analysis through binary logistic regression model because it offers insight through statistical scoring Rao and Wald statistic, contribution of each of the variables in the proposed model.

However, for this type of research, first, it's necessary to segment or stratify groups of consumers there for the importance to correlate and determine the individual contribution of each variable segmentation in people who choose or are decided by the criterion for differentiation of attributes in decision-making with regard to basic acquire against alternative criterion determining prices, hence, in this research proposal is sought to explore the strategy of discrete choices, through a model that discriminates the dependent variable in binary form (price vs attributes).

We also note that, the need described so far is of utmost importance to develop prototypes for product differentiation based on segmentation criteria via binary choice models, since in the theoretical discourse of marketing in this topic has emphasized proper general aspects to recognize only guidelines addressing the topic of interest by presenting a source area for research and practice in the absence of models that come to contribute in a practical and concrete way to resolve shortcomings in this field knowledge [1].

2   Methodological Strategy

As for treatment and compliance objectives in research, be guided by compliance to traditional econometric methodology, concretized through the model of binary logistic regression.

This research was conducted in the city of Culiacan, Sinaloa in México, the collection of information on variables of geographic, demographic, psychographic and psychological segmentation. Similarly, to the approach used in the purchase of edible oils.

Stratification of the geographic area for the collection of information is performed by dividing the city into four regions (North, South, Northeast and Northwest) covering almost all the malls (hypermarkets), where consumers usually made the purchase of the staple foods.

The universe of this research is composed of all persons over 18 years old engaged in the purchase of commodities in the city of Culiacan. In some cases, the

Table 1 Determination of sample size

p	q = 1 − p	ε (%)	Confidence level (%)	np*
0.41	0.59	5	95	371
0.41	0.59	5.5	95	307
0.41	0.59	6	95	258
0.41	0.59	5	94.12	346
0.41	0.59	5.5	94.12	286

Source: Authors

households have only one decision maker. In other cases, with two or more households who made purchases.

Finally, to apply the survey, we proceeded by way of probabilistic sampling by geographic strata. To get to determine the sample size we proceed as follows:

Levels of error (ε) and confidence in determining the size of probabilistic sample proportions (np) when the population is unknown (N) (Table 1).

$$n_p * \frac{Z^2(p)(q)}{\varepsilon^2}$$

In the case of estimating proportions, Bowerman et al. [2] generalize the use of P values for the success of the event and q = 1− p as its complement. With regard to the purchase decision between decision makers predominantly through the price variable and which are decided by the characteristics (attributes) of the product, for assessment error rate was set at 5.0% and a level 95% confidence; and the proportions obtained previously in the pilot, in determining the minimum sample size. On this occasion were applied with the updated values of p and q, a total of 349 questionnaires.

3 Review of Literature

Market segmentation plays an essential role in product placement on the market, using variables that are related to consumer behavior is the key to effective segmentation strategy. Stanton et al. [3] define market segmentation as the division of the total market for a product or service in several homogeneous groups of consumers, where there are similar features between them and thus respond more effectively to marketing strategies. Czinkota and Kotabe [4] in turn, define market segmentation as the process of dividing the market into groups of consumers with different preferences and needs, in order to optimize and concentrate resources within a market.

In market segmentation, it is common to use variables that are measurable and identifiable and give the ability to bundle consumers into homogeneous groups, there are three approaches to market segmentation, and the first is market segmentation with sociodemographic criteria, using variables such as age, race, sex, occupation, among others.

A second approach is geographical, where variables such as country, region, climate, etc. are used and a third criterion is the psychographic behavioral, which include the variables of attitudes, values, goals, personality, lifestyle, among others.

For the latter approach, psychographic, the most used by marketers is the lifestyle variable, as stated Vyncke [5], the lifestyle of the consumer has an influence on both consumer behavior patterns and the receiving messages advertising communication. The model commonly used for variable lifestyle is the AOI—Activities, Interests and Opinions—where are covariates such activities, highlighting the buying habits, work, vacations; with interests such as fashion, food, home and opinions on political, cultural, social, etc.

Another psychographic segmentation model is focused on values, which are understood as the goals that consumers have and guiding principles of his life [5]; The VALS (Values and Lifestyle) model coined by Mitchell [6], is the most used measurement model of values, as it offers many advantages over the AOI model, within which include the wider capture range of attitudes and consumer behavior and thus, be able to identify them easily.

However, market segments based on consumer behavior or personality, as noted by Kotler and Armstrong [7], are not sufficient to estimate the magnitude of the target market and reach it efficiently, but is required to correlate the different variables and thus segment the market more useful and effective way, providing the tools to design better business strategies.

The methodologies applied to multivariate data analysis, provides the opportunity to obtain accurate identification and description of the target market, allowing the company to adapt its business strategy and direct their resources more effectively and accurately. For this study, an array with two demographic covariates were used; a psychographic and three behavioral. When speaking of consumer behavior, refers to activities that consumers have of obtaining, using and disposing of the goods purchased, Loudon and Della [8] state that consumer behavior is the decision process that individuals make when acquire or consume goods or services. The factors involved in the consumer process of buying are essential for developing effective marketing strategies. Churchill and Petter [9] states that consumer behavior consists of feelings, thoughts and actions that influence consumers and cause changes; Richers [10] for his part, said that the consumer is characterized by emotional activities to choose and buy products to satisfy their wants and needs. The main factors that influence purchasing behavior as stated Schiffman and Kanuk [11] are the cultural, social, personal and psychological influences.

There are variables that influence the process of consumer purchasing, Bateson and Hofmann [12] state that the perceived quality of a product depends on the comparison of customer expectation with certain product, so if the product fails the satisfaction of consumer needs, is perceived as low quality; similarly, the consumer does not value the quality of the product only for its outcome, but also influence the perception of quality service provider, employees, management, among others.

The strategies used by companies as product differentiation and customer loyalty are essential to survive the fierce market competition, the oversupply of products and

standardization of them becomes increasingly difficult task for the department marketing and achieves goals.

One strategy used by companies is product differentiation focused on quality, Dey et al. [13] state that some companies turn their attention to consumers looking at price and other consumers seeking quality as well, segments exist for each. The quality differentiation provides an alternative to consumers who do not seek products of excellent quality, but who are attracted by the low price.

Other companies, used as a strategy the customer loyalty, Reinartz and Kumar [14] state that achieve long-term customer (Customer Lifetime Value or CLV) loyalty to the brand, it is essential to maximize the success of the company. Researchers have used various methods to calculate the individual value of each consumer and to make predictions or segment them into groups, such as Jain and Singh [15], Gupta and Lehmann [16], Kim et al. [17], Han et al. [18], among others.

The segmentation method used by Paintings and Cuadros Domínguez [19] in which considers three factors: current value, potential value and brand loyalty, provides information about customer behavior and how long-term loyalty is a good unit extent to which companies can support decisions; the study shows that the application of this methodology to a specific group of consumers, you get a good way to characterize and identify, to attract new consumers, these can be segmented into pre-existing groups and thus be able to retain consumers.

Several authors as Dubrovsky [20], Shaw and Gibbs [21] and Hensen [22] state that there is a significant correlation between customer satisfaction and purchase frequency, obtaining a brand loyalty and overall, a positive attitude to the product, a situation that impacts positively on the overall product placement and consumer behavior.

4 Logistic Regression Model Classic Hosmer and Lemeshow

To better understand the structure and nature of the binary model, we consider the theoretical contribution to the Logistic Regression Hosmer and Lemeshow [23]; in his classic work Applied Logistic Regression, reasoning as follows in relation to the expected value of the response variable in a linear function as:

$$E(y/x) = \beta_0 + \beta_1 x \tag{1}$$

Where it is established that (x) moves in ranges ($-\propto$ and $\propto$). But with dichotomous response variables type ranges are set to $0 \leq E(y/x) \leq 1$ If, $\pi(x) = E(Y/x)$. Therefore the logistic model is specified as:

$$\pi(x) = \frac{e^{\beta_0 + \beta_1 x}}{1 + e^{\beta_0 + \beta_1 x}} \tag{2}$$

Finally, defining performed a logistic transformation in terms of: $\pi(x)$, so,

$$\wp(x) = \ln\left[\frac{\pi(x)}{1 - \pi(x)}\right] = \beta_0 + \beta_1 x \tag{3}$$

Complementing the explanation, Ferrán [24], recommends that:

$$\frac{\pi(x)}{1 - \pi(x)} = \frac{\delta}{\lambda_y} \varphi = \beta_1 x_1 + \Box \beta_P x_P + \beta_0,$$

then: $\lg\left(\frac{\delta}{\lambda}\right) = \varphi \therefore$ an additional way of presenting the model is:

$$\left(\frac{\delta}{\lambda}\right) = e^{\beta_0}\left(e^{\beta_1}\right)^{\chi_1} \cdots \left(e^{\beta_P}\right)^{x_P} \tag{4}$$

We also note that, with respect to η, parameters or coefficients of equation (in general terms), we have that for Gujarati (2010), these parameters are expressed in terms of the following subparagraphs: β_1 and β_2, thus we have, if: $\ln\left(\frac{P_i}{1 - P_i}\right) = Z_i$, straighten it the expression:

$$Z_i = \beta_1 \text{ and } \beta_{2xI}$$

With information on these parameters in the function sum we are likely to interpret the relative importance of each of the original variables segmentation in shaping the block and the final identification of the covariates of interest. For the procedure for identification, evaluation and selection of covariates of interest, we proceed to illustrate through the variable educational level of the respondents. Then, it is necessary to clarify on the categorization of this variable. Thus, we proceed to reclassify the fate variable such that reconfigure a cluster consisting of three categories of response; those who only have the level of education through high school; another made up what feature level preparatory instruction and finally have professionals who manifest studies (undergraduate and/or postgraduate). The exact observance of the preamble leads to consideration of the following information (Table 2 and Fig. 1):

It cannot be omitted here, on the representative balance achieved in the size of the new segments with strong social and professional significance. Now, the question is who said to have higher education levels in the city tend to opt for purchasing criteria based on product differentiation? Do consumers with basic education level decision

Table 2 Cross Tab. edu_rec* selection criteria

			Selection criteria		Total
			Price	Differentiation	
Edu_re	Basic education	Count	54	60	114
		Total (%)	15.8	17.5	33.3
	High school	Count	33	70	103
		Total (%)	9.6	20.5	30.1
	College	Count	25	100	125
		Total (%)	7.3	29.2	36.5
Total		Count	112	230	342
		Total (%)	32.7	67.3	100.0

Source: Own elaboration by authors
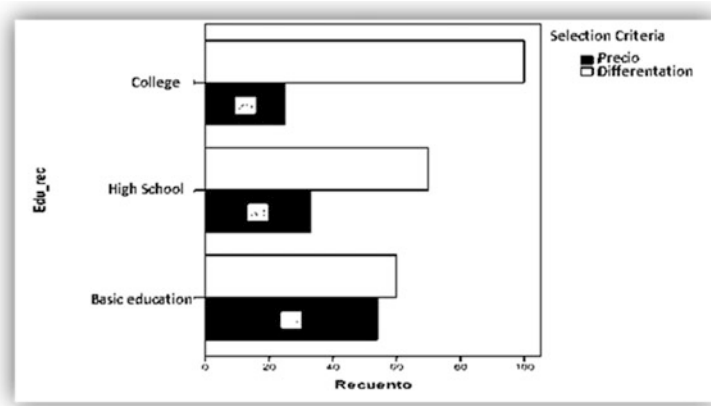
Fig. 1 Educational level of respondents. Source: Own elaboration

Table 3 Chi-square tests

	Value	gl	Sig. asintotic (bilateral)
Chi-square Pearson	20.31	2	0.000
N of valid cases	342		

Source: Own elaboration

makers are through the criterion of prices in the population? Formalize the significance test by the following hypothesis.

H0: Variable educated buyers have no connection with the purchase criteria used either the price or differentiation by attributes (Table 3).

The minimum expected frequency is 33.73.

As tested, the test turns out to be highly significant. So the null hypothesis is rejected and thus proceed to select important demographic segmentation variable in

Table 4 Encodings categorical variables

			Encoding parameters	
		Frequency	(1)	(2)
edu_re	Basic education	114	0.000	0.000
	High school	103	1.00	0.000
	College	125	0.000	1.000

Source: Own elaboration

Table 5 Specifications bootstrap

Sampling method	Simple
Number of samples	1000
Level of confidence interval	95.0%
Type confidence interval	Percentile

Source: Own elaboration

Table 6 Variable and categories in the equation

		B	E.T.	Wald	gl	Sig.	Exp(B)
Step1[a]	Educareca			19.473	2	0.000	
	Educareca (1)	0.647	0.282	5.241	1	0.022	1.909
	Educareca (2)	1.281	0.292	19.261	1	0.000	3.600
	Constante	0.105	0.188	0.315	1	0.574	1.111

Source: Own elaboration
[a]Input variables Step 1: Educateca

shaping the logistic regression model, now entering mode covariate. Is this appropriate candidate variable in the model? Let's analyze this situation.

5 Statistical Hypothesis Testing with Wald and Bootstrap Procedure for Education

Before testing the hypotheses of individual significance of the variable educated, proceed to encoding the same as shown in Table 4.

As can be seen from the above table, basic education category is the category of reference or comparison. Why this category was selected as a reference? Since we want to investigate what is the role of education in the criterion of discrimination and is part of supposing that those with more education tend to attribute discrimination on the criterion of purchase. Notice how in contrast, the level of school studies is assigned category (1). Finally, a professional level code (2). Now is coefficient associated with the variable level equal to zero in the study population? Put another way, are significantly related the independent and dependent variables? Formally express the null hypothesis. H0: The education variable is not found associated in explaining the way how consumers decide to use binary criteria purchase.

Table 7 Bootstrap for variables in the equation

			Bootstrapa			Level of confidence interval al 95%	
		B	Sesgo	Típ. error	Sig. (bilateral)	Inferior	Superior
Step 1	Educareca (1)	0.647	0.012	0.291	0.023	0.077	1.251
	Educareca (2)	1.281	0.012	0.295	0.001	0.735	1.903
	Constant	0.105	0.005	0.186	0.555	−0.247	0.484

Source: Own elaboration

For having more elements of reliability and enhance the accuracy of the results of hypothesis testing is performed using the bootstrap procedure with a total of 1000 samples. The results are presented below (Tables 5, 6 and 7).

From the table above the high significance of education variable discrimination in consumer buying criteria, alternately follows the procedure allows us to construct bootstrap confidence intervals at 95% for testing H0 of independence between the covariate and the dependent variable. If you look carefully you will notice that the coefficients for Educareca (1) and Educareca (2) variables fall within the respective confidence intervals, so likewise the H0 is rejected coming to the same conclusion. If we now consider the other variables classified according to Kerin et al. [25], in the following dimensions or block segmentation; geographic, demographic, psychographic and psychological or behavioral, then once the same procedure for the remaining variables segmentation is performed; it is able to present the segmentation matrix and covariates of interest.

6 Conclusion

As shown in Table 8, the matrix of dimensions and covariates are based or behavioral dimension that contributes more covariates of interest (3); expected benefits, brand awareness and loyalty to it. Next, the demographic dimension favors with two variables (education and income). Finally, the psychographic block provides the consumer personality type variable. It is important to remember that this classification was made on individually variable by variable, once incorporated all together, some of them may have to leave the model. With the above is manifestly clear the essential importance of the behavioral characteristics manifested by the consumer in the process of binary discrimination purchase. From the foregoing, those combinations in Table 8 are adjusted covariates were highly significant (* all Rao and Wald test). This exercise teaches us the same way as when using the Wald statistic for individual significance (individual importance of giving a covariate) is in the expected benefits of the product the highest scores. Therefore, they are two covariates (benefits expected and brand awareness) forming block behavioral or

Table 8 Block segmentation and variables

Covariables	Blocks (segmentation dimensions)					
	Demographic		Psychographic		Behavioral	
1. Education level	χ^2	20.312				
	Sig χ^2	0.000				
	Wald	19.473				
	Sig. Wald	0.000				
2. Income level	χ^2	20.161				
	Sig. χ^2	0.000				
	Wald	18.102				
	Sig. Wald	0.000				
3. Personality type			χ^2	13.428		
			Sig. χ^2	0.020		
			Wald	12.676		
			Sig. Wald	0.027		
5. Expected profit					χ^2	74.109
					Sig. χ^2	0.000
					Wald	55.086
					Sig. Wald	0.000
6. Brand awareness					χ^2	24.441
					Sig. χ^2	0.000
					Wald	22.18
					Sig. Wald	0.000
7. Brand loyalty					χ^2	12.958
					Sig. χ^2	0.000
					Wald	12.574
					Sig. Wald	0.000
Total block covariates	2		1		3	

psychological segmentation which affects further explanation of the differences in the criteria adopted in buying edible oils.

References

1. Ceniceros J (2009) Diferenciación de productos a través de regresión logística múltiple. (RLM). Caso: alimentos básicos. Tesis de Doctorado no publicada, Universidad de Occidente, Culiacán, Sinaloa, México
2. Bowerman OM (2009) Business statistics in practice. McGraw Hill International, Burr Ridge, IL
3. Stanton W, Etzel Y, Walker B (2007) Fundamentos de Marketing. McGraw Hill, México
4. Czinkota M, Kotabe M (2001) Administración de la Mercadotecnia. Thomson Learning, México

5. Vyncke P (2002) Lifestyle segmentation: from attitudes, interests and opinions, to values, aesthetic styles, life visions and media preferences. Eur J Commun 17:445–463
6. Mitchell A (1983) The nine American life styles. Warner, New York
7. Kotler P, Armstrong G (1996) Mercadotecnia, Sexta Edición, 1996. Mexico, Prentice-Hall
8. Loudon D, Della A (1995) Comportamiento del Consumidor: concepto y aplicaciones, 4ª Ed. Editorial. McGraw-Hill, México
9. Churchill GA, Peter J (2000) Marketing: criando valor para o cliente. Saraiva, São Paulo
10. Richers R (1984) O enigmático mais indispensável consumidor: teoria e pratica. Revista de Administração, jul/set 19(3):45–56
11. Schiffman LG, Kanuk LL (2000) Comportamento do Consumidor. Editora LTC, Rio de Janeiro
12. Bateson EG, Hofman D (2001) Marketing de serviços. Bookman, Porto Alegre
13. Dey D, Lahiri A, Zhang G (2014) Quality competition and market segmentation in the security software market. MIS Q 38(June):589–606
14. Kumar V, Reinartz W (2006) Modeling customer lifetime value. J Serv Res 9:139–155. https://doi.org/10.1177/1094670506293810
15. Jain D, Singh S (2002) Customer lifetime value research in marketing: a review and future directions. J Interact Mark 16:34–46
16. Gupta S, Lehmann D (2006) Managing customers as investments. Wharton School Publishing, Upper Saddle River, NJ
17. Kim SY, Jung TS, Suh EH, Hwang HS (2006) Customer segmentation and strategy development based on customer lifetime value: a case study. Expert Syst Appl 31:101–107
18. Han SH, Lu SX, Leung SCH (2012) Segmentation of telecom customers based on customer value by decision tree model. Expert Syst Appl 39:3964–3973
19. Cuadros AJ, Domínguez VE (2014) Customer segmentation model based on value generation for marketing strategies formulation. Estudios Gerenciales 30:25–30. https://doi.org/10.1016/j.estger.2014.02.005
20. Dubrovski D (2001) The role of customer satisfaction in achieving business excellence. Total Qual Manag 12(7):920–925
21. Shaw SA, Gibbs J (1999) Procurement strategies of small retailers faced with uncertainty: an analysis of channel choice and behaviour. Int Rev Retail Distrib Consum Res 9(1):93–109
22. Hansen K (2001) Purchasing decision behaviour by Chinese supermarkets. Int Rev Retail Distrib Consum Res 11(2):159–175
23. Hosmer D, Lemeshow S (1989) Applied logistic regression. Wiley Interscience, New York, NY
24. Ferrán Aranaz M (2019) SPSS para windows: análisis estadístico/Magdalena Ferrán Aranaz. SERBIULA (sistema Librum 2.0)
25. Douvrou M (2019) Hotel revenue management techniques and successful applications in the Greek resort hotels sector. In: Kavoura A, Kefallonitis E, Giovanis A (eds) Strategic innovative marketing and tourism 7th ICSIMAT

An Exploration of Employability Competences of Greek Accountants: The Employers' Opinion

Sofia Asonitou

Abstract The present study reports on the generic employability skills required by employers for a range of accounting and financial type positions in Greece. Despite the high unemployment rates in Greece, employers claim that they cannot find qualified employees who possess the proper abilities that allow them to become competitive and offer more value-added goods and services. This paper derives the competencies needed by employers from job ads on the most browsed career website in Greece by employing content analysis as the research method. This approach allows a close and accelerated method to define competencies needed with very short time delay and additionally shows how industry is moving towards digitalization. 550 ads were examined in detail and the related skills were identified and ranked according to the importance assigned from employers. Key findings display that there is no skills differentiation by employer while the top skills demanded by market place are IT and group working skills.

Keywords Accounting · Employability · Skills · Greece · Employers

1 Introduction

The required skillset for accountants has changed in the last 30 years due to technology and globalization [1, 2]. Academics and professional chambers [3–5] have studied the necessary reforms in the education and training of prospective accountants so that they can perform successfully in the new era. Numerous research has examined the knowledge, skills and abilities demanded by the market place from recent graduates and newcomers in the profession [6]. Most of these studies have shown the need for a strong technical background in parallel to a range of professional competences [7]. Generic employability skills or competences are those

S. Asonitou (✉)
University of West Attica, Aigaleo, Greece
e-mail: sasonitou@uniwa.gr

crucial abilities that support accountants to perform successfully in their professional environment and within a globalized and technology driven context. In this study the term professional skills or competences is used interchangeably with the term generic employability skills because they are considered indispensable in any disciplinary context and they may range from generic foundation skills to complex disciplinary and human capabilities and aptitudes [8].

In Greece the discussion about skills has started with a relevant delay and only recently pertinent studies are connecting the skills' gap to high unemployment rates, continuing financial recession and low competitiveness rates of the country [9]. In Greece, as elsewhere, employers complain of the low skills level of their employees in almost all sectors of the economy [10, 11]. With regards to the accounting sector similar results were found in Greece with practitioners stating that they need advanced professional skills in order to compete in a highly complex and demanding global market place [12].

Precise recording of the competences required by employers may offer great help in stakeholders like recruiters and job candidates who can prepare themselves accordingly. Also accounting educators can adapt their curricula to the needs of marketplace and support their graduates in their professional endeavors.

The aim of the present study is to research and record the current competences required by industry for a range of accounting and other financial type positions through the examination of a very well-known career website in Greece, for a period of 6 months (end of January 2018 to July 2018). Therefore, the following research questions were formulated:

1. "Which are the most required skills for the accounting and other financial type positions by employers in Greece?
2. "Do the skills requirements in accounting and financial type positions differ by

    (i) the economy sector?
   (ii) the level of position?

The results of this study can be of interest to accounting educators to help them align the educational and professional world with obvious positive results for the country and its citizens, especially in the current socio-economic recession period. Section 2 reviews relevant literature while Sect. 3 describes the methodological approach of the study. Section 4 presents the results and Sect. 5 analyses the conclusions. Finally, Sect. 6 discusses the limitations and future research of the study.

2   Literature Review

Accounting and finance are part of the service sectors of the economy that primarily pivot on human resources [13]. Accounting industry already from the last quarter of twentieth century recognized the need of re-orientating the knowledge, skills and

abilities of practicing accountants in order to face the challenges of globalization and technology driven changes [14–16]. Researchers have concentrated their efforts into the investigation and classification of proper abilities for practitioners that would support their employers into their decision making processes. These studies have proven that employers demand from their employees apart from very good technical accounting skills a range of generic employability skills or professional abilities [17, 18]. These comprise communication skills, interpersonal skills, leadership, time management, digital skills and other [19–21]. There is no one single list of employability skills suitable for every professional field rather each profession should define the most important abilities for its own practitioners.

Relevant research in Greece about accounting professional skills include the work of [22, 23]. These studies have indicated that the most important and most wanted professional skills for recent graduates are IT skills, communication, critical thinking, social and ethical responsibilities and group working skills. Other studies have investigated the barriers to the development of skills in the educational environment [24]. Most common research method for investigating the demanded abilities by the employers is to ask them to rate the importance of a list of skills provided by the researchers. However, a more enlightening and effective method can be the exploration of competences through job advertisements. This approach allows a close and accelerated method to define skills or attributes needed with very short time delay. Also it leaves the freedom to employers to define their preferences without possible influences by the researcher.

3 Methodology

Career websites have evolved into major sources for job ads that candidates visit regularly. Technology improves at an accelerated rate and influences everyday lives, turning career websites into main reference points for finding a suitable job. Employers and recruiters prefer these sites as the most convenient way to find qualified candidates with the least effort and at minimum cost.

Content analysis methodology was employed for this study in order to explore the skills and abilities that are most wanted by employers for accounting and other financial positions. The study analysed 550 job ads that were published by a very well-known career website in Greece during the period of 29 January to 25 July 2018. Job ads for accounting and financial type positions depict the recruiters' demands in real terms and in real time. Content analysis is one of the most effective and most popular research methods for investigating and analyzing mass data in systematical terms including the analysis of web sources and therefore it was selected as the most convenient and proper method for the present study [25].

A total of 1167 were published from the specific career website during the given period January to July 2018. The initial screening limited the ads that were related to accounting and other financial type positions to 550. Three categories of employers were created as follows: accounting and financial type services sector, tourism and

Table 1 Categories of positions and employers examined

Level of position	Type of employers		
	Accounting and financial type services sector	Tourism sector	Industry
Newcomers (1–3 years' experience)	19	83	203
Middle management (4–7 years' experience)	21	52	150
Senior management (>7 years' experience)	0	7	15
Total positions (ads)	40	142	368

marketing sector and industry. Within each category of employer the authors categorized ads by three types as follows: ads asking for newcomers in the profession (1–3 years' experience), ads asking for middle management positions (3–7 years' experience) and ads asking for senior management positions (more than 7 years' experience).

Indicative positions include: accountants' assistant, accounting department employee, accounting department supervisor, accounting department director, director of economic department, credit controller, economist, financial consultant. The following Table 1 displays the number of positions that were included in the ads by type of employer and level (years of experience).

4 Findings

The record of competences provided 41 different skills for newcomers, 45 for middle management and 21 for senior management. By using content analysis methodology all skills were analysed and then regrouped separately for newcomers, middle management and senior management positions. This analysis provided 10 groups of skills for newcomers, 8 for middle management and 7 for senior management. The number of times that each skill appeared in the ads was recorded for each employer and each type of position. This type of analysis provided a list of skills according to their number of appearance in the ads (calculated in percentage for comparison purposes) which shows the importance assigned by employers to the specific group of skills. The categorization of skills followed similar work done by other studies in the accounting field for purposes of comparison [12, 19, 20].

The following Table 2 provides the results of data analysis for the newcomers in the profession. Ten categories of competences were identified and ranked by importance for each employer group.

For middle management position the following eight group of competences were identified and ranked by the importance assigned to them by employers.

For senior management positions the following seven groups of skills were identified and ranked by the importance assigned to them by employers.

Table 2 Group of skills identified for newcomers in the profession and ranked by employer needs

Accounting and financial type services		Tourism		Industry	
Skills	Appearance (%)	Skills	Appearance (%)	Skills	Appearance (%)
Newcomers					
IT	53	IT	50	Group working	57
Group working	53	Group working	50	IT	48
Social and ethical responsibilities	32	Communication	15	Communication	14
Communication	26	Time management	10	Social and ethical responsibilities	12
Career management	16	Problem solving	7	Time management	11
Lifelong learning	5	Social and ethical responsibilities	1	Problem solving	8
Problem solving	5	Career management	1	Entrepreneurshi–Global vision of the organisation	0
Time management	0	Critical thinking	1	Career management	0
Entrepreneurship–Global vision of the organisation	0	Lifelong learning	0	Lifelong learning	0
Critical thinking	0	Entrepreneurship–Global vision of the organisation	0	Critical thinking	0

5 Conclusion

Many studies have identified and ranked the importance of professional skills assigned by the market place to accountants using pre-defined instruments distributed to employers. The present study attempted to identify and then rank the required skills by employers through the examination of real time data. This data originated from ads that were published between January and July 2018 in a well-known career website in Greece.

With regards to the first research question (1) "Which are the most required skills for the accounting and other financial type positions by employers in Greece?" the analysis of data showed that the following groups of skills are the most demanded in Greece within the three type of employers examined in this study: IT, Group working, Social and ethical responsibilities, Communication, Career management, Lifelong learning, Problem solving, Time management, entrepreneurship-global vision of the organisation and Critical thinking. This result accords to other studies locally [26] and abroad for the majority of skills [17, 27]. Differences exist for IT skills which in other studies do not appear in the first places of ranking and in career management which is not very often found in other studies. Online communities in accounting and other sectors may be created to employ digital tools in order to create a database for data mining in education [28–30].

With regards to the second research question (2i) "Do the skills requirements in accounting and financial type positions differ by the economy sector?" the examination of data showed that there is no difference in the type of skills required for all type of positions but there are differences in the importance assigned to them by each type of employer. Apart from IT and group working skills which occupy the two first positions for all employers (Tables 2, 3 and 4), the next three positions (for newcomers) are occupied by social and ethical responsibilities, communication and career management skills (accounting and financial type services), communication, time management and problem solving skills (tourism sector), communication, social and ethical responsibilities (industry) and time management. Lifelong learning skill is in the sixth position for accounting and financial type services but surprisingly is not demanded by any other employer. Similar are the results for middle and senior management skills.

With regards to the second research question (2ii) "Do the skills requirements in accounting and financial type positions differ by the level of position (newcomers, middle management, senior management)"? analysis of data unveiled five important points: (a) there were no ads for senior positions for the accounting and financial services sector, (b) fewer groups of skills are demanded for middle and senior management positions, (c) IT and group working skills remain in the first positions for all three type of employers, (d) social and ethical responsibilities group of skills is ranked much higher for senior management than from middle management i.e. from 4% in the tourism sector (middle management) rises up to 29% (for senior management) and from 8% for industry (middle management) rises to 13% (for senior management), (e) time management and communication skills are ranked very low

Table 3 Group of skills identified for middle management positions and ranked by employer needs

Accounting and financial type services		Tourism		Industry	
Skills	Appearance (%)	Skills	Appearance (%)	Skills	Appearance (%)
Middle management positions					
IT	52	IT	43	Group working	69
Group working	43	Group working	28	IT	51
Problem solving	19	Time management	9	Time management	19
Communication	14	Communication	9	Communication	18
Time management	5	Social and ethical responsibilities	4	Problem solving	15
Social and ethical responsibilities	0	Problem solving	0	Social and ethical responsibilities	8
Entrepreneurship –Global vision of the organisation	0	Entrepreneurship–Global vision of the organisation	0	Career management	1
Career management	0	Career management	0	Entrepreneurship–Global vision of the organisation	1

Table 4 Group of skills identified for senior management positions and ranked by employer needs

Accounting and financial type services		Tourism		Industry	
Skills	Appearance (%)	Skills	Appearance (%)	Skills	Appearance (%)
Senior management positions					
IT	–	IT	71	Group working	80
Group working	–	Group working	71	IT	67
Problem solving	–	Problem solving	43	Social and ethical responsibilities	13
Time management	–	Time management	29	Problem solving	13
Communication	–	Social and ethical responsibilities	29	Entrepreneurship–Global vision of the organisation	7
Social and ethical responsibilities	–	Communication	14	Time management	0
Entrepreneurship–Global vision of the organisation	–	Entrepreneurship–Global vision of the organisation	0	Communication	0

in the senior management positions in industry and this is a result that should be further researched.

6   Limitations and Further Research

This study has certain limitations which include the use of only one career website for a certain period of time. The examination of data from more career websites for the same period would provide richer and higher amount of data. Further research from other sources would also be advisable in combination to personal interviews with employers which could enlighten certain points derived from this study.

References

1. Walker M (2004) Recovering accounting: an economic perspective. Crit Perspect Account 15:519–527
2. Krause JM (2007) Assessing the "new information professional" beyond college. CPA J 77:68–71
3. IMA (1999) Counting more, counting less, transformations in the management accounting profession. A research project of the Institute of Management Accountants. http://www.imanet.org
4. Albrecht WS, Sack JR (2000) Accounting education: charting the course through a perilous future. Accounting education series. American Accounting Association, Sarasota, FL
5. IFAC (2006) International education standard 8, competence requirements for audit professionals. International Accounting Education Standards Board. http://www.ifac.org/Education
6. Big 8 White Paper (1989) Perspectives on education: capabilities for success in the accounting profession. In: Sundem G (ed) Reprinted in the accounting education change commission: its history and its impact, appendix B, 1999. AAA, Sarasota, FL
7. AECC (Accounting Education Change Commission) (1990) Objectives of education for accountants: position statement number one. Issues Account Educ 5:307–312
8. Barrie CS (2012) A research-based approach to generic graduate attributes policy. High Educ Res Dev 31:79–92
9. OECD (2017) Education policy in Greece, a preliminary assessment. http://www.oecd.org/education/improving-education-and-training-will-boost-growth-and-productivity-in-greece.htm
10. EY Greece (2017) Seeking a closer alignment between entrepreneurship, education and employment. https://www.ey.com/gr/en/issues/business-environment/ey-survey-seeking-a-closer-alignment-between-entrepreneurship-education-and-employment
11. Foundation for Economic and Industrial Research (2017) Higher education at Greece-impact of crisis and challenges [in Greek]. http://iobe.gr/docs/research/RES_05_F_05072017_REP_GR.pdf/
12. Asonitou S (2014) Embedding generic employability skills in Greek accounting education studies: development and impediments, PhD. Sheffield Hallam University, Business School
13. Howieson B (2003) Accounting practice in the new millennium: is accounting education ready to meet the challenge? Br Account Rev 35:69–103

14. AAA (American Accounting Association) (1986) Future accounting education: preparing for the profession (the special report of the AAA Committee on the future structure, content, and scope of accounting education—Bedford report). Issues Account Educ 1:168–195
15. IMA (1996) The practice analysis of management accounting. A research project of the Institute of Management Accountants [online]. http://www.imanet.org
16. AICPA (American Institute of Certified Public Accountants) (1999) The AICPA core competency framework for entry into the accounting profession. AICPA, New York
17. Bui B, Porter B (2010) The expectation-performance gap in accounting education: an exploratory study. Account Educ Int J 19:23–50
18. Coady P, Byrne S, Casey J (2017) Positioning of emotional intelligence skills within the overall skillset of practice-based accountants: employer and graduates requirements. Account Educ 21:94–120
19. Montano AJL, Donoso JA, Hassall T, Joyce J (2001) Vocational skills in the accounting professional profile: the Chartered Institute of Management Accountants (CIMA) employers' opinion. Account Educ 10:299–31320
20. Hassall T, Joyce J, Montano AJL, Donoso JA (2005) Priorities for the development of vocational skills in management accountants: a European perspective. Account Forum 29:379–394
21. Botes VL, Sharma U (2017) A gap in management accounting education: fact or fiction. Pac Account Rev 29:107–126
22. Asonitou S, Hassall T (2008) The international call for change in accounting education and the Greek context. South Eur Rev Bus Financ Account 6:21–52
23. Mandilas A, Kourtidis D, Petasakis Y (2014) Accounting curriculum and market needs. Educ Train 56:776–794
24. Asonitou S (2015) Barriers to the teaching of skills in the Greek higher education accounting courses: insight from accounting teachers. Int J Strat Innov Market 3. https://doi.org/10.15556/IJSIM.02.03.002
25. Cooper DR, Schindler PS (2014) Business research methods. McGraw-Hill, Irwin, NY
26. Asonitou S (2015) Employability skills in higher education and the case of Greece. Procedia Soc Behav Sci 175:283–290. https://doi.org/10.1016/j.sbspro.2015.01.1202
27. Pan P, Perera H (2012) Market relevance of university accounting programs: evidence from Australia. Account Forum 36:91–108
28. Kavoura A (2016) How can mobile accounting reporting benefit from the imagined communities? Int J Mobile Comput Multimedia Commun 7:36–52. https://doi.org/10.4018/IJMCMC.2016040103
29. MacLeod J, Kiriakidis S, Kefallonitis E, Kavoura A (2017) Strategic innovative communication tools in higher education. In: Proceedings in Business and Economics, Springer, pp 759–764
30. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and future outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, PA, pp 3827–3838

Entrepreneurship Education Impact on Entrepreneurial Intention Among Tourism Students: A Longitudinal Study

Alexandros G. Sahinidis, George Polychronopoulos, and Dimitrios Kallivokas

Abstract The purpose of this study is to examine the impact of Entrepreneurship Education (EE) on the intention to start a business among university students of the Tourism Department. We used the theory of Planned Behavior (TPB), in measuring each of the theory's components before the intervention and after. A sample of 77 students answered the questionnaire both at the beginning of the semester and at the end of it. The results suggest that the intervention had a positive impact on Personal Attitude (PA), on Perceived Behavioral Control (PBC) and on Entrepreneurial Intention (EI). No significant change was observed in Social Norms (SN). The findings have implications both for policy makers and academics. The former can help foster entrepreneurship and through that economic growth, making provisions for the availability of EE programs both inside and outside the university ecosystems. The latter can devote more resources in research and teaching EE programs, experimenting with teaching methods and new technologies, so as to increase the student awareness of the entrepreneurial career option. The contribution of this study lies in that no other study has used a longitudinal method in measuring the effect of EE on EI and its antecedents among tourism management students.

Keywords Theory of planned behavior (TPB) · Tourism students · Entrepreneurial intention · Entrepreneurship education

1 Introduction

Entrepreneurship education (EE) refers to "any pedagogical [program] or process of education for entrepreneurial attitudes and skills" according to Fayolle et al. ([1], p. 702). The importance of EE cannot be over-emphasized, given the proliferation of such programs and courses offered, since the first course taught at Harvard in 1947,

by universities all over the world [2]. The demand for EE programs brought along the increase in research by academics, investigating concepts, methods, measures, impact and other outcomes ensuing the evolution of the subject. Numerous studies have been published in the last two decades, focusing primarily on two EE areas, its impact and the teaching of skills and competences necessary to the would-be entrepreneurs. In a systematic review of the literature Nabi et al. [3] examined 159 EE studies, published between 2004 and 2016, found that the two main groups of studies examined, impact and pedagogy. In this paper, we will examine the impact of EE on Entrepreneurial Intention (EI), as there is evidence in many studies that a positive relationship exists between the two variables, although some studies reported findings refuting the generalizability of this [4, 5]. As discussed in [3], while the positive relationship is clearly more commonly reported, some of the studies found this does not hold in some cases, specifically 22% of the articles reviewed by the authors in [3]. Other meta-analyses and reviews, report similar problems with conflicting findings in terms of EE impact [4–6].

   Research on EE and EI, although extensive, has focused on students of the later college years, closer to graduation, with the exception of two studies focusing on First Year students, one by Nabi et al., and another by Majumdar and Damodharan [7, 8]. This study attempts to investigate the effects of the intervention on first year Tourism students, in terms of their EI, after having a 13 week, 3-hours per week class in Entrepreneurship. In the following paragraphs, we present a brief literature review, the methodology used, the study results and the conclusions drawn.

2   Literature Review

The entrepreneurial intention literature can be broadly categorized into the psychological perspective, focusing of the personal traits of the would-be entrepreneurs (see Zhao and Siebert and Zhao et al.) [9, 10] and the social psychological perspective mainly represented by the Theory of Planned Behavior (TPB), which is based on the work of Ajzen and his associates [11–13]. The EE literature is rather abundant, with studies from both traditions. A number of meta-analyses and the majority of the studies using mostly the TPB, report support of the hypothesis that EEP have a positive impact on Entrepreneurial Intention (EI) and its antecedents, Personal Attraction (PA), Perceived Social Norms (SN) and Perceived Behavioral Control (PBC) [3, 7, 14, 15]. Personal Attraction refers to the degree of a person's "liking" the idea of becoming an entrepreneur. Social Norms refer to the extent to which the social surroundings of the person are supportive to the person's potential entrepreneurial initiatives. Perceived Behavioral Control reflects the degree to which the person perceives himself/herself as capable of carrying the task out, in this case starting a business. It is closely related to the concepts of self-efficacy and Internal locus of Control, frequently used in the literature interchangeably. In spite of the nearly consensus over the usefulness of the EEP, questions abound over the appropriateness of the methodologies used and the lack of rigor in the majority of the

extant research [16–18]. As Lorz, Mueller and Volery suggest, in their systematic review of 39 related studies, followed by Nabi et al., most studies did point to some extent of a positive relationship between EEPs and EI and its antecedents, skills and other outcomes [3, 7, 14]. The former authors ([14], p. 129), categorized the studies included into two types, the ex post and the ex ante/ex post designs and recorded the sample sizes of each study. Based on their observation, they counted only 31% or 12 studies with ex ante/ex post designs, half of which were conducted with sample sizes smaller than 71. Lorz et al. [14], demonstrated the debatable robustness of the assertion that EEPs positively affect Intention, lending partial support to the findings reported by Von Graevenitz et al. [18] and Oosterbeek et al. [16] of a negative relationship between EEPs and EI and non- significant correlations with its antecedents.

Other studies however, such as the meta-analyses by Martin et al. [15], found a significant influence of EEP on EI and its antecedents. Similar findings were reported by Suitaris et al. [19], Petridou and Glaveli [20], Peterman and Kennedy [16] and others. In light of the above issues, the purpose of this paper is to examine the relationship between EEP and EI and its antecedents, using an ex ante/ex post design and an adequate sample, so as to avoid the pitfalls of the large majority of the extant literature. The approach taken in this study is that, of Ajzen's [11] Theory of Planned Behavior, allowing for the examination of the relationships between EI and Personal Attraction, EI and Perceived Social Norms and Perceived Behavioral Control. The theory of planned behavior, is one of the most thoroughly tested and validated, in many research settings and has produced generally accepted outcomes, explaining amounts of variance in EI ranging from 0.27 to 0.65 (see Sahinidis et al. [21], and Armitage and Conner [22]). The majority of the EI studies reports significant relationships between EI and its antecedents, especially in the cases of PA and PBC [3, 7, 23]. Meta-analyses of the TPB and exercise suggest that intention has been empirically validated as the key proximal predictor of behavior, explaining approximately 30% of its variance [7]. In turn, PA and PBC have been validated as reliable determinants of intention, together explaining 40–60% of its respective variance [23]. Subjective norms, in contrast, have been of less utility in predicting intention, with either a small or non-significant effect across studies [23].

Based on the literature we proposed the following hypotheses:

H1:   EE will have a positive effect on EI,
H2:   EE will have a positive effect on Attitude toward Entrepreneurship,
H3:   EE will have a positive effect on Perceived Behavioral Control
H4:   EE will have a positive effect on Social Norms of the person.

3   Methodology

The sample in this study comprises of 77 students from the department of Tourism in a Greek University in the area of Athens. One of the Authors taught a one semester Entrepreneurship course to first year students of the department and had the participants fill out a questionnaire at the beginning and at the end of the course. Entrepreneurial Intention and PBC have been measured according to the questionnaire elaborated by Sahinidis et al. [21]. To measure Subjective Norms (SN) a three-item scale was used, from the original questionnaire [21]. We used SPSS v. 20.1 to test the hypotheses generated.

4   Results

Table 1 presents the differences in the measurements of EI, PA, SN and PBC, before and after the end of the semester. As expected, the first hypothesis was not rejected, leading us to the conclusion that the EEP does have a significant effect on EI. This corroborates earlier findings reported in the literature and summarized in the reviews and the pertinent meta-analyses [3–6, 23]. The second hypothesis, is also accepted, with EEP relating significantly to PA, lending support to earlier findings such as the ones reported in the studies above [3–6, 23]. The third hypothesis is also supported in our analysis, demonstrating a significant relationship between EEP and PBC, again in line with the findings reported in the review studies [3–6, 23]. The fourth hypothesis proposing a positive relationship of EEP with social norms is rejected, as did in some other studies mentioned earlier [7, 23].

Table 1   Paired samples test

		Paired differences					t	Df	Sig. (2-tailed)
					95% confidence interval of the difference				
		Mean	Std. deviation	Std. error mean	Lower	Upper			
Pair 1	PA2–PA1	0.974	3.532	0.402	0.172	1.776	2420	76	0.018
Pair 2	SN2–SN1	−0.481	3.817	0.435	−1.347	0.386	−1105	76	0.273
Pair 3	PBC2–PBC1	1.299	5.436	0.620	0.065	2.533	2096	76	0.039
Pair 4	EI2–EI1	1.961	5.293	0.603	0.760	3.162	3251	76	0.002

5 Discussion and Conclusions

The findings of this study lend support to three of the hypotheses posed above, based on the relevant literature. The increase of EI, after the intervention has taken place, is to be expected, considering the students gained greater insight of the entrepreneurship career option, following the information they have been exposed to, through the lectures, the guest speakers and the business plan they were required to prepare as part of their classwork. Through the use of the above tools the students became more interested in the course subject and as a result they showed a significant increase in their EI by the end of the course. Also, a positive change was present in the students' PA and their PBC (p values 0.018 and 0.039 respectively). These findings refute those reported by Suitaris et al. [19], who found no relationship between EE and EI as well as those by Oosterbeek et al. [16] and Von Graevenitz et al. [18] who reported an inverse relationship between EE and EI. The study findings also support the previously reported in several studies lack of significant relationship between EE and SN, contrary to the findings reported in Suitaris et al. [3, 19]. The present study attempted to shed some light in an area barely researched the first year university students' exposure and response to EE [7]. The findings of our research may be useful to academics in curriculum generation and to career advisors to help them provide guidance to students seeking career advice. Tourism students in particular may benefit from such insight, considering that Greece is among the top tourism destinations in the world. Considering the great importance of the industry to the country's economy, the addition of more and better equipped entrepreneurs will be a great contribution the universities can offer to the state. The findings of this study are limited by the small sample employed which is prohibitive for making generalizations. Another weakness of the study is the limited number of factors examined as determinants of EI. More personal characteristics are usually at play when a person decides if s/he wants to become an entrepreneur, along with external environment factors such as the culture, the economy among others.

References

1. Colette H, Lewis K (2018) A review of entrepreneurship education research: exploring the contribution of the education + training special issues. Educ Train 60(3):263–286. https://doi.org/10.1108/ET-12-2017-0189
2. Kuratko DF (2005) The emergence of entrepreneurship education: development, trends, and challenges. Entrep Theory Pract 29:577–598. https://doi.org/10.1111/j.1540-6520.2005.00099.x
3. Nabi A, Liñán F, Fayolle A, Krueger N, Walmsley W (2017) The impact of entrepreneurship education in higher education: a systematic review and research agenda. Acad Manag Learn Educ 16:277–299. https://doi.org/10.5465/amle.2015.0026
4. Pittaway L, Cope J (2007) Entrepreneurship education a systematic review of the evidence. Int Small Bus J 25:479–510. https://doi.org/10.1177/0266242607080656

5. Bae TJ, Qian S, Miao C, Fiet JO (2014) The relationship between entrepreneurship education and entrepreneurial intentions: a meta-analytic review. Entrep Theory Pract 38:217–254. https://doi.org/10.1111/etap.12095

6. Martin BC, McNally JJ, Kay MJ (2013) Examining the formation of human capital in entrepreneurship: a meta-analysis of entrepreneurship education outcomes. J Bus Ventur 28:211–224. https://doi.org/10.1016/j.jbusvent.2012.03.002

7. Nabi G, Walmsley A, Liñán F, Akhtar I, Neame C (2018) Does entrepreneurship education in the first year of higher education develop entrepreneurial intentions? The role of learning and inspiration. Stud High Educ 43:452–467. https://doi.org/10.14419/ijet.v7i4.9.20631

8. Majumdar S, Damodharan V (2013) Student's attitude towards entrepreneurship: does gender matter in the UAE? Foresight 15:278–293. https://doi.org/10.1108/FS-03-2012-0011

9. Zhao H, Seibert SE (2006) The big five personality dimensions and entrepreneurial status: a meta-analytical review. J Appl Psychol 91:259–271. https://doi.org/10.1037/0021-9010.91.2.259

10. Zhao H, Seibert SE, Lumpkin GT (2010) The relationship of personality to entrepreneurial intentions and performance: a meta-analytic review. J Manag 36:381–404. https://doi.org/10.1177/0149206309335187

11. Ajzen I (1991) The theory of planned behavior. Organ Behav Hum Decis Process 50 (2):179–211. https://doi.org/10.1016/0749-5978(91)90020-T

12. Ajzen I, Fishbein M (1980) Understanding attitudes and predicting social behavior. Prentice-Hall, Englewood Cliffs, NJ

13. Fishbein M, Ajzen I (1975) Belief, attitude, intention, and behavior: an introduction to theory and research. Addison-Wesley, Reading, MA

14. Lorz M, Mueller S, Volery T (2011) Entrepreneurship education: a Meta analysis of impact studies and applied methodologies. In: Conference paper, FGF G-forum 2011. Förderkreis Gründungs-Forschung E.V, Bonn. https://doi.org/10.1504/IJEV.2015.073648

15. Peterman NE, Kennedy J (2003) Enterprise education: influencing students' perceptions of entrepreneurship. Entrep Theory Pract 28:129–144. https://doi.org/10.1046/j.1540-6520.2003.00035.x

16. Oosterbeek H, Van Praag M, Ijsselstein A (2010) The impact of entrepreneurship education on entrepreneurship skills and motivation. Eur Econ Rev 54:442–454

17. Fayolle A, Gailly B (2015) The impact of entrepreneurship education on entrepreneurial attitudes and intention: hysteresis and persistence. J Small Bus Manag 53:75–93. https://doi.org/10.1111/jsbm.12065

18. Von Graevenitz G, Harhoff D, Weber R (2010) The effects of entrepreneurship education. J Econ Behav Organ 76:90–112. https://doi.org/10.1016/j.jebo.2010.02.015

19. Souitaris V, Zerbinati SA, Al-Laham A (2007) Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. J Bus Ventur 22(4):566–591. https://doi.org/10.1016/j.jbusvent.2006.05.002

20. Petridou E, Glaveli N (2008) Rural women entrepreneurship within co-operatives: training support. Gender Manag Int J 23:262–277. https://doi.org/10.1108/17542410810878077

21. Sahinidis AG, Giovanis AN, Sdrolias L (2012) The role of gender on entre-preneurial intention among students: an empirical test of the theory of planned behavior in a Greek university. Int J Integr Inf Manag 1:61–79

22. Armitage CJ, Conner M (2001) Efficacy of the theory of planned behavior: a meta-analytic review. Br J Soc Psychol 40:471–499

23. Brandstätter H (2011) Personality aspects of entrepreneurship: a look at five meta-analyses. Personal Individ Differ 51:222–230

Artificial Intelligence (AI) Impact on Digital Marketing Research

Dimitris C. Gkikas and Prokopis K. Theodoridis

Abstract This paper maps and describes the current and potential relationship between two different scientific branches of marketing science and computer science. It examines the interaction of digital marketing and artificial intelligence (AI) in academia, proposing, at the same time a machine learning model that could fit in several aspects of digital marketing scientific area. There are numerous scientific publications regarding artificial intelligence (AI) across the disciplines. However, referring to digital marketing aspects, this number remains small. Scientific research on artificial intelligence (AI) could benefit marketing science in numerous ways. Nowadays, only a small amount of scientific research referring to digital marketing and artificial intelligence (AI) is related to specific digital marketing methods. Most of the scientific research examines generic aspects such as e-business, consumer behavior, e-commerce strategies, social media advertisement, search engines and consumer predictive modeling avoid being more related to specific marketing issues in which business world is more aware of, like consumer behavior on social media, targeted advertisements, social media marketing, conversion optimization, predictive models in online purchases, chatbots etc. Despite the vast research area and a certain number of publications, it seems that there is a lack of scientific publications regarding specifically digital marketing and artificial intelligence (AI). Never the less, there are some very extensive research attempts on specific digital marketing matters and artificial intelligence (AI) that are promising. This paper through the mapping of the current state of artificial intelligence (AI) applications on digital marketing scientific area, highlights the corner stone publications, comes up with areas of absence or lack of its presence, mentioning at the same possible reasons why that occurs and provides a machine learning model that could fit in several digital marketing occasions.

Keywords Artificial intelligence (AI) · Digital marketing · Big data · Customer behavior · Decision making · Predictive modeling

D. C. Gkikas · P. K. Theodoridis (✉)
University of Patras, Agrinio, Greece
e-mail: dgkikas@upatras.gr; proth@upatras.gr

1251

1   Introduction

Nowadays, the technology progress has given the opportunity to industries to provide people with huge amounts of products. Digital marketing uses channels like internet to open new avenues for industries to advertise and sell their products to customers. Digital marketing includes all the methods that can create a massive impact on people at certain time, at certain place and through certain channel [1]. Digital marketing industrial progress is an outcome of combining big data and academic scientific research on intelligent systems. In this article digital marketing methods are thoroughly analyzed and explained through an artificial intelligence (AI) research perspective. However, the number of scientific publications remain in intermediate level when at the same time business sector seems having moved forward. This paper highlights the technical components of digital marketing techniques in scientific research to optimize the performance of them through artificial intelligence (AI) methods. Despite the vast research area and a certain number of publications, it seems that there is a lack of scientific publications regarding specifically digital marketing and artificial intelligence (AI). Never the less, there are some very extensive research attempts on specific digital marketing fields like search engine optimization, search engines ranking factors, consumer behavior, web development and targeted ads that gives hope for the future of artificial intelligence (AI) impact on digital marketing research [2].

2   Digital Marketing

Digital marketing includes all marketing tactics and ways that use an electronic device or the internet to show, promote, sell products or services and industries use internet channels that will help them succeed that. Websites, social media pages, targeted advertisements and email tend to keep current and increase prospective customers. Customers, resellers, competitors, suppliers, promoters, the overall economy, positioning, segmentation, expansion, growth, products, brands, advertising, market share, price, advertising expenditures, number of resellers, churn, customer value, etc. are some of the main variables that affect decision making. It is certain that decision making is a matter of multiple variables based on analysis, experience and judgment [3, 4]. In order to define the key role of artificial intelligence (AI) on digital marketing research we must map the current situation of digital marketing scientific research and compare it to the business sector. Then we will know in what scale digital marketing in academia falls short of the development in business sector.

2.1 Digital Marketing Methods

We briefly analyze the most important digital marketing methods for commercial use. Search engine optimization (SEO), social media marketing (SMM), content marketing, pay-per-click (PPC), affiliate marketing, native advertising, email marketing, chatbots, semantic search, ad targeting, predictive marketing, voice search, A/B testing, lead scoring and web development are presented [3, 5].

Search Engine Optimization (SEO): It refers to optimization procedures that will increase the organic traffic of a website, blogs or infographic to rank highly in search engine results [3]. Social Media Marketing: It refers to practices that optimize and promote brands social media pages to increase organic traffic, brand awareness and generate leads for a business [3]. Content Marketing: It refers to the strategic and human-centric content creation of a blog post, e-book, infographic or online brochures to generate brand awareness, traffic increase, lead generation, and customers [3].

Pay-Per-Click (PPC): It is a method of driving traffic to a website by paying a publishing internet service every time an ad is clicked, or an action took place [3]. Affiliate Marketing: This is a referral tactic of promoting a business through an individual or a network of promoters who receive commission on their website either having the form of a video either a hosted link [3]. Native Advertising: It refers to advertisements that are displayed on a web platform alongside with non-paid content and follows the natural form of user experience [3]. Marketing Automation: It refers to software that automates basic business daily needs such as email newsletters, social media post scheduling etc. [3]. Email Marketing: It refers to methods of creating promotional email campaigns to keep contact with the clientele, inform it for discounts, new stuff and events [3].

Chatbots: Refer to non-stop programmed and automated interactive applications for chatting and completing orders with the visitors of a website or social media page when the last pay a visit [5]. Semantic search: It refers to a smart data searching method that helps users find the result they search for, faster. Based on machine learning, interprets the search query and through data correlations among the words understands the meaning of the search phrase. It predicts what information users might need based on their search history [5]. Content Creation: It refers to a content creation method based on an artificial intelligence (AI) technique called natural language generation that gathers, organizes, transforms raw data relevant to the search query into readable sport, financial etc. reports or suggests similar products to customers based on their purchase history [5]. Ad targeting: It refers to sophisticated online advertisement generation techniques essential for branding. It generates or optimizes advertisements based on user's history and behavior importing factors such as geographic location, gender, age etc. for better user targeting aiming to improve the return of investment to the advertisers [5]. Predictive marketing: It refers to an artificial intelligence (AI) technique that gathers users' behavioral data, analyzes them through data mining finding any possible data correlations including

preferences and needs. With these data feeds the machine learning model and produces better predictions that help company's decision makers [5].

Voice search: It refers to artificial intelligence (AI) techniques for voice searches. Voice searching will reestablish the perception of results speed and relevancy and it is based on natural language processing and text mining techniques will make information retrieval an extremely easy procedure [5]. A/B testing: It refers to an online marketing tactic that test which version of the same website would make better conversions or leads. Based on artificial intelligence (AI) conducts conversion optimizations to variations of different versions of the same website and decides which is the most probable to increase user engagement [5]. Lead scoring: It refers to a method for assessing customers leads and rank them based on user's behavior, interest and purchase history to avoid losing time and money [5].

Web development: It refers to sophisticated tools based on artificial intelligence (AI) that can build a search engine, user experience and conversion optimized human centric web site easy and fast [5].

3   Artificial Intelligence (AI)

Since the variables, that affect the outcome can be quantified and measured a new question is arising "In what scale artificial intelligence (AI) can contribute to digital marketing research?". Marketing decision makers are constantly using their experience and instinct to make decisions based on huge amount of data, statistic charts, opinions and taste. Inevitably that makes the decision hard to make cause of the complexity and multifactor circumstances. Artificial intelligence (AI) seems capable to solve the riddle of how can so much information be processed and produce a low risk decision in short time period. Artificial intelligence (AI) applications vary from business to business. However, business predictive models have their roots on scientific research. But there is a slowdown in artificial intelligence (AI) research and an increase in business [4].

3.1   Artificial Intelligence (AI) Research on Digital Marketing Methods

In order to understand how artificial intelligence (AI) contributes to digital marketing techniques we should first mention the artificial intelligence (AI) sub-fields. Afterwards, we examine one by one which of those fields apply to the digital marketing techniques. This will reveal what impact artificial intelligence (AI) has on digital marketing research. Artificial intelligence (AI) sub-fields are presented. Neural Networks refer to brain modelling, time series prediction, classification procedures etc. Evolutionary Computation refers to genetic algorithms, genetic programming

procedures etc. Vision refers to object recognition, image understanding procedures etc. Robotics refer to intelligent control, autonomous exploration procedures etc. Expert Systems refer to decision support systems, teaching systems etc. Speech Processing refer to speech recognition, production procedures etc. Natural Language Processing refers to machine translation. Planning refers to scheduling, game playing procedures etc. Machine Learning refers to data mining, decision tree learning etc. [6]. Search Engine Optimization (SEO): Scientific research on SEO seems to have one the biggest volume of scientific research publications. Referring to search engine optimization or SEO's, most related scientific published works concern evolutionary computations, fuzzy intelligent systems, machine learning algorithms and web-crawlers for reading, gathering and analyzing websites' data, trying to improve webpages ranking positions in search engines results combining ranking factors through an intelligent learning model [7–9].

Social Media Marketing: The number of scientific publications referring to social media marketing mostly exam customer behavior, customer intension, image understanding procedures, analyzing data from social media through machine learning models and data mining techniques, reveals the small progress on that field [10, 11].

Content Marketing, Content Creation and Predictive marketing: Scientific research using data extracted from blogs, websites, e-shops and social media examines, using data mining, image understanding procedures, text mining and machine learning techniques, like keyword extraction, expert systems, customers' decision support system, text analysis, predictive analysis in order to produce optimized content [12–14]. Pay-Per-Click (PPC) and Ad Targeting: Machine learning plays a major role in scientific research for bidding and advertisements targeting through optimized advertising models. It examines criteria which allow to assess the significance of different factors on probabilities of clicks and conversions. Machine Learning is used to build regression models out of available data creating regressions models that offer new information and hidden trends [15–17]. Chatbots: Chatbots research has made a serious progress in comparison to other digital marketing methods. From health care and education to the digital counseling and insurances sector there is a very important ongoing research to automated robotic simulators that interact with humans engaging AI subfields like decision support systems, neural networks, autonomous exploration procedures etc. [18–20]. Semantic search: There is an extensive research referring to semantic research involving multiple marketing stages and its foundations. The scientific research by far exceed similar attempts from business sector and includes a high volume of scientific publications referring to search engines, information retrieval, world wide web, natural language processing systems, websites, data mining, social networking, internet, learning algorithms, machine learning, information analysis, query processing, information management, decision support systems, user interfaces, web searches etc. [21, 22]. Voice search: Most research refers to voice search and digital marketing is infrequent and limited. However, in other scientific fields makes an impressive progress. Most important research referring to marketing includes personal voice assistant technologies and speech recognition providing flexible interaction technique where the user and the system act as equal participants having the ability to

facilitate precise and unambiguous answers in web queries [23, 24]. Web development: It seems that the biggest amount of scientific research which has been conducted refers to web development. More than 2000 publications have been describing web technologies and optimized versions of them. From web design and web development to web application, web services, mobile friendly websites and data representation, artificial intelligence (AI) is involved in an effort of optimizing procedures in web development [25–28]. Despite the technological advance or academia in some marketing fields there are no substantial evidences which prove any remarkable scientific research specifically on affiliate marketing, native advertising, marketing automation, lead scoring, e-mail marketing and A/B testing which could be considered measurable at this stage.

3.2 Lack of Artificial Intelligence (AI) on Digital Marketing Research

Since businesses have expanded over the last years, the need of hiring expert staff emerged, academic researchers chose being hired by companies instead of remaining at universities or research centers. Inevitably, the maturity of AI research in business sector is much higher and explains the diffusion of AI outside of universities, and in technology product. Another main reason is that scientists lack of data when business sector manages to gather and store billions of bytes of data daily which makes them sufficient to conduct their own research when artificial intelligence (AI) scientists have nothing but less amount of data to evolve their models [29]. According to eMarketer.com marketing experts struggle to define artificial intelligence (AI). Instead of using the words 'machine learning', 'data mining', 'predictive modeling' they constantly use the word 'artificial intelligence' to describe data analysis, smart systems, user profiling or keyword searches. On the contrary computer scientists and IT engineers lack of marketing knowledge [30].

4 Research Proposition

Due to the big amount of data which are daily generated, the complexity of decision making, and the need of fast results lead to a point where we must invent a model that can be applied in as many different digital marketing methods as possible. To do that we must find the facts and decide what outcome we need. The facts we have and are used in most of digital marketing methods are big data with multiple attributes and numerous instances, sophisticated decision and optimization algorithms. The outcome could be a statistically correct result which could help decision makers. We would probably need a model that classifies data upon request and optimizes them in order to be more accurate. The existence of a generic optimization model that

produce classified data would give decision makers the ability to reconsider their choices based on low risk decisions. Digital marketing methods vary from bidding optimization to keyword selection, targeted audiences etc. If we statistically prove that specific data interact and correlate with each other, we could build the foundation of a smart decision agent [31].

5 Conclusion

Our research reveals that the amount of scientific research that took place and refer to the involvement of artificial intelligence (AI) in digital marketing techniques is still in its prime with few exceptions. Nowadays, personalization, targeting, high conversion rates, high ROIs etc. are some of what we are about to witness from the excessive technological evolution of marketing and computer science. Now it is the perfect time for marketers, companies, decision makers to grab the chance and produce excellent results. Artificial intelligence (AI) will clearly bring new standards in digital marketing both in academia and businesses. Industrial sector is few steps ahead from the point where academic world stands today. Despite companies' artificial intelligence (AI) model's evolution, academia will manage eventually to close the gap in between. Marketing science does evolve, not only in business sector but also in universities where the new knowledge is born, and businesses depend on the latter [32–34].

References

1. Rao S, Srivatsala V, Suneetha V (2016) Optimizing technical ecosystem of digital marketing. In: Dash S, Bhaskar M, Panigrahi B, Das S (eds) Artificial intelligence (AI) and evolutionary computations in engineering systems, Advances in intelligent systems and computing, vol 394. Springer, New Delhi
2. Casillas J, Martínez López FJ (eds) (2010) Marketing intelligence systems, STUDFUZZ 258. Springer, Berlin, pp 1–8
3. Hub Spot. https://blog.hubspot.com/marketing/what-is-digital-marketing
4. Wierenga B (2010) Marketing and artificial intelligence (AI): great opportunities, reluctant partners. In: Casillas J, Martínez-López FJ (eds) Marketing intelligent systems using soft computing. Studies in fuzziness and soft computing, vol 258. Springer, Berlin
5. GEC Designs. https://gecdesigns.com/blog/impact-of-artificial-intelligence-on-digital-marketing
6. University of Birmingham. www.cs.bham.ac.uk/~jxb/IAI/w2.pdf
7. Yuniarthe Y (2017) Application of artificial intelligence (AI) in search engine optimization (SEO). In: 2017 International conference on soft computing, intelligent system and information technology (ICSIIT), pp 96–101
8. Krasotkina O, Mottl V (2015) A Bayesian approach to sparse learning-to-rank for search engine optimization. In: Perner P (ed) Machine learning and data mining in pattern recognition. MLDM 2015. Lecture notes in computer science. Springer, Cham, p 9166

9. Zhu C, Wu G (2011) Research and analysis of search engine optimization factors based on reverse engineering. In: Third international conference on multimedia information networking and security, pp 225–228

10. Li C, Lu Y, Mei Q, Tan X, Pandey S (2015) Click-through prediction for advertising in Twitter timeline. KDD, Sydney, NSW

11. Eshak MI, Ahmad RB, Sarlan AB (2017) A preliminary study on hybrid sentiment model for customer purchase intention analysis in social commerce. In: 2017 IEEE conference on big data and analytics (ICBDA), pp 61–66

12. Isah H, Neagu D, Trundle PR (2014) Social media analysis for product safety using text mining and sentiment analysis. In: 2014 14th UK workshop on computational intelligence (UKCI), pp 1–7

13. Liu X, Nie D, Bai S, Hao B, Zhu T (2015) Personality prediction for microblog users with active learning method. In: Zu Q, Hu B, Gu N, Seng S (eds) Human centered computing. HCC 2014. Lecture notes in computer science, vol 8944. Springer, Cham

14. Reis DD, Goldstein F, Quintão F (2012) Extracting unambiguous keywords from microposts using web and query logs data. MSM, Lyon

15. Spentzouris P, Koutsopoulos I, Madsen KG, Hansen TV (2018) Advertiser bidding prediction and optimization in online advertising. In: Iliadis L, Maglogiannis I, Plagianakos V (eds) Artificial intelligence applications and innovations. AIAI 2018. IFIP advances in information and communication technology, vol 519. Springer, Cham

16. Mahdian M, Tomak K (2007) Pay-per-action model for online advertising. In: Deng X, Graham FC (eds) Internet and network economics. WINE 2007. Lecture notes in computer science, vol 4858. Springer, Berlin

17. Zhang W, Yuan S, Wang J (2014) Optimal real-time bidding for display advertising. KDD. ACM, New York, NY

18. Cameron G, Cameron D, Megaw G, Bond R, Mulvenna MD, O'Neill S, Armour C, McTear M (2017) Towards a chatbot for digital counselling. BCS HCI, Swindon, UK

19. Stanica I, Dascalu M, Bodea CN, Moldoveanu AD (2018) VR job interview simulator: where virtual reality meets artificial intelligence for education. In: 2018 Zooming innovation in consumer technologies conference (ZINC), pp 9–12

20. D'Alfonso S, Santesteban-Echarri O, Rice SG, Wadley G, Lederman R, Miles CR, Gleeson J, Alvarez-Jimenez M (2017) Artificial intelligence-assisted online social therapy for youth mental health. Front Psychol 8:796

21. Gervais A, Shokri R, Singla A, Capkun S, Lenders V (2014) Quantifying web-search privacy. In: ACM conference on computer and communications security. ACM, New York, NY

22. Kanagarajan K, Arumugam S (2018) Intelligent sentence retrieval using semantic word based answer generation algorithm with cuckoo search optimization. Clust Comput, 1–11. https://doi.org/10.1007/s10586-018-2054-x

23. Buck JW, Perugini S, Nguyen TV (2018) Natural language, mixed-initiative personal assistant agents. IMCOM, New York, NY

24. Chai JY, Horvath V, Nicolov N, Stys M, Kambhatla N, Zadrozny W, Melville P (2002) Natural language assistant: a dialog system for online product recommendation. AI Mag 23:63–76

25. Chi L, Huang C, Chuang K (2016) Mobile-friendly and streaming web-based data visualization. In: 2016 Conference on technologies and applications of artificial intelligence (TAAI), pp 124–129

26. Peng D, Li T, Wang Y, Chen CL (2018) Research on information collection method of shipping job hunting based on web crawler. In: 2018 Eighth international conference on information science and technology (ICIST), pp 57–62

27. Satapathy SM, Rath SK (2016) Effort estimation of web-based applications using machine learning techniques. In: 2016 International conference on advances in computing, communications and informatics (ICACCI), pp 973–979

28. Rukavitsyn A, Kupriyanov M, Shorov A, Petukhov I (2016) Investigation of website classification methods based on data mining techniques. In: 2016 XIX IEEE international conference on soft computing and measurements (SCM), pp 333–336
29. Marketing Profs. https://www.marketingprofs.com/charts/2017/32531/the-incredible-amount-of-data-generated-online-every-minute-infographic
30. eMarketer. https://www.emarketer.com/content/why-marketers-struggle-to-define-artificial-intelligence
31. Mitchell T (1997) Machine learning. McGraw Hill, New York. ISBN 0-07-042807-7
32. Ckickz.com. https://www.clickz.com/heres-how-ai-is-set-to-transform-the-digital-marketing-landscape/216156/
33. Search Engine Journal. https://www.searchenginejournal.com/search-ai-will-transform-landscape-seo/185531
34. Kiriakidis S, Kefallonitis E, Kavoura A (2018) The effect of innovative communication technologies in higher education: current trends and future outlook. In: Khosrow-Pour M (ed) Encyclopedia of information science and technology, 4th edn. IGI Global, Hershey, pp 3827–3838

United States Small Employers: A New Marketing Channel for Medical Tourism?

Michele Thornton

Abstract As a strategy for lowering healthcare costs some large United States employers are beginning to offer a medical tourism benefit to encourage patients to seek care abroad. Using a pilot survey of 20 small employers in August of 2018 this study estimates a baseline understanding of whether they would be a viable channel to "push" medical tourism utilization within their employee population and encourage more patients to seek care outside of their home country. Given the small sample size, this work should be seen as early findings to inform a future larger scale study.

1 Introduction

1.1 Background

The American workforce has seen unprecedented change related to cost, quality and access in the health care sector within the last decade. With dramatic shifts in the industry such as the Affordable Care Act (ACA), and proposed future market changes by the Trump Administration, United States (U.S.) employers and employees remain confused and frustrated by affordability and regulatory changes. Despite all of the policy changes within the health insurance industry, more than half (55.7%) of Americans continue to obtain health insurance through an employer-sponsored plan [1]. Although large firms are more likely to offer health insurance, 40.2 million adults (approximately 1/3 of the total U.S. workforce) are employed in small firms with less than 100 employees [2]. Across the U.S. over the last decade, we have seen annual family health insurance premiums provided by small employers rise from $11,835 in 2007 to $17,615 in 2017 [3]. While rising costs are a challenge,

M. Thornton (✉)
State University of New York at Oswego, Oswego, NY, USA
e-mail: michele.thornton@oswego.edu

small employers have also noted frustrations with the changing landscape, lack of competition and overall complexity in health care, with 44% of those small business owners surveyed noting healthcare as the top issue they would like the new Trump Administration to address [4].

Concerns over affordability and higher cost sharing have begun to motivate patients to travel outside the U.S. for the primary purpose of seeking healthcare, a practice known as medical tourism [5]. Large employers, particularly those that self-insure employee health care, are pursuing this option with the expectation of a significant reduction in spending while maintaining favorable health outcomes. The typical cost per surgery abroad is 60–85% lower than negotiated charges in U.S. hospitals [6]. Three trends have also served to reduce barriers in perceptions of healthcare quality abroad: more U.S. based providers such as the Cleveland Clinic setting up outposts abroad; global hospitals attracting U.S. trained surgeons to their staff; and other international facilities becoming accredited by trusted organizations such as the Joint Commission [7]. Small employers tend to follow large employer trends when it comes to the provision of health care as an employee benefit, however, not much is known about their knowledge and opinions on medical tourism. By employing a pilot study approach, this project surveyed 20 small employers to assess their knowledge and perceptions of healthcare outside of the United States as well as their willingness to travel for health-related purposes.

1.2 Theoretical Framework

Given normal circumstances, patients tend to prefer to seek care locally. High costs, or dissatisfaction with the quality of local providers may cause patients to seek care outside of the local community. The motivation to travel for healthcare has been characterized into "push" factors at the patient level (cost, type of illness) and "pull" factors at the organization level (innovation, efficiency, or quality) [8, 9]. Given that the employer's role in healthcare insurance and financing in the U.S. is well established, it is reasonable to assume that they could influence patient behavior particularly through related push factors. This study seeks to establish a baseline understanding of whether small employers specifically would be a viable channel to "push" medical tourism utilization within their employee population and encourage more patients to seek care outside of their home country.

2 Methods

2.1 Study Design

This pilot study was conducted using online survey research fielded through Qualtrics [10]. The researchers used a mixed methods approach to exploratory

analysis as a way to identify emerging data patterns and response themes. Participants were recruited via a partner organization focusing on their regional small employer client database. Empirical data from respondents were analyzed using basic descriptive statistics with STATA [11]. Qualitative responses were analyzed using DeDoose to generate underlying themes [12].

2.2 Participants and Procedures

The online survey instrument contained a total of 16 response items. This contained a variety of questions, requiring both quantitative and qualitative responses intended to measure both knowledge on key health care and health insurance policy and economic factors as well as perceptions of those constructs as well. Care was taken to develop the instrument using best practices that minimize non-response bias, recall bias and measurement error. The survey instrument contained instructions, notice of informed consent and clear statement of respondents' ability to end participation at any point in time. All participants were informed that by completing the online survey, they would be entered into a $100 raffle as an incentive. Two follow up reminders were emailed over a 2-week period.

All professionals queried were working in small firms with less than 100 employees. The link to the online survey was emailed to 80 business owners or managers in Chicago, IL from an existing external vendor partner. Twenty employers ultimately responded, yielding a 25% response rate. 17 (or 21%) of the employers completed all key constructs required for this study, and those comprise our analytical sample. All available efforts were taken to ensure the security and confidentiality of data collected throughout the project. The pilot study design and instrument were submitted to and approved by the Human Subjects Protection Committee at the primary researcher's home university.

2.3 Data Analysis

Empirical data analysis included descriptive summary statistics, including simple frequencies, mean and distribution counts. The basic demographics of the respondents can be found in Table 1. Of the 17 respondents, over half (58.82%) were executives or owners of the businesses they represent. The largest majority of respondents (70.59%) had fewer than 26 total employees working for their firms. The distribution of firm years in business was less than 26 (35.29%), 26–50 years (52.94%) and 51 or more years (11.76%). All respondents offered a minimum of one health insurance plan, but nearly half offered employees more than one plan to choose from.

Table 1 Demographics of survey respondents

	(n)	Percent (%)
Total sample	17	100.00
Role of respondent		
Executive	10	58.82
Management	5	29.41
Finance	2	11.76
Number of employees		
1–25	12	70.59
26–50	4	23.53
51+	1	5.88
Years in business		
1–25	6	35.29
26–50	9	52.94
51+	2	11.76
Number of health plans offered		
1	9	52.94
2	2	11.76
3	4	23.53
4 or more	2	11.76

3 Results

3.1 *Perceptions of Cost and Quality*

There were seven response items in the employer survey related to their perceptions of cost, quality and willingness to travel for medical care. Although participants were given a five-point Likert-scale to respond to each item (strongly agree, agree, neutral, disagree, strongly disagree), for reporting simplicity and easier observation of patterns within the small sample we collapse the response items into three categories (agree, neutral, disagree). Table 2 shares the frequencies and distributions among the entire sample for each of these seven items.

3.2 *Sub-Group Analysis*

The responses were also analyzed for patterns among key sub-groups within the sample (role of respondent, size of employer and years employer is in business). Table 3 focuses on two key areas related to seeking healthcare abroad: perceptions of affordability and perceptions of quality as compared to the United States.

Table 2 Small employer perceptions of cost, quality and willingness to travel

	Agree		Neutral		Disagree	
	(n)	Percent (%)	(n)	Percent (%)	(n)	Percent (%)
Construct: perceptions of cost and quality						
Healthcare is more affordable since Obamacare was passed in 2010.	0	0.00	8	47.06	9	52.94
Healthcare is of higher quality since Obamacare was passed in 2010.	4	23.53	7	41.18	6	35.29
The Trump administration will make health insurance more affordable.	4	23.53	3	17.65	10	58.82
The Trump administration will increase healthcare quality.	4	23.53	4	23.53	9	52.94
Healthcare outside my home state is more affordable.	3	17.65	12	70.59	1	5.88
Healthcare outside of the U.S. is more affordable.	5	29.41	8	47.06	4	23.53
Healthcare outside of the U.S. is higher quality.	1	5.88	8	47.06	7	41.18
Construct: medical travel						
I would travel outside my home state for health care.	1	5.88	2	11.76	14	82.35
I have traveled outside of the country for healthcare services.	0	0.00	5	29.41	12	70.59
I would travel outside of the country for healthcare.	2	11.76	1	5.88	14	82.35
I would offer an employee benefit that paid for healthcare outside of the U.S.	1	5.88	0	0.00	16	94.12

3.3 Information Seeking

The channels that the respondents report using as resources to gain access to information on healthcare and health insurance can be found in Table 4. Overwhelmingly, participants in this pilot relied on their agent or broker (94.12%). The next largest majority was represented by those going to the internet (29.41%) and other colleagues (17.65).

4 Discussion

Over half of respondents do not feel that healthcare is more affordable since Obamacare (the ACA) was passed in 2010, and a similar percentage (58.82%) are not optimistic that the current administration will have an impact on lowering costs either. There are not any clear patterns in the distribution about perceptions of increased quality—either in the time period since the ACA—nor looking forward.

Table 3 Perception of international healthcare, by selected characteristics

	(n)	Agree (%)	Neutral (%)	Disagree (%)
Healthcare is more affordable in other countries	17	29.41	47.06	23.53
Role of respondent				
Executive	10	50.00	50.00	0.00
Management	5	0.00	20.00	80.00
Finance	2	0.00	100.00	0.00
Number of employees				
1–25	12	33.33	41.67	25.00
26–50	4	25.00	50.00	25.00
51+	1	0.00	100.00	0.00
Years in business				
1–25	6	33.33	50.00	16.67
26–50	9	22.22	55.56	22.22
51+	2	50.00	50.00	0.00
Healthcare is higher quality in other countries	17	5.88	47.06	41.18
Role of respondent				
Executive	10	10.00	60.00	30.00
Management	5	0.00	40.00	60.00
Finance	2	0.00	50.00	50.00
Number of employees				
1–25	12	8.33	50.00	41.67
26–50	4	0.00	50.00	50.00
51+	1	0.00	100.00	0.00
Years in business				
1–25	6	16.67	50.00	33.33
26–50	9	0.00	55.56	44.44
51+	2	0.00	50.00	50.00

Table 4 Sources of information

Which of the following sources do you go to for information about health insurance and health care finance?	Respondents (n) %
Agent or broker	(16) 94.12
Internet	(5) 29.41
Colleagues	(3) 17.65
Professional association	(1) 5.88
Health care providers	(1) 5.88

In the qualitative responses, several participants reported being open to a new tool or resource to have "different options . . .so that small employers can save money."

Five of the 17 employers responding perceive healthcare outside of the United States as more affordable, but only one felt that it would be higher quality. When asked about their experiences with traveling outside the country for healthcare services, none of the participants reported receiving care abroad, and only two said

they would even consider it. There was variation in perception of affordability and quality of care in other countries by the sub groups we identified. Executives, who made up the majority of our sample, perceived healthcare outside of the U.S. as more affordable—but zero respondents in the other two roles (management and finance) agreed with this notion. Conversely, the executive group was less convinced about quality of care outside of the United States, with a 60.00% majority responding neutral on this item. Given the existing evidence about costs abroad, there appears to be a knowledge gap among participants related to the ability to lower healthcare spending by seeking care outside of their local service areas.

If lack of awareness or information on international health care costs and quality is driving small employer disinterest in medical tourism, it is useful to understand where they report receiving information related to health insurance and the finance of care. Given that small employers seem less informed about comparisons with care abroad in the areas of cost and quality, marketing firms, insurers and destinations should employ an educational strategy to build awareness, dispel myths and encourage utilization. Noting the high reliance on agents and brokers for information, perhaps they would be the channel with the most efficient reach.

There are several limitations in this investigation—primarily focused on the small sample size. Although the sample size is small, further work should continue to build on these findings, gain a larger response sample and broaden them to other geographic areas in an attempt to make the study more generalizable and nationally representative. Another limitation revolves around survey data itself, often subject to recall bias-and using an unvalidated survey instrument requires replication in future work.

5 Conclusions

Overall, the small employers in this study continue to struggle with affordability in health care. More than half of all respondents felt that healthcare quality and affordability in the United States was not improved with Obamacare and that the Trump Administration will not be able to make improvements. Given their reported demand for new health care solutions that save money and provide a positive benefit to employees, small employers could be a potential market for education and incentives to boost medical tourism. Their current disinterest in medical travel is potentially rooted in lack of awareness about available options and quality of care abroad—and therefore finding educational opportunities will be key. Healthcare costs in the United States will continue to be a challenge for small employers into the future. Building awareness of viable strategies to reduce spending in this area, such as global medical tourism, is a potential opportunity for market growth in this tourism segment.

References

1. United States Census Bureau (2017) United States Small Business Administration. Health Insurance Coverage in the United States: 2016. https://www.census.gov/library/publications/2017/demo/p60-260.html
2. United States Small Business Administration. Office of Advocacy (2016) Small business profile. https://www.sba.gov/sites/default/files/advocacy/United_States.pdf
3. Henry J (2017) Kaiser family foundation. Employer health benefits survey. https://www.kff.org/health-costs/report/2017-employer-health-benefits-survey/
4. Biz Buy Sell. Poll (2017) Small business owners and potential buyers approve of Trump's presidency. https://www.bizbuysell.com/htmlmail/2017/email/pr/bbs_smallbusiness_poll_feb2017.html
5. Centers for Disease Control and Prevention (2017) Medical tourism. https://www.cdc.gov/features/medicaltourism/
6. Milstein AMD, MPH, Testimony before U.S. Senate Special Committee on Aging (2006) June 27. https://www.aging.senate.gov/imo/media/doc/hr159am.pdf
7. Wagner M (2016) The Wagner Law Group. Medical tourism and group health plans. http://www.wagnerlawgroup.com/pdf/medical-tourism.pdf
8. Johnson TJ, Youngquist JS, Garman AN, Hohmann S, Cieslak PR (2015) Factors influencing medical travel into the United States. Int J Pharm Healthcare Mark 9:118–135. https://doi.org/10.1108/IJPHM-02-2013-0004
9. Veerasoontorn R, Beise-Zee R (2010) International hospital outshopping: a staged model of push and pull factors. Int J Pharm Healthcare Mark 4:247–264. https://doi.org/10.1108/17506121011076174
10. Qualtrics (2018) Provo, Utah, USA. www.qualtrics.come
11. StataCorp (2017) Stata Statistical Software: Release 15. College Station, TX: StataCorp LLC
12. Dedoose Version 8.0.35, web application for managing, analyzing, and presenting qualitative and mixed method research data (2018). Los Angeles, CA: SocioCultural Research Consultants, LLC www.dedoose.com

Country-of-Origin Preferences and Networks in Medical Tourism: Beyond the Reach of Providers?

Klaus Schmerler

Abstract This paper investigates the drivers of inbound medical tourism at the individual level and explores the role of both personal networks and the country-of-origin effect as key determinants of destination choice. We draw from two novel and unique data sets: stakeholder interviews with facilitators and providers and an international patient survey in Germany. We find strong evidence for the use of personal networks as information and support channels, the presence of a strong country-of-origin effect and two distinct consumer segments. These segments differ in their importance placed on staff characteristics, provider characteristics and the magnitude of their country-of-origin effects. Our results have important implications for both providers and policy makers that seek to emulate strategies of successful medical tourism destinations as we identify factors that inhibit their portability.

Keywords Medical tourism · Networks · Country-of-origin effect

1 Introduction

Medical tourism as a mode 2 service export has attracted substantial public, commercial and academic interest over the past decade. With private and public savings looming on the demand side and the potential to generate extra-budgetary income on the supply side, stakeholders had substantial motivation to engage in this field. Asia is often considered the cradle of medical tourism with multiple waves of countries establishing themselves as destinations [1]. Since then, countries around the globe entered or attempted to enter the fray and today's medical tourism can be considered both regional and long-distant [2].

The precise economic magnitude of medical tourism remains somewhat shrouded as there is little official, high-quality data available on international patients. Early

K. Schmerler (✉)
Martin-Luther-University Halle-Wittenberg, Halle, Germany
e-mail: klaus.schmerler@wiwi.uni-halle.de
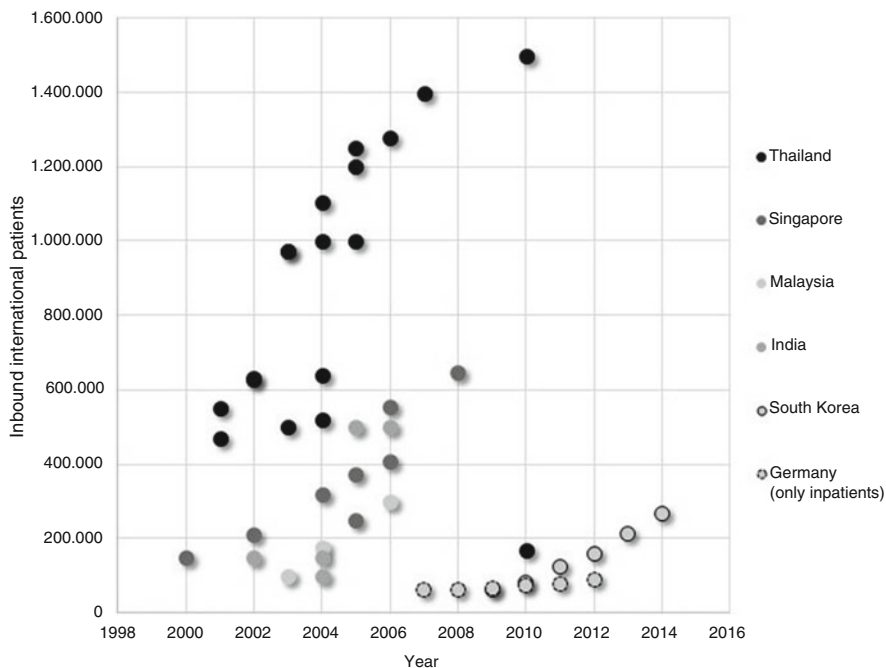
Fig. 1 Estimated number of inbound international patients

accounts of medical tourism were often based on industry reports and guilty of substantial boosterism. Researchers have since employed multiple different data sets to better gauge the economic implications of medical tourism but available data sets suffered from considerable imperfections [3–7]. Nevertheless, the range of sources provide a grand picture of the economic magnitude associated with medical tourism. Figure 1 displays the estimated number of patients for six destinations over a 20-year span and draws from a large number of publications. Multiple estimates per country and year are depicted when available.

Estimated patient numbers translate into economic magnitude via expenditures and the expenditures associated with medical tourists are substantial as they include both medical and non-medical expenditures for patients and accompanying care-givers. An analysis of inbound medical tourism to Thailand, for example, estimates 1.4 million international patients in 2007 to account for US$ 1.23–1.39 billion, which corresponds to 0.4% of GDP [8]. Other estimates value inbound medical tourism between US$491 million and US$ 1.2 billion in the U.S. [4] and at £219 million in the UK [3].

Lured by these numbers, businesses and policy makers have devised strategies to develop a medical tourism sector but they have rarely been guided by solid empirical insights. The absence or poor quality of patient flow data has largely precluded empirical investigations and the key challenge of identifying policies and strategies that are effective in developing medical tourism remains a tall order. We thus

reframe this challenge to identify drivers of medical tourism that are likely to prevent the emulation of successful destinations' strategies. Such drivers are investigated in our overarching research program "Medical Tourism in Germany" and we hypothesize two key drivers to prevent the success of many destinations strategies: personal networks and a strong country-of-origin effect for health treatments.

2 Literature

A key problem in the investigation of medical tourism is its definition, which—along with poor data and deliberate boosterism—has led to wildly varying estimates of international patients. Sometimes these estimates result from a confusion of treatments, patients and trade volume patient numbers, but more often they stem from a lack of discrimination of the research object itself. Early studies viewed all international patients who seek to improve their well-being as medical tourists [9] while other authors suggested specific treatment characteristics to delineate medical tourism [10]. Eventually, patients were grouped by treatment types, e.g. invasive, diagnostic and lifestyle treatments [11] or similar clusters [1]. Today, we distinguish between health tourism and medical tourism where the former focuses on treatments of largely preventive nature, e.g. wellness treatments, whereas the latter is associated with curative and often invasive treatments [12]. Our definition of medical tourism follows [1] and allows the framing of medical tourism as an economic choice, i.e. medical tourism is a conscious choice to travel to a location outside the usual country of residence for a limited period of time to obtain an elective treatment of interventionist, curative character while bearing some direct or indirect costs. For empirical purposes, it is useful introduce an additional criterion that turns medical tourism into medical travel, i.e. medical travel occurs if the medical treatment is the primary and initial purpose of the trip. Medical travel thus rules out incidental treatments or trips whose destination choice is primarily governed by other purposes such as leisure or business. The distinction between heterogeneous international patient segments that seek different treatments [13] in different settings is crucial as these groups are expected to follow different decision-making processes and weigh determinants of destination choice differently. Our empirical investigations focus on inpatients without incidental treatments who can reasonably be considered medical travelers.

We hypothesize personal networks and a country-of-origin effect to be key determinants of destination choice for patients who seek treatment in Germany. These effects are expected to be of large magnitude as they need to compensate for the comparatively high costs associated with a treatment in Germany. In fact, the role of networks and the country-of-origin effect may go beyond the offsetting of actual costs but produce the trust required to consume a credence good such as a medical treatment abroad in the first place.

The international trade literature hints at the importance of networks and cultural ties whose importance increases in lockstep with product heterogeneity [14]. In

absence of reference prices for complex products, consumers use personal networks to assess product quality and can lower both direct costs (e.g. translation costs) and indirect costs (e.g. transaction costs) in the process. Such costs have been identified and quantified in the trade literature by network measures [15–18] and by measures of cultural proximity [19, 20], which can be considered indirect measures of networks.

The medical tourism literature has also recognized the potential of networks. Consumer-driven tourism, network tourism and facilitator-driven tourism have been coined in the context of medical tourism [21] and an empirical investigation has been conducted with a focus on the role cultural and familial ties at various stages of a proposed decision-making process of international patients' destination choice [22]. These results are specific to UK diaspora patients who may derive additional utility from visiting abroad but provide an indication of personal networks' role in guiding patients. Generally, network nodes can be of commercial (e.g. marketing) or private (e.g. recommendations) nature and the trust generated differs by the source of information. We can distinguish between organic and induced information where the former are produced by highly trusted private network nodes and the latter by less trusted commercial network nodes [23]. Empirically, both types are often difficult to disentangle. Networks nodes do not only feed trust in destinations into networks but may also provide local support, which may again be of private (e.g. accommodation) or commercial (e.g. interpretation) nature.

Finally, the marketing literature also justifies our hypotheses. A purchase can be viewed as a mix of processes, specifically as a mix of a search, experience and credence/trust process and physician visits have been identified to be trust products [24]. Complex products with largely unobservable product characteristics do not only force patients to resort to trust generated from networks but also invite a strong country-of-origin effect [25]. This effect essentially captures the impact of a country's reputation on the perception of a product produced therein. Trust or distrust then change the uncertainty about a product's quality. This country-of-origin effect and the trade-cost dampening and trust-enhancing effects of networks are precisely what we expect to find for inbound medical travellers in Germany.

3   Empirical Approach

We investigate our two hypotheses in the context of a comprehensive survey among international patients in Germany that addresses multiple research questions including the quantification of cultural proximity and aggregate network size effects on inbound medical traveler flows. To identify specific personal networks and to gauge the size of the country-of-origin effect, we conducted stakeholder interviews and a patient survey among international inpatients in Germany. Our primary interest lies in international patients but they are notoriously difficult to approach for privacy and organizational reasons: Even designated international offices at German hospitals do not always make direct contact with all international patients as they are often report

directly to wards. In anticipation of these difficulties, we also approach other stakeholders that often act as gatekeepers to treatment in Germany.

Specifically, we conducted interviews with German hospitals, facilitators in Germany and facilitators abroad in 2015. They were selected in a purposive sample based on their visibility to international patients on the internet and in patient forums. Project resources forced us to restrict our interviews to facilitators that focus on Russian patients—the largest segment of inbound patients by far. In total, we conducted 20 comprehensive interviews with questions ranging from patient classification over perceived competitors to Germany as a destination to determinants of destination choice that patients reveal in their dealings with the other stakeholders. In addition, we collected exploratory patient surveys from 42 international patients who answered a comprehensive set of questions about their treatments, information channels, consideration sets, networks and purpose of the trip. In addition, they revealed socio-demographic characteristics and preferences of destination characteristics in a rating exercise and a discrete choice experiment. In the discrete choice experiment, patients were exposed to ten scenarios each, which yielded a total of 348 observations. The entire survey was administered in English, Arabic and Russian.

4 Results

This section presents select results that address our main hypotheses. First, we inquired about the role of networks as a source of information and asked how patients became aware of Germany as a treatment destination—with multiple answers possible. We find that awareness of Germany as a destination is most often raised by friends (38%), family/relatives (33%) and also by physicians (24%) i.e. personal networks are complemented by professional networks. Our interviews supported these findings as both hospitals and facilitators indicated "word-of-mouth" and "recommendations" as key channels to raise awareness of their services. Our follow-up questions inquired about the role of networks as sources of specific recommendations and providers of local support. Figure 2 displays the answers to whether a specific hospital or doctor were recommended to a patient. We find that the chosen hospital and doctor often coincide with a recommendation from friends/family and sometimes their referring doctor.

Figure 3 shows the availability of local support as patients were asked if they can receive help with their travel arrangements at different destinations. The majority of patients could receive support from friends or family at the chosen location in Germany. However, such support was also available at other destinations. 19% of the patients reported available local support exclusively at the chosen destination in Germany.

We investigated the surmised country-of-origin effect in a discrete choice experiment and the effect turned out to be pronounced—only physician expertise had a stronger effect on destination choice. Table 1 shows the average selection
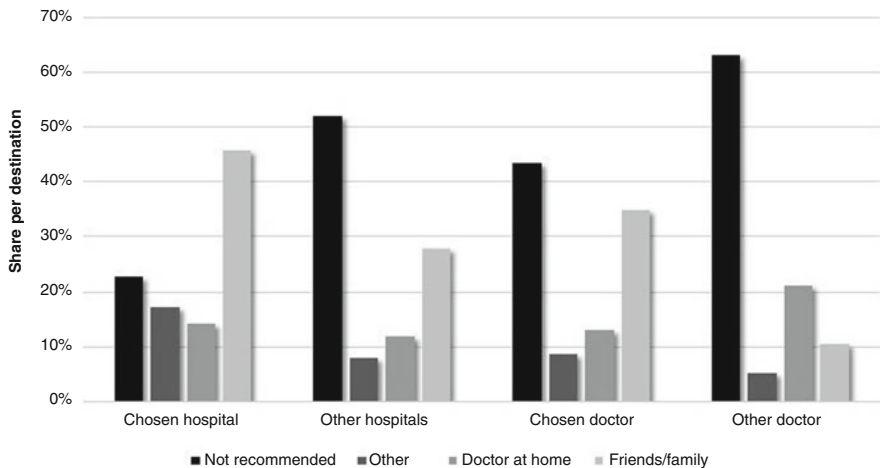
Fig. 2 Networks as sources of recommendations
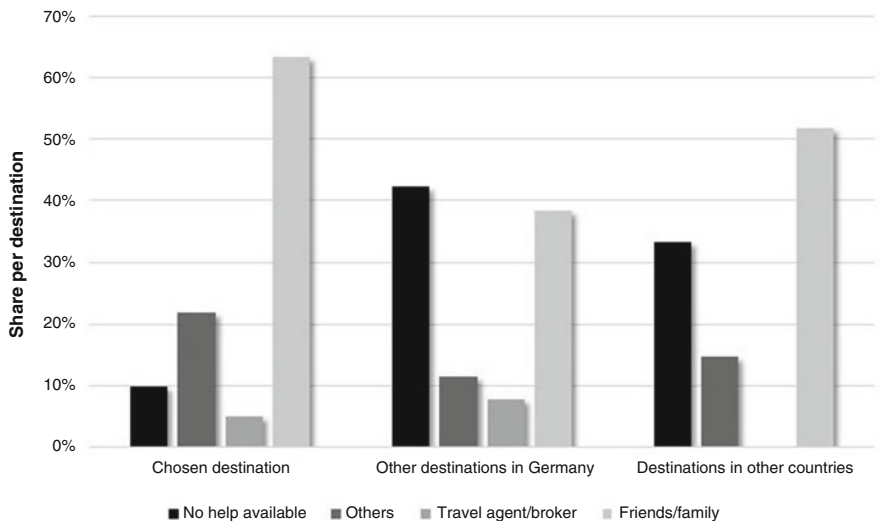
Fig. 3 Networks as sources of local support

Table 1 Average selection probabilities

	Germany	Switzerland	Czech Republic
All destination characteristics at sample levels	0.618	0.156	0.226
Physician and hospital characteristics at baseline, costs at sample average	0.728	0.228	0.044

probabilities of destination countries with all destination characteristics at sample levels in the first row and with physician/hospital characteristics set to baseline and treatment costs set to sample average in the second row. The first row thus shows the selection probability of Germany in the sample setting and the second row isolates the country-of-origin effects from other characteristics. Germany remains the strongly preferred choice in both settings. Switzerland benefits from the lower sample-average costs in the second setting while Czech Republic drops to the third rank when it loses its price advantage and needs to rely purely on its country-of-origin effect.

Closer inspection of the data reveals that the average utility associated with a specific country disguises two underlying patient segments that differ in their country preferences based on the survey language chosen by a respondent. Middle Eastern patients turn out to assign only small disutility to Switzerland as compared to Germany and large disutility to Czech Republic. Patients who chose to complete the questionnaire in English or Russian, on the other hand, assigned a similar disutility to Switzerland and Czech Republic with the latter being preferred to the former.

5 Summary

We found strong evidence for our two hypotheses and conclude that both personal networks and a pronounced country-of-origin effect govern destination choice in medical travel. Personal networks serve to establish consideration consideration sets, reduce uncertainty about a destination's service and provide local support. The country-of-origin effect turned out to be a main determinant of destination choice whose effect size is exceeded only by physician quality. These results are in line with larger quantitative studies [26] and imply that a provider's ability to emulate a successful destination's strategy and to improve selection probability is greatly restricted by the country in which the provider is located and by existing network ties between the source and destination countries. However, physician quality, professional networks and word-of-mouth from previous patients may be leveraged to develop a destination despite providers' limited ability to directly influence personal network ties and country reputations [26]. Noteworthy limitations of our study are the focus on a high-cost destination that offers a specific set of treatments. We still expect a role of networks and cultural ties for low-cost destinations with different treatment portfolios but the effect sizes of these determinants of destination choice probably differ. The limitation to one destination country further limits the generalizability of our discrete choice experiment and it should be rolled out to in multiple destination countries to avoid selection bias.

References

1. Lunt N, Smith R, Exworthy M et al (2011) Medical tourism: treatments, markets and health system implications: a scoping review. OECD, Paris
2. Connell J (2013) Contemporary medical tourism: conceptualisation, culture and commodification. Tour Manag 34:1–13
3. Hanefeld J, Horsfall D, Lunt N et al (2013) Medical tourism: a cost or benefit to the NHS? PLoS One 8(10):1–8
4. Johnson TJ, Garman AN (2010) Impact of medical travel on imports and exports of medical services. Health Policy 98(2–3):171–177
5. Klijs J, Ormond M, Mainil T et al (2016) A state-level analysis of the economic impacts of medical tourism in Malaysia. Asian-Pac Econ Lit 30(1):3–29
6. Loh C-PA (2014) Health tourism on the rise? Evidence from the balance of payments statistics. Eur J Health Econ 15(7):759–766
7. Noree T, Hanefeld J, Smith R (2016) Medical tourism in Thailand: a cross-sectional study. Bull World Health Organ 94(1):30–36
8. NaRanong A, NaRanong V (2011) The effects of medical tourism: Thailand's experience. Bull World Health Organ 89(5):336–344
9. García-Altés A (2005) The development of health tourism services. Ann Tour Res 32 (1):262–265
10. Mattoo A, Rathindran R (2006) How health insurance inhibits trade in health care. Health Aff 25(2):358–368
11. Bookman MZ, Bookman KR (2007) Medical tourism in developing countries. Palgrave Macmillan, New York
12. Hall CM (2011) Health and medical tourism: a kill or cure for global public health? Tour Rev 66 (1/2):4–15
13. Esiyok B, Çakar M, Kurtulmuşoğlu FB (2017) The effect of cultural distance on medical tourism. J Dest Market Manag 6(1):66–75
14. Rauch JE (1999) Networks versus markets in international trade. J Int Econ 48(1):7–35
15. Duanmu J-L, Guney Y (2013) Heterogeneous effect of ethnic networks on international trade of Thailand: the role of family ties and ethnic diversity. Int Bus Rev 22(1):126–139
16. Dunlevy JA (2006) The influence of corruption and language on the protrade effect of immigrants: evidence from the American states. Rev Econ Stat 88(1):182–186
17. Gould DM (1994) Immigrant links to the home country: empirical implications for U.S. bilateral trade flows. Rev Econ Stat 76(2):302–316
18. Head K, Ries J (1998) Immigration and trade creation: econometric evidence from Canada. Can J Econ 31(1):47–62
19. Melitz J, Toubal F (2014) Native language, spoken language, translation and trade. J Int Econ 93(2):351–363
20. Möhlmann JL, Ederveen S, de Groot HLF et al (2010) Intangible barriers to international trade: a sectoral approach. In: Van Bergeijk PAG, Brakman S (eds) The gravity model in international trade: advances and applications. Cambridge University Press, Cambridge, pp 224–251
21. Lunt N, Horsfall D, Smith R et al. (2013) Market size, market share and market strategy: three myths of medical tourism. Policy & Politics
22. Hanefeld J, Lunt N, Smith R et al (2015) Why do medical tourists travel to where they do? The role of networks in determining medical travel. Soc Sci Med 124:356–363
23. Jotikasthira N (2010) Salient factors influencing medical tourism destination choice. Dissertation, Southern Cross University, Lismore, NSW
24. Weiber R, Adler J (1995) Positionierung von Kaufprozessen im informationsökonomischen Dreieck: Operationalisierung und verhaltenswissenschaftliche Prüfung. Schmalenbachs Zeitschrift für betriebswirtschaftliche Forschung: Zfbf 47(2):99–123

25. Mai R (2011) Der Herkunftslandeffekt: Eine kritische Würdigung des State of the Art. J Betriebswirtsch 61(2–3):91–121
26. Schmerler K (2018) Medical tourism in Germany: determinants of international patients' destination choice, vol 13. Springer, Cham

Flowering Local Community Participation: Culture and Nature as Cradles of Sustainable Development Via "KOINONO Tinos Art Gathering"

Christos Artemis and Olga Tsakirides

Abstract This article presents an innovative cultural non-profit organization named "KOINONO Tinos Art Gathering" operating on the island of Tinos, in the Cyclades Complex, using art as a mediator to strengthen social cohesion, to promote the place and revitalize the natural environment. The basis of the organization is a natural garden next to an old building, both parts of the island's cultural heritage. The philosophy, its actions, as well as a first approach to the weaknesses, strengths, threats and opportunities are presented. The paper concludes with points for discussion and suggestions.

Keywords KOINONO Tinos Art Gathering · Community gardens · Gardens and art

1 Introduction

The purpose of the following article is to present an innovative effort established in one of the islands of the Cyclades complex named Tinos, a non-profit cultural organization, as a private initiative, called "KOINONO Tinos Art Gathering", providing participation through Art and Nature. The organization comes to fill a huge gap in the local society of Tinos, developing interaction and dialogue among the participants, but also with the natural and cultural environment inviting creative people from Greece and abroad to stay on the island and develop their work there. Starting from the description of the island of Tinos, a brief text then refers to the gardens, as special places of leisure, entertainment and socialization. In the main part, the paper examines the operation and the strategic perspective of the organization based on the S.W.O.T. analysis, as well as its actions through the programs implemented so far. Finally, some discussion points and proposals are presented.

C. Artemis
KOINONO Tinos Art Gathering, Tinos, Greece

O. Tsakirides (✉)
National Center for Social Research, Athens, Greece

2   Tinos as a Tourist Destination

The island demonstrates 64 traditional picturesque villages, a very interesting natural environment, monuments and archaeological sites, approximately 25 museums, the magnificent Church of Panagia Evangelistria, becoming one of the pilgrimage centers of Christianity, the 1200 chapels, the exquisite examples of traditional architecture, among which the well-known pigeons-houses, nowadays is evolving into a wider cultural tourism destination, changing its image, as considered to be a religious destination so far. It is also famous as "the island of artists" with internationally renowned representatives of both the fine and the folk arts [1]. Traditional techniques of marble sculpture have survived in Tinos through ages. The Museum of Marble Crafts is built on the island by the Piraeus Bank Group Cultural Foundation [2]. Marble sculpture, tradition and techniques have been recorded in UNESCO's World Cultural Heritage List of intangible heritage [3]. The island has landscapes of particular beauty, such as the area and the village with the same name "Volax", the "Xombourgo" rocky mountain, for which several pages have been written. In the village of Volax the traditional art of basketry is booming, with excellent samples that still have utilitarian and decorative value.

3   The Use of Gardens in Everyday Tinos' Life

The gardens are considered as a special part of cultural heritage, having many symbolic dimensions. The Babylon hanging gardens, the Garden of Eden, the Shadow Fields, the palace gardens, the interior gardens of the Roman residences, as well as the gardens in greenhouses, small or older ones, are well known [4]. In all cases, the relationship between man and nature is pointed. Nowadays modern gardening often is connecting with the harmonious development and the principles of sustainability [5]. Modern civilization, with the development of the urban centers, places the gardens as a vivid area in the crowded and over built cities in which parks and alleys are created for the entertainment of the residents and the visitors [6]. More specifically, the island of Tinos was formerly green, having in its entirety stairs and terraces made by stones ("xerolithies") that have been preserved to present. The "xerolithies" is a system which developed by the locals to hold the ground. It was a terrestrial paradise, a vast garden, a place full of life and creation. As time passed the locals began to move towards the urban centers, thus the place lost its previous vitality. Only some native herbs and plants survived, due to the lack of water and the lack of human presence. Nowadays, Tinos seeks to find its old beauties and create new, modern ones without altering the authenticity of the landscape. It seeks the revitalization of nature, the restoration of life and energy that has gone by the flight of the habitants. Young people on the island consider this as a goal of first priority. A garden is a complex field. It requires water mostly, but also it needs specialized care.

This care requires administrative-coordination, budgeting, control and planning, thus it requires specialized management.

Each garden attracts visitors for recreation, sports and more. For this reason, in modern gardens are developed various artificial infrastructures that support these needs, benches for the visitors, picnic-tables, playgrounds etc. Thus, the garden is a place needed for gathering people and can also be a tool for social cohesion [7] and for social work [8]. Most modern gardens have managerial centers, which work together with specialized, mild entrepreneurs to carry out activities for visitors. Several gardens develop flower and vegetable gardens, depending on the needs of the visitors, the landscape's physiognomy and its natural resources (soil, climate etc.). Most of the times are decorated with sculptures, fountains, etc.

4 Presenting KOINONO Tinos Art Gathering Society

4.1 Philosophy and Purpose

The initiation of the idea and the artistic direction belong to a new artist/creator who was born and raised on the island of Tinos, named Christos Artemis, who, apart from his initial inspiration, after a long study, accomplished the implementation of the original idea, encouraging other young people to participate.

The philosophy of KOINONO is enclosed in its official title: in Greek, it means to communicate, but also to participate actively in an interactive way with the other members of society. At the heart of its philosophy and purpose is therefore the interaction of individuals, not only as a reflection of oneself but as an act of further activation and mobilization of the spiritual forces [9, 10].

Initially, the community of KOINONO, searching the land, in order to start its activities, chose a forgotten place, an eighteenth-century building that operated once as a mill. There, a strange, natural patio emerged as the years passed. The roof of the old building has collapsed and in the center of the ruined building three large fig trees grown covering like vast umbrellas the surround area as a kind of natural roof.

This old building however, is a quite significant part of the island's cultural heritage, since is located in the old town of Tinos, named Pallada. The center of KOINONO's action is therefore a natural garden. Initially this garden had fig trees and other dry herbs. As the crowd gathered around the idea, the garden enriched with more plants. Nowadays there is an emerging interesting in preserving historic gardens, gardens that are a significant spot in the shaping of traditional landscape, as part of cultural heritage [11].

Starting from the construction created by the intervention of the wild fig trees in the building, some more wild plants and herbs were planted and now they are growing and climbing to the naked walls, together with different varieties of flowers. The garden attracted more people to participate, who planned more flowers, herbs and trees. Thus, the circle of life and social participation is growing every year. The aim of the garden is to create an organic space of harmonious evolution and

coexistence, an environment that recalls the spiritual desire for communication and reconnection of man with nature.

If the actions of KOINONO were shaped, if this shape was a circle extending as far as the island of Tinos, the center of the circle is founded in the Garden of Chora with the fig trees. From this center the activities of KOINONO start like rays that grow throughout the island, always having as a center the garden and the calmness, harmony and peacefulness that can bring as inspiration supporting creativity. The interactive communication which is developed among the participants from one side, the participants' communication with the natural environment and the garden on the other side, formulate a special atmosphere in which the artists are inspired. The effort as a whole supports the enrichment of culture of the island. An open dialogue is developing among the participants in an active way: nature, local society, historical elements and participants of KOINONO. In its pick KOINONO is transformed into a big event, like a festivity of joy, spirituality and socialization.

The KOINONO Tinos Art Gathering is a meeting of artists, teachers, researchers, creators and scientists who are invited to Tinos in order to create a project during their stay on the island. Within a community of dialogue and synergy, an open interactive experience brings together multiple fields of art, science and new technological media. Participants, residents and visitors interact with each other, they also interact with the natural landscape and the island's history and culture. Finishing their project, they can communicate their work and share it with the community. Through the social and cultural action of KOINONO the place and its culture are projected through the development of individual thematic units and a variety of cultural activities.

4.2   Operation and Management

The position and role of the manager is held by the project initiator, who is responsible for the planning, coordination, financial management, staffing, communication and control. Planning is designed on an annual basis, including a series of cultural activities, and in particular for the summer of 2018 organized into three thematic sections: Secret Gardens, Local Gardens, Virtual Gardens. The Secret Gardens emphasize the symbolic dimensions of the garden, the inner and spiritual dimensions of the concept. This section is first as a notion and as a priority, referring to the medieval "hortus conclusus" and the "enclosed garden" of the Bible.

In the local gardens, emphasis is placed on the emergence of the relations of the inhabitants with their place and the creation of their culture. The transformation of the Tinian land into a place, i.e. the effect of the natural environment on the inhabitants and the structured environment, emerges through the programmed cultural activities.

The Virtual Garden emphasizes on the imagination and the image creation, as participants are invited to translate their ideas and impressions with the help of new media technologies.

In each section there are events that refer to all contemporary arts and all forms of cultural activities such as art exhibitions, educational seminars, round trips, cultural tours, musical events etc. (see KOINONO's official website [9]). KOINONO is a meeting event of creative people who interact with the land of Tinos and its inhabitants. Within the framework of KOINONO, scientists, artists and intellectuals are invited to create cultural events, which in accordance interact with the groups of people involved. All the participants have their sight towards the respect of the natural environment, the land and its culture. Thus, KOINONO enhances the development of cultural tourism in Tinos island [12].

5   Discussion Points

The organization reveals several strengths, such as innovation, interactivity, creates a fertile environment for development, dissemination and exchange of ideas, projects the place with the events organized, strengthens the cohesion of the local community, activates young and creative groups outside and inside Tinos island, projects natural landscapes, historic buildings and cultural heritage as well as contemporary artistic production through Art, Tradition and Nature [13].

On the other hand, it is obvious that there is a serious absence of organizational structure based on an adequate institutional framework, lack of specialized and sufficient human resources, as well as lack of financial resources capable to support the development of the organization. Additionally, some elements of insularity have a catalytic effect due to infrastructure deficiencies.

However, opportunities are emerging from the increase of domestic and foreign visitors, especially those representing the so-called thematic-quality cultural tourism, the operation of modern cultural institutions, the operation and development of artistic schools/colleges/academies and the operation of major thematic museums. Opportunities are also presented because of the content of the identity of the island, which is an island of arts, culture, the development of inter-religiousism and interculturalism, an island that brings together artists and creative groups.

The growth of cultural tourism will prevent the massive character of tourism development and is expected to preserve the identity of the place and its traditional products. The creation of a specialized modern organization, such as KOINONO, retains young people in their place but also gives them the opportunity to cooperate and develop synergies with all the creators inside and outside the island at national, European and international level.

6   Conclusion and Proposals

In Tinos, which is part of the Cycladic islands, a non-profit cultural and social organization was created and operated with the inspiration and guidance of a new creative person.

The organization has managed to activate new creators from Tinos and elsewhere as well as to attract audience from the local residents. Moreover, it attracted creators and visitors who prefers to join alternative forms of tourism, such as cultural tourism from Greece and abroad. It is important that through their activities enrich the ideas about the development of the place and its touristic exploitation [14].

Thanks to its activities and existence, a positive image of the place is created. It is obvious that the action of KOINONO has a positive effect on domestic tourism, because, apart from the random visitors involved, especially for the carrying out of its activities, it attracts visitors who, as a result of their participation in the cultural activities, are essential for the development of cultural tourism. The 110 people who participated as creators in the summer of 2018 stayed and created on the island for a long period. In addition, about 200 people participated in discussions, screenings, workshops, as well as about 1000 people attended the festival and other musical events, therefore these people stimulated the island's tourism appearance. On a daily basis, about 100 people from July to the end of August visited the garden of KOINONO with the herbs, the domestic plants and the fig trees. Hence, the organization's vast activities have a positive effect to the entrepreneurship of the place.

The organization has managed to achieve one of its main goals, because it actively and interactively engages the locals throughout its production spectrum.

The inspirer of the idea and artistic director of the organization, without the proper support, will remain in a limited number of audiences, although the organization could have open horizons to develop entrepreneurship and further research. Therefore, properly trained staff is needed in order to create efficient business structure. The more KOINONO develops, the more funding is needed. A modern solution is Crowdfunding, as well as sponsorship.

Several young people have shown interest in participating in KOINONO Tinos Art Gathering but this can no longer continues without specialized training. For this reason, training programs designed by specialized scientists are essential for further development.

It is also necessary to implement modern techniques as regard to cultural management as audience surveys to determine the profile of the visitors, their preferences, as well as to record any suggestions and ideas that can contribute to the creative development of the organization based on crowdsourcing.

In addition, support for housing and the creation of a non-profit structured organization is necessary as a type of cultural entrerpreneurship.

Finally, the area of the research is missing, considered as crucial for any sustainable development. The creation of research infrastructures that could support and co-operate the creators of Tinos is a prerequisite. Art, Nature, Tradition, Social

Capital, Cultural Institutions and Organizations can provide additional impacts with multiple benefits for land.

Last, but not least, it would be crucial to restore the old building and formulate the garden with the fig trees, because through this garden and the revitalization of the landscape, Tinos island can achieve to raise its touristic arrivals in an all year basis.

References

1. Website of the Region of Tinos. https://tinos.gr/
2. Museum of Marble Crafts on Tinos Island, Greece. http://www.piop.gr/en/diktuo-mouseiwn/Mouseio-Marmarotexnias-Tinou/to-mouseio.aspx
3. Unesco Intangible Cultural Heritage List. https://ich.unesco.org/en/purpose-of-the-lists-00807 (12/8/2018)
4. Wellington-Miller J, Zube EH (2007) Great gardens of the world: historians' view. Landsc Res 14:16–22. https://doi.org/10.1080/01426398908706294
5. Clavin Alma A (2011) Realising ecological sustainability in community gardens: a capability approach. Int J Justice Sust 16(10):945–962. https://doi.org/10.1080/13549839.2011.627320
6. European garden heritage network – eghn. https://wp.eghn.org/en/european-garden-heritage-network-eghn
7. Vaiou D (2018) Rethinking participation: lessons from a municipal market in Athens. J Place Manag Dev 11:181–191. https://doi.org/10.1108/JPMD-06-2017-0055
8. Bailey S, Hendrick A, Palmer M (2017) Eco-social work in action: a place for community gardens. Aust Soc Work 71:98–110. https://doi.org/10.1080/0312407X.2017.1384032
9. Official website of KOINONO ART GATHERING https://kinono.gr/
10. Sonti NF, Svendsen E (2018) Why garden? Personal and abiding motivations for community gardening in New York City. Soc Nat Res Int J 31(10):1189–1205. https://doi.org/10.1080/08941920.2018.1484971
11. Bourke M (2012) How will my garden grow? A philosophy for the restoration of historic gardens. J Garden Hist 3(1):49–54. https://doi.org/10.1080/01445170.1983.10412422
12. Mortaki S (2012) Cultural tourism is a local business: the example of the Maritime Museum of Litochoro in Greece. Rev Contemp Bus Res 1:15–22
13. Firth C, Maye D, Pearson D (2011) Developing "community" in community gardens. Int J Justice Sust 16:555–568. https://doi.org/10.1080/13549839.2011.586025
14. Tan S-K, Tan S-H, Kok Y-S, Choon S-W (2018) Sense of place and sustainability of intangible cultural heritage-the case of George Town and Melaka. Tour Manag 67:376–387

Online Presence of Tour Companies in the Azores

Sandra Faria, Nuno Pereira, Maria Tiago, Flávio Tiago, and João Couto

Abstract Tourism is a sector that is assuming more and more importance in the economy and finances of the Azores and, in recent years, has presented one of the largest growth rates in Portugal. This growth stems from the liberalization of airspace, coupled with a strong commitment to the sector by tourism agents in the region, and by the Regional Government of the Azores, which has been working to promote the Azores as a touristic destination. In spite of the improvement in the quality of services offered by tour companies on the archipelago, it is crucial to boost agents' online presence about available activities and attractions, as well as to increase tourist flows and stay duration. This work evaluates the websites of these companies and aims to analyze the online presence of tour companies in the Azores, and identify their level of knowledge and functionality for consumers and other tourism travel agents.

Keywords Tour companies · Internet · Azores

1 Introduction

The purpose of this work is to analyze the online presence of tours companies in the Azores and to verify the extent of information and functionality available to tourists and agents in the sector. Information technology has radically transformed the way consumers interact with suppliers of tourism products and services [1].

This study focuses on tourism and information and communication technologies (ICT), the growth of internet use for consumption and demand for tourism products/ services, and the importance, as well as the role, of the internet in the tourism sector.

Nowadays, there is a strong commitment to the management of information in the tourism sector, since the availability of information is a crucial element in the

S. Faria (✉) · N. Pereira · M. Tiago · F. Tiago · J. Couto
University of the Azores, Ponta Delgada, Portugal
e-mail: sandra.mc.faria@uac.pt

decision-making process for the purchase of tourism products and services, in a market composed of consumers who travel more and more independently [2, 3].

The size of the tourism industry itself suggests a large amount of information to be processed and communicated. When a person goes on a trip, a large amount of information has to be made available to the traveler so he can analyze it, such as the itinerary, schedules, payment information, details of the product or service, and the destination.

For many consumers, the collection, processing, and evaluation of information is an integral part of the travel experience [4, 5]. The growing trend in internet use internet by consumers in relation to the purchase of products and services on e-commerce sites has created training needs and new investment policies on the part of companies in order to respond to those trends.

2   The Information Technology and Tourism

The tourism and information technology sectors are currently two of the most significant and impactful factors in world economic activity, providing positive effects such as job creation, economic and social benefits.

Nowadays the tourism sector does not work without information management, as the current trend is that more and more tourists travel independently for a shorter possible time. Thus, it is practically compulsory for tourists to request information before leaving on a trip, in order to plan and choose the best options [6].

Distribution of tourist information through electronic channels was based on the creation of the Computerized Reservation System (CRS) by large airlines in the US in the 1960s. This system contained information related to the flight; namely availability, schedules, and passenger information. Later, this information was shared between different airlines and, in 1987, travel agents such as Amadeus, Galileo, and Abacus also gained access to these systems [4].

Later on, CRSs give rise to Global Distribution Systems (GDS), which allow travel agencies to book air travel as well as multiple products in the tourism industry, such as car and accommodations. GDSs are normally owned by multiple airlines, which provide important electronic distribution channels for tourism products.

The traditional tourist distribution channel in a GDS includes three key participants: the service provider, the hotel, and the airline or the rent-a-car that makes the tourist product available for reservations.

The GDS allows the tourist service access to information, processes the reservation, distributes the information, and the travel agency manages the transaction on behalf of the clients [4].

Consumers, apart from looking for information regarding tourist services and products, expect to acquire them through the internet. In order for companies to meet this demand, they can expand their traditional marketing channels such as brochures, billboards, holiday stands, and also the conventional channels of tourist product

distribution, such as travel agencies, to make their online services available, increasing interaction (B2C) [7].

Regional policies are changing to encourage the use of web technologies in the trade and distribution of tourism products and services, and thereby improve the effectiveness of small tourism enterprises. Given that tourism products and services are of an intangible nature, the internet, e-commerce, and multimedia technologies have allowed the materialization of consumer expectations and experiences [8].

Small and medium-sized enterprises (SMEs) in the tourism sector run the risk of being isolated from the new marketing dynamics provided by e-commerce if they do not have the experience or the resources. Although new technologies can intimidate SMEs, for the reasons set out above, they also benefit from the opportunities provided by them [8].

The twenty-first century is an era of information. New tourism forms based on the carrier of internet have emerged. Information technology can provide different types of information flow and convenient and effective sales channels for the tourism enterprises as well.

New competitive business environment has been created. The online travel, online ordering and trading, electronic guide, tourism positioning system, online virtual tour and so on have affected tourism electronic commerce industry. In other words, it has become the fastest growing areas in tourism industry.

The prosperity of the online consumer market makes tourism electronic commerce develop rapidly, and it also increases the importance and demand of the professionals mastering information technology in tourism enterprises [9].

Believes that the character of density of tourism information originates from the increase of consumer demands. It imposes unprecedented pressure to professionals in tourism industry. Professionals in tourism industry ought to provide high quality information service to meet the present and future development of tourism industry [10].

3 Methodology

The methodology used in the present study is based on a qualitative analysis, of tours companies in the Azores that were selected according to the number of online searches. They account to 80% of volume and represent the nine islands of the Azores (Table 1).

The criteria used to evaluate them was developed by [6] and is followed in more recent studies [9–13]. The case study analysis consists of four parts. The first part analyzes the homepage of each website, since this represents the first contact with the client.

The second part focuses on evaluating the general information provided by the page, such as information about the company, schedules, locations, and others. The third part analyzes the general functions that are common to most tourism sites, such as the availability of content in at least three languages, an exchange rate converter,

Table 1 Description of activities of the companies

Company		Type of activities
ANC	São Miguel	Boat tours, buggy tours, whale & dolphin watching, tuk tuk tours, moto quad tours, van tours, jet ski, and jeep tours
Atlantiangra	Terceira	Whale & dolphin watching, fishing, snorkeling, and walking tours
Azoren Travel Experts	São Miguel	Walking tours, van tours, canyoning, whale & dolphin watching, boat tours, and VIP tours
Azores Adventure Islands	São Miguel	Canyoning, hiking, biking, climbing, kayaking, and paddling
Azores for All	São Miguel	Jeep tours, kayaking, walking tours, bicycle tours, culture tours, and traditional Portuguese games.
Azores GreenMark	São Miguel	Nature tours, snorkeling, cow milking tour, speleology, jeep tours, CEO, VIP, and personalized tours
Azores On Travel	São Miguel	Canyoning, guided city tours, chartered minibus, cow milking & local markets, paragliding, scuba diving, hiking tours, all terrain biking, bird watching, canoeing, off-road tours, and whale & dolphin watching.
Bootlá	Santa Maria	Jeep safari, canyoning, coasteering, rappelling, biking, transfers
Discover Experiences Azores	São Jorge	Walking tours, canyoning, coasteering
Futurismo	São Miguel	Whale & dolphin watching, dolphin swim, sunset boat tours, canyoning, bird watching, and walking tours;
Geo-Fun	São Miguel	Kayaking, bicycle tours, horse tours, jeep tours, and whale & dolphin watching
MarAzores	São Jorge	Snorkeling, boat tours
NaturFactor	Pico	Bicycle tours, kayaking, climbing Pico mountain, hiking, slides, snorkeling, jeep tours, boat tours, coasteering and bird watching
Panazorica	São Miguel	Golfing, bus tours
Peter café sport	Faial	Whale & dolphin watching, Swimming with dolphins, Bicycle tours, yacht tours, walking tours, sea taxi
Picos de Aventura	São Miguel	Fishing, whale & dolphin watching, snorkeling, catamaran tours, bird watching, all terrain biking, kayaking, jeep tours, and canyoning
SailAzores	Faial	Yacht rental
Trilhos da Natureza	São Miguel	Safari tours, all terrain biking, walking tours, fishing, boat tours
Tripix Azores	Pico	Wine tours, climbing Pico mountain, lava cave tours, and trekking

and a registration form. Finally, e-commerce issues are analyzed, such as available price, the online store, payment methods, and the integration of the websites with other technologies, such as social networks and ratings sites.

4   Case Study Analysis

4.1   Homepage Evaluation Criteria

The homepage of corporate websites has been losing importance over the years due to changing user behavior online. Instead of accessing the home page, users directly access products and services via links made available through social networks, email, newsletters, intelligent search systems, internet marketing programs, and others. However, the homepage of each company's site represents not only the first contact the user has with it, but also the user's interest in continuing to navigate the site. In evaluating the websites of the companies that constituted the case studies, the following criteria were analyzed: Logo, Language selection, Sector license, and Menu.

As might be expected, we found that the companies under review have both a logo and a main menu on the homepages. It was possible to verify that, of the sample under analysis, only 57.89% have the Industry License visible on the homepage. Regarding the possibility of selecting a language, we verified that 84.21% of websites offered a choice of language on the homepage; however, taking into account the markets where these companies operate.

We expected that all the cases under analysis would have this option. To sum up, we can confirm that all the companies studied fulfilled at least ¾ of the analyzed criteria.

4.2   General Information Evaluation Criteria

The following criteria are related to the availability of information regarding the company, as well as external links that lead to information about the way in which the company operates, such as transportation information, information from other stakeholders in the sector and Destination Marketing Organizations (DMOs), and others: Transportation, Timetables, Map, FAQs, Company information, Up-to-date information, Regional or local DMO links, and Browser compatibility.

We observed that more than 70% of the companies in the study have up-to-date information, external links to DMOs, and information about the company itself. Less than 50% of the sites analyzed had transport information, working hours, and FAQs. Only 5.26% of the companies indicate compatibility with internet browsers.

This does not simply mean that the rest are failing this criterion. We can say that, more and more, companies create their websites to function with any browser or operating system. In terms of compliance with the company's information criteria, we can highlight Trilhos de Natureza, with 87.5% of the defined criteria, and secondly, SailAzores and ANC, with 75% of the criteria.

4.3 General Functions Evaluation Criteria

The points listed below identify the standard features usually found on company websites in the tourism industry: Providing three languages (at least), Homepage link on all tabs, Sitemap, Newsletter form, Exchange rate converter, Search by keyword, Search by category, and Registration form.

Analyzing the data, we collected, it is possible to verify that 15.79% of the websites offer at least three languages, since there are markets in which the English language might not be displayed, such as the Spanish and French markets. The fewer languages a company website makes available, the more limited it is concerning its level of coverage of other markets.

We can also verify that only 36.84% of the sites surveyed use a registration form. The fact that others do not represents lost opportunities, since having a database of users is essential for publicizing their products and services. This situation may be related to the type of active tourism customer in the Azores, which is mostly sporadic and irregular.

While most of the sites reviewed presented their products and services organized by category or class, none of them had an exchange rate converter available. Regarding compliance with the criteria under analysis, it was possible to verify that only 26% of the cases under examination meet at least 50% of the criteria. Peter Café Sport, Futurismo, and ANC stand out because they fulfilled ¾ of the criteria under analysis.

4.4 Electronic Commerce Evaluation Criteria

The points defined below are criteria that are intrinsically related to the functionality of selling products and services online, usually found on the websites of companies that offer online purchasing functionality: Service reservation by form (email), Prices of services, Detail of components included (services), Service availability, Multimedia elements of services, Online shop, Various methods of payment, and Visible terms and conditions.

Analyzing the data, we verified that less than 30% of the cases studied have an online store, a diversity of payment methods, and the availability of services. This could be related to customers' habit of continuing to make reservations of the product or service via form (email). However, online consumers are increasingly demanding shorter waiting times for a response, and it is not plausible that they have to wait for confirmation of availability of the product or service afterwards. On the other hand, the weakness in e-commerce in the cases under analysis could be related to the high costs associated with the development and integration of an online sales module.

Finally, we verified that all the cases under study provide multimedia elements in the products or services, given their intangible nature, and that 94.74% of the

companies under analysis detail the components included in the products and services. Regarding terms and conditions, about 74% of companies make them available on their websites because, during the purchasing process, all information must be presented in a transparent and clear way to the customer. Regarding product and service prices, 73.68% of companies provide this information.

It should be noted that 90% of the cases under study meet at least 50% of the criteria under analysis in this section. Falling below those percentages are Atlantiangra and the Azores Adventure Islands, which both meet only 25% of the defined criteria.

4.5 Other Technologies and Functionalities Evaluation Criteria

Given the growing trend of interaction between companies and consumers through social networks, UGC sites, and the use of mobile devices, it is necessary to evaluate the criteria that mirror the integration of sites with social networks and other platforms, and their ability to work on mobile devices: Integration with social networks, Integration with TripAdvisor, Weather forecast, Chat, and Mobile version.

Analyzing the data, we can verify that practically all the cases under study are integrated with at least one social network. More than half of the sites are not optimized to work on mobile devices, with only 42.11% of sites scaling to the mobile's screen resolution.

Given the growing importance given to consumer information (UGC) more specifically, in terms of evaluations and criticisms, only 63.16% of the cases under study had an integration module with the TripAdvisor platform, although all the cases under study have a profile on that platform. It should be noted that the TripAdvisor platform allows sharing, in addition to reviews and evaluations, certificates of excellence according to companies' performance.

The meteorological forecast is an important fact, and should be considered in the process of choosing the type of activity desired by the client, especially when the destination in question is characterized by a mesothermic (humid subtropical) climate with frequent changes in the weather. Only 36.84% of the cases under study have indicators or links to the weather forecast.

5 Discussion and Conclusions

In the present study, we analyze the way that ICTs have revolutionized the tourism sector, as they have changed its way of functioning by modifying the traditional processing of transactions between customers and suppliers. As a consequence, the importance of intermediaries, such as travel agents and tour operators, in the process

of buying or selling a product or service has been reduced, promoting direct contact between the customer and the supplier through infomediaries services such as Booking.com, Rental Cars, or Expedia.

Taking into account the growing demand for the Azores as a destination, we analyzed the online presence of Azores tours companies from a sample of companies most searched online.

From the analysis of their websites, we found that, although 84% of the organizations studied have the possibility of choosing a language on the main page, only 15% do so in at least three languages.

We also verified that less than 30% of the analyzed companies have an online store, predominantly through the reservation method via form or email, which shows that most of the companies studied have adopted some technologies incompletely.

Given the variety of existing information access terminals, and taking into account the growing trend in the use of mobile devices, we found that only 42% of the companies in the study have a website prepared to operate on different terminals, whether they are mobile phones, the internet, or interactive TVs.

We found few differences between the companies' online presence due to location, or number of years in operation, but larger companies tend to have more developed websites.

These results are in line with the literature in term of the type of components that are available on the websites for tourist to consult, but there is still a reduced number of companies providing reservation and purchase of their services online. This is an aspect that is mentioned in the literature has relevant to consumers and that need to be developed by these companies.

E-tourism has transformed the tourist industry, digitizing all inherent processes. This requires the provision of a varied set of inputs to the information intermediaries—infomediaries—that provide the information in a neutral way to the users who need it. Consumers expect to be able to purchase all possible tourist services online, from hotels, car rentals, and tourist activities, through platforms that aggregate the existing offers for a given product or service.

Benchmarking is an important tool that can overcome the competition, since this process, by comparing one company with another, allows the identification of the factors that improve its efficiency. Therefore, we conclude that there is no platform in the market today which brings together the entire range of tourist activities in the Azores, and there is an opportunity to implement such a platform.

By creating a platform to offer tours companies in the Azores, consumers would have easy access to information, and could enjoy the best market price for a given tourism product or service. For suppliers, this platform would allow for greater worldwide exposure of their products and services, as most of them do not have an online store on their website. It would also increase their competitiveness, reducing barriers between large and small businesses.

References

1. Buhalis D, Law R (2008) Progress in information technology and tourism management: 20 years on and 10 years after the internet: the state of eTourism research. Tour Manag 29: 609–623. https://doi.org/10.1016/j.tourman.2008.01.005
2. Gohr CF, Santos LC, Veiga MF (2009) A informação como um elemento chave para a qualidade do produto turístico: uma análise dos postos de informações turísticas do município de Florianópolis. Perspéctivas em Ciência da Informação 14:169–186
3. Lopes T, Silva F, Almeida MDC (2018) Quality in the tourist recreation services of the Azores: perspectives and motivations of the agents. Tour Hosp Int J 10:76–93
4. Jorge C, Rita P, Águas P (2004) Tendências Internacionais em Turismo. Lidel, Lisbon
5. Guerreiro M (2017) Azores: more than a tourist destination. Worldw Hosp Tour Themes 9:653–658. https://doi.org/10.1108/WHATT-09-2017-0059
6. Milheiro E (2004) A Informação Turística e as Tecnologias da Informação e da Comunicação: o Caso Português. Dissertation (MA), Universidade de Aveiro
7. Buhalis D, Main H (1998) Information technology in peripheral small and medium hospitality enterprises: strategic analysis and critical factors. Int J Contemp Hosp Manag 10:198–202. https://doi.org/10.1108/09596119810227811
8. Braun DP (2014) E-Commerce and business and in the regions: regional tourism and the internet. Working Papers, Centre for Regional Innovation & Competitiveness, University of Ballarat, Ballarat
9. Sigala M, Mich L, Murphy J (eds) (2007) Information & communication technologies in tourism 2007. Springer, New York, pp 1038–1050
10. Wang H, Kong J (2017) Research on the course of tourism electronic commerce based on the perspective of enterprise demand in higher vocational institutes. In: 2017 international conference on Computing Intelligence and Information System (CIIS). IEEE, pp 211–213
11. Cavia JF, Rovira C, Luque PD, Cavaller V (2014) Web Quality Index (WQI) for official tourist destination websites. Proposal for an assessment system. Tour Manag Perspect 9:5–13. https://doi.org/10.1016/j.tmp.2013.10.003
12. Lopez MT, Valarez K, Altamirano V (2016) Collaborative tourism communication 2.0: promotion advertising and interactivity in government tourism websites in Latin America. Soc Commun 71:249–271
13. Bonjisse BJ, Morais EP (2017) Models for evaluating tourism websites. J Internet e-Bus Stud 2017:1–15

Fighting Recession with Art: Innovative Suggestions from Pioneers in Opera—The Case of "The Medium Project"

Raia Tsakiridis, Andreas Tselikas, and Olga Tsakirides

Abstract This article presents an innovative group of pioneers in opera named as "The Medium Project", which was established in the middle of the financial crisis in Greece. Despite the various difficulties the founders and their companion proved that Art can heal many traumatic symptoms caused by the austerity measures and above all that artistic expression needs creativity, professionalism and devotion in order to flourish and reveal innovations.

Keywords The Medium Project · Drama therapy · Art therapy

1 Introduction

Opera is a kind of music mostly developed in European countries. Among them the strongest tradition is found in Italy and also in Germany, in Austria and in France [1]. In Greece the opera is considered officially as a continuation of ancient Greek tragedy, in which music and chorus parts were usually found together. Because of historical and cultural reasons, this kind of music has lost in the Greek audience its popularity and it was connected, as times passed, mostly with the upper classes entertainment habits.

Apart from this, there are many composers in Greece, who created quite exquisite and innovative opera plays, having classical education and kept deep esteem for classical music as a whole. A strong number even for more popular music composers has created not only popular songs but also some very strong classical synthesis in various types of classical music [2]. Opera, as well as classical music, have never stopped to develop. There are very interesting contemporary plays with more modern sounds, enriched with ethnic and sometimes jazz patterns. In 2013 two

R. Tsakiridis · A. Tselikas
Greek National Opera, Athens, Greece

O. Tsakirides (✉)
National Center for Social Research, Athens, Greece

young professionals of classical music, decided to create an opera group of young also professionals and opera singers. This group was baptized and it is known ever since as "The Medium Project". The group has already developed a quite interesting portfolio, with innovative approach to each project.

2013 was a very difficult year for Greek society because of the rigid recession and the implementation of memorandums in the Greek National Accountings and Policies. The reduction of the ministries' budgets caused the shrinking of the expenses in all the public organizations. Since the state is the main pillar of Greek economy, many reductions followed in the private sector as well. Most of the population experienced a tremendous reduction in their expenses, having negative psychological effects in peoples' health. Greece has shown a significant number of suicides in its official statistics for the first time in its modern history. Depression and other psychological problems occurred.

2   The "Invisible Power of the Art"

There are various kind of Art. According to the typical division there are Fine Arts and Applied Arts. The first refers mostly to aesthetics and beauty, the second has a more practical implementations and use. Among the classical fine arts are painting, sculpture, architecture, music, poetry and performing arts as theatre and dance. Nowadays many new forms were added such as photography, design, printmaking, film, video production, sequential art, conceptual art and others. In modernity even more arts have appeared as graffiti, manga, animated movies or animation, comics and others.

Art as a complex of messages has an immediate impact in human mentality. It is considered as a strong mediator to influence and cure people. In the UK Adrian Hill and Edward Adamson were among the first pioneers who discovered the power of the Art and promoted "Art Therapy" in 1940s and 1950s [3]. Nowadays this power has been rediscovered and widely discussed among the academics because art is used as a mediator for the integration of the immigrants and also a very strong mediator to fight the various impacts of recession to human psychology [4]. Moreover, today mostly museums, in which artistic objects are collected, are considered as places that strengthen mental health, having positive impact on human psychology. Recently, it was found that museums' visiting offer serotonin mood boost and therefore museums could be an alternative way of treatment specially for chronic pains [5].

3   The Medium Project: Establishment and Identity

The creative group named "The Medium Project" founded in 2013, in the middle of
the financial crisis which had already shown its sharp teeth in the everyday life in
Greece that year [6]. The heart of the group had a lot of experience as a director
working beside well-known directors. She was the inventor of the group, on a
theoretical level. Mrs Tsakiridis, from her first steps, found another devoted com-
panion, thus the two young professionals established the group together. Her
companion and co-founder is Mr Andreas Tselikas, with studies in music, in
orchestra conducting and in musical synthesis. He is one of the new Greek extremely
talented orchestra conductors; apart from his age he is quite experienced with a very
heavy C.V. Both shared a lot of dreams about the group, having innovative plans and
a very creative schedule.

Raia and Andreas created step by step with a lot of enthusiasm and hard work, a
platform of artistic expression that brought together other creators who loved the
opera as well. Thus, an expert could find a lot of innovations nowadays in its
productions as regard to the designing of the costumes and the scenery assets.

The aim of the creative group is to project opera in a wider audience gathering its
repertoire from modern composers. Thus, opera, as a popular kind of artistic
expression and a popular spectacle, would return in its original roots before it was
surrounded with golden-dust after its embracement of the upper social classes. "The
Medium Project"'s perception is that opera can be more popular and could be
presented not only to luxurious opera buildings but also in many cultural centers
and theaters as well. Its deepest notion is revealed in a better way without being
covered by strass, jewels and faircoats, because opera, above all, is Art and has a
strong educational role to play in society [6]. It can formulate culture. This is the
main reason for the price of the tickets which are sold in low cost, making the
performances acceptable to most of the people despite their high quality level.

The Medium Project's repertoire include contemporary opera works that are
related to today's concerns. There is a particular approach to the content of each
project in the context of psychotherapeutic analysis, education and treatment.

The productions so far of the creative group named "The Medium Project" are:

1. The Medium by Ciancarlo Menotti
2. The Shell Game by George Doussis
3. Bon Appetit by Lee Hoiby
4. Trouble in Tahiti by Leonard Bernstein
5. Raven Revisited by Kostis Kritsotakis

The second play of the above mentioned was a special order and unique produc-
tion of "The Medium Project". It was presented to the public for the first time on the
28th of November 2015 in the theater "Olvio". "The Medium Project" opera group
attracts mainly youth and its performances are usually "sold out".

4   The Innovations

"The Medium Project" has several innovations as concern to:

– the psychological approach and analysis of the content of each opera play
– the whole perception of the opera, which "The Medium Project" group is considered as a popular way of entertainment
– before the performances there is an analysis of the play to the audience by the director. Sometimes experts are invited to make the analysis of each play more vivid to the audience.
– the group is following modern cultural management practices; and audience survey was carried out in order to get information about audience's profile and experience as regard to the plays.
– "The Medium Project" use modern ways of communication via social media and internet.
– In most of the performances it was used only piano, without orchestra.
– in all the performances it was used the English language in order to be understood by foreigners. For the Greek audience who cannot understand English language it was used an electronic system which translates the subtitles in Greek instantly. The same system is used in the National Opera House in Greece.
– "The Medium Project" addresses not only to Greeks but also to the foreigner visitors of the country, offering entertainment for tourists as well.
– "The Medium Project" transferred successfully their productions outside Athens, performing even in the U.S.A.
– Its repertoire is taken from modern opera plays making modern and young composers known to the Greek audience.
– apart from the difficulties the members of the group faced, they have managed to keep their enthusiasm, creative and positive thinking and attitude. They have managed to fight recession through Art. This positive atmosphere has been successfully transferred to the audience, according to their responses during the audience survey.
– "The Medium Project" created its logo according to its history.

5   Discussion Points

The example of the creative opera group "The Medium Project" shows enough strengths, such as originality and innovations. Increasing tourism has provided lots of opportunities for the enlargement of its audience. Many performances took place outside of Athens in the provinces. However, the lack of funding due to the long lasting recession in the Greek economy and the difficulties in finding sponsors due to the increasing competitiveness in the field could keep its development in slow motions.

6   Conclusion

Despite the financial crisis and the deep recession of the Greek economy, some young creative pioneers broke the chains of the austerity establishing an innovative opera group named "The Medium Project". "The Medium Project" apart the difficulties managed to reach its goals, making modern opera composers known to the Greek audience. Their performances were "sold out", proving that opera is a popular entertainment as long as it is connected with the audience's concerns and needs.

References

1. Mamalis N (2001) Music in Europe, vol C. Hellenic Open University, Patra
2. Raptis M (1989) National lyric scene. History of Greek Melodrama and the National Opera House 1888–1988. Ktimatiki Bank, Athens
3. The British Association of Art Therapists. www.baat.org
4. Yang L, Petrini MA (2016) Effects of music therapy on pain, anxiety and vital signs in patients after thoracic surgery. Contemporary Ther Med 50:714–718. https://doi.org/10.1016/j.ctim.2015.08.002
5. Meilan S (2018) Canadian doctors will soon be able to prescribe museum visits as treatment. Smithsonian.com. www.smithsonianmag.com
6. https://www.culturenow.gr/andreas-tselikas-exoyme-orama-na-feroyme-ti-sygxroni-opera-konta-sto-koino/

Tourism Marketing Channels in Digital Evolution Era: Online Travel Agencies in Greek Tourism Industry

Alexios-Patapios Kontis, Sofoklis Skoultsos, and Dimitris Papayiannis

Abstract In 2001 when Cooper and Lewis pointed out that *"once the Cinderella of the marketing mix—unglamorous but essential—distribution is now seen as central to many economic sectors"*, probably they could not foresee the extent of what followed, especially in the tourism sector. As distribution channels developed from disorganized, loosely knit collections of organizations into highly efficient integrated channels, they changed the existing status of the tourism sector. Current trends of economic, technological, social, and political factors have lead to the sudden emergence and the rapid growth of the e-intermediaries, which introduced many unforeseen challenges for existing tourism businesses and travellers. Despite the anticipation that the Internet would provide many opportunities for the tourism industry, such as an increase in choice that also closes the gap between consumers and suppliers, the reality is totally different. The awareness of new opportunities and threats within the tourism distribution channels is essential for tourism professional in order to remain competitive and successful.

Keywords Tourism · Marketing channels · Online Travel Agencies (OTAs)

1 Introduction

Over the past decades, a mix of socioeconomic factors has increased awareness that distribution channels constitutes one of the few remaining areas of competitive advantage and a need to understand how best to tap them [1]. In many business sectors, such as hotels, competition has moved away from the field of production of quality products and services, to that of trade and distribution of those products and

A.-P. Kontis (✉) · S. Skoultsos
University of the Aegean, Chios, Greece
e-mail: apkontis@aegean.gr

D. Papayiannis
University of West Attica, Athens, Greece

services in the market [2, 3]. Since the intangible nature of services is suitable for sharing, tourism-related activities such as accommodation and transportation [4], the tourism sector has become the center of some of the most spectacular changes and intense debates about new and established distribution channel transformation and their effects on the tourism industry in the era of digital evolution [5]. The tourism distribution channels' network is becoming extremely complex, as the development of online social networks; online review sites as well as a plethora of new mobile technologies have added new forms of distribution channels and recently new business models, such as sharing economy platforms [6]. These alternative distribution channels support trading, exchanging, rental and swapping a variety of goods and services, with a significant economic footprint and in fact they create new markets and disrupt established business models, which naturally provoked considerable controversy.

At the same time, increasing international competition in the hotel sector as well as the particular circumstances concerning production and trading of touristic services has been pushing hotel businesses to understand the vital role of tourism distribution channels and to intensify their efforts in linking them with the markets. The majority of hotels adopt multi-channel distribution strategies in order to obtain fuller market coverage and the reinforcement of their presence against competitors [7–9]. The constant enrichment of available touristic marketing channels with new, innovating and dynamic channels has complicated the circumstances and the terms of effective practice of management and administration of multi-channel marketing mixes even further [10–13].

Tourism distribution channels administration is implemented through repeated crucial decisions by the administrators, pursuing the achievement of the particular business goals related to the trading of produced and provided services [14]. The validity, correctness, accuracy and effectiveness of these decisions are definitive for the achievement of short and long term business objectives [15]. Even though marketing administrations in hotels acknowledge the vital role of their decisions in the formulation of multi-channel Marketing, nevertheless, a notable part of marketing administrators makes relevant decisions in an ambiguous setting, based on experiential knowledge and professional intuition, a practice that is directly related to the evaluation criteria they use to select distribution channels [7]. According to Kracht and Wang [16, p. 737] "from a practical perspective, the effective use of distribution channels depends on an adequate understanding of the evolution and transformation of such channels in the tourism industry".

The structure of the distribution system of tourism affects both the available options for the final consumer and the business models and strategies adopted by the channel participants [8]. The catalytic effect of the evolution of Information and Communication Technologies (ICTs) has begun to transform many aspects of tourism distribution [16] with significant impact on the relationships between the members of the channels. Main factors such as power, roles and influences change very fast with an unpredictable and non-linear way, causing confusion to several of the tourism stakeholders.

Although a number of surveys on influences and relationships between tourism distribution channel members have been recorded in the past, it is obvious that the rapid and remarkable changes in recent years, relying mainly on changes based on technological developments, make the research even more relevant. In this paper an attempt is made to monitor the current situation of tourism distribution channels within the Greek hotel industry, especially in relation to the role of Online Travel Agencies (OTA), as well as the selection criteria used by hoteliers for choosing distribution channels.

2 Literature

According to Coughlan, Anderson et al. [2, p. 2] "marketing channels is a set of interdependent organizations involved in the process of making a product or service available for use or consumption". So, the focal point of marketing channels is on delivery because it means making products and services available for consumers. But from the beginning of the 1980s, Stern and El-Ansaray [17, pp. 3–4] point out that marketing channels not only satisfy demand by supplying goods and services at the right place, quantity, quality and price, but more and more they also stimulate demand as an orchestrated network that creates value for the user through the generation of form, possession, time and place utilities.

Distribution channels, in short, are what make products and services available to consumers, such as interconnecting the suppliers with consumers [18]. This connection can be expressed directly or indirectly, via one or more intermediaries such as retailers, wholesalers, inbound and outbound operators etc. An intermediary is "any corporate third party or organization between producer and final consumer that facilitates purchases, the transfer or title of the buyer and sales revenue to the producer" [19, p. 293].

Distribution channels have been perceived as a network of interdependent entities that have banded together for purposes of trade [20]. Despite the different priorities and goals of independent channel partners, the distribution channel needs to function effectively as an integrated system to maximize the benefits of all channel participants. In an intensely competitive environment, organizations recognize the need to develop cohesive partnerships and long-term relationships with their channel partners. Despite the good intentions of the participants, in many cases "partner asymmetries" may exist that can create an unequal balance of power [21].

One of the central approaches in literature on channels occupies the "power-influence approach", which attempts to explain leader effectiveness in the source and amount of power available to leaders from power bases, which include reward, as well as coercive, referent, legitimate, and expert power [2, 22]. The literature review of distribution channels reveals that conflict manifested when one channel partner behaves in a manner that impedes another channel partner from achieving its goals [2, 23]. Not only in the tourism sector, the partner who has direct contact with the end consumer tends to determine the cooperation's conditions and to undertake a

leading role in the distribution channel, a practice that is greatly enhanced by the current developments in the field of technology.

Although the topic of influence has been extensively studied in the general distribution channels' literature, there is relatively little published research examining the tourism distribution channels context.

3 Methodology

The main purpose in the current paper is to assess the characteristics, influences and perspectives the current situation of tourism distribution channels (online as well as offline) within the Greek hotel industry, especially in relation to the role of Online Travel Agencies (OTA). The study is based on primary and secondary data from Greek experience which is part of ongoing primary research. In order to collect the data, primary quantitative research was conducted by means of a structured Questionnaire consisting of 18 close questions and divided into four sections (i) market shares of different—direct and indirect—distribution channels (in terms of overnights) (ii) specific market shares of the OTAs (i.e. Booking.com, Expedia), (iii) characteristics of hotels and OTAs relationships and (vi) characteristics of the responding hotel property. For data collection purposive sampling [24] together with convenience sampling were used [25]. An online questionnaire sent in cooperation with local hotels' associations to hotel managers or hotel marketing managers of all categories of hotels.

In the present paper, and since research is still in progress, 127 valid questionnaires have been analysed (Table 1). The statistical package SPSS 23 was used to that effect and descriptive statistical methods, arithmetic and graphic were employed.

Table 1 Research sample (%)

Star category	5*	4*	3*	2*	1*	Total
	16	29	53	26	3	127
	12.6%	22.8%	41.7%	20.5%	2.4%	100%
Hotel size (rooms)	<20	20–50	50–100	>100		
	7	79	28	13		
	5.5%	62.2%	22.0%	10.2%		
Seasonality	All year	Winter	Summer			
	68	21	38			
	53.5%	16.5%	29.9%			

4 Discussion

In the recent past, there has been a lot of talk about disintermediation in the tourism industry based on rapid changes in the business and technological environment, but previous research findings may not accurately reflect the current situation because industry practitioners are likely to perceive and react to disintermediation differently [26]. Disintermediation was a very promising prospect that would bring consumers and hoteliers closer, into direct contact, but how it seems that there is a stronger trend in the entrance of new powerful e-intermediaries.

Facts clearly show that online platforms are steadily acquiring bigger and bigger shares in hotel bookings, while the hotels' own distribution channels are in decline, making dependency on OTAs growing (Table 2). Across Europe the total share of the three main OTAs is 92.7% of the travel market. Booking Holdings is the dominant player with a share of 65.55% followed by Expedia Group with 16.63% and HRS with 9.03%. In Greece, the picture is even more pronounced, as the three largest players have 96.17% of the total market, with Booking Holdings dominating 72.91% of the market, 7.36% more than in the rest of Europe. The situation is especially critical as it seems that the OTA market is becoming monopolistic in Europe, with one group of companies controlling close to 2/3 of the market. Analogously, the Greek tourism market is dominated by two companies with a total of 96.2%; the leader holds almost 3/4 of the market and the second holds the remaining 25%.

In addition to the strength of ongoing trends that shape and determine the current conditions for the distribution and marketing of tourism services, the high dependency of hotels on OTAs is also related to their ability to perceive the factors of distribution and make effective decisions about appropriate long and short term distribution strategies. Specifically, in a multi-channel business sector such as tourism, the management of distribution channels is not an easy endeavor because of the multifactorial role of distribution channels seen within the overall framework of business pursuits and economic entities. The factors that are involved in the operation of distribution channels are financial and non-financial, making efficient administration harder. The financial indicators mostly regard performances of the past while being unable to depict future developments, thus restricting the potential of administrations to proceed to rational decision taking. The combined use of a wide

Table 2 Market shares of major OTAs in Europe and Greece (2017)

	Europe	Greece	DELTA
Booking Holdings (Booking.com, Agoda)	65.55	72.91	+7.36
Expedia Group (Expedia, Hotels.com, eBookers etc.)	16.63	21.88	+5.25
HRS (HRS, Hotel, de, Tiscover)	9.03	1.38	−7.65
Total	92.07	96.17	+4.10

Source: [27]
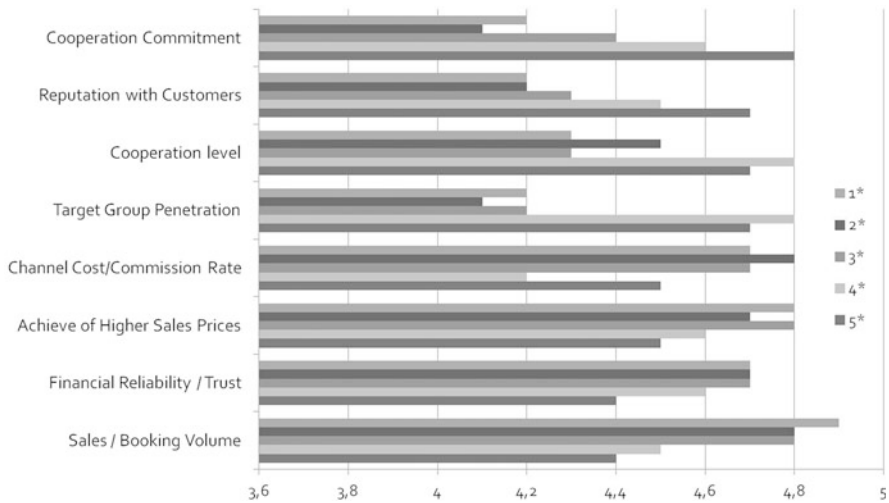
Fig. 1 Criteria for choosing distribution partners per hotel category

Table 3 Hotels and OTAs relationship

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Pressured by OTAs	3	5	33	38	48	127
	2.4%	3.9%	26.0%	29.0%	37.8%	100%
Attempting to break free from OTAs	10	15	53	23	26	
	7.9%	11.8%	41.7%	18.1%	20.5%	
Avoid OTAs	33	33	28	20	13	
	26.0%	26.0%	22.0%	15.7%	10.2%	

range of quantitative and qualitative data, objectively and effectively can contribute to the improvement of the decisions that are taken by administrations.

The results of primary research show that there are strong and significant differences in the criteria (qualitative & quantitative) in the decision making of distribution partners (Fig. 1). Superior category hotels tend to use more qualitative criteria (cooperation commitment, reputation with customers, cooperation level, target-group penetration) for decision making than hotels of other categories that focus on quantitative factors such as sales/booking volume, achievement of higher sales prices, channel cost/commission rate.

From practitioners' perspective, the effective use of distribution channels depends on the adequate understanding of the evolution and transformation of such channels in the tourism industry [16]. Focusing on quantitative criteria—which suffer from a series of weaknesses—for the formulation of channel distribution strategies is likely to be one of the reasons leading the hoteliers to particularly high levels of dependency on tourism distribution intermediaries (Table 3).

Underlining some aspects of the relations with OTAs, the majority of hoteliers (66.8%) feels pressured by OTAs to accept the platforms' terms and conditions that hotels do not want, with only 6.3% disagree. Although 38.6% of hoteliers declare that they are attempting to break free from OTAs, the majority of hoteliers (52.0%) accept that they could not avoid cooperating with OTAs, recognizing their vital role.

5 Conclusions

Increasing business competition pushes more and more businesses towards constant improvement in their effectiveness so that they will be able to operate in the most effective way, thus safeguarding their competitiveness and their sustainability. Tourism distribution channels are claiming a dominant position in tourism entrepreneurship and have attracted an increasing amount of attention from industry practitioners and researchers. Despite those forces that drive marketing administrations in hotels to acknowledge the vital role of tourism distribution channels, their decisions in the formulation of multi-channel marketing strategies do not appear to yield the expected results for their businesses.

It is obvious that rapid changes in the business and technological environment do not lead to the disintermediation in the tourism industry, but to "re-intermediation" with either the entrance of new powerful intermediaries or the re-entrance of disintermediated ones. Internet and mobile technologies offer various tools for consumers to search and purchase tourism products/services directly from hotels (suppliers), but for the time being, these increased opportunities are being exploited by the e-intermediaries in tourism distribution channels to strengthen their position to the detriment of suppliers. Power has shifted from suppliers to intermediaries, especially to those who base their activities on new technologies.

All the above demonstrate the need for further focusing on tourism distribution channels by the researchers, and especially on achieving more effective management of them in order to formulate an optimum overall desirable multi-channel marketing mix, which serves the real business objectives in the new digital evolution era.

References

1. Pearce DG (2010) Chapter 8: Tourism distribution: a review and strategic research agenda. In: Pearce D, Butler RW (eds) Tourism research: a 20-20 vision. Goodfellow Publishing, Oxford, pp 94–110
2. Coughlan A, Anderson E, Stern L, El-Ansary A (2006) Marketing channels, 7th edn. Pearson Prentice Hall, New Jersey
3. Cooper C, Lewis J (2001) Transformation and trends in the tourism industry: implications for distribution channels. In: Buhalis D, Laws E (eds) Tourism distribution channels: practices, issues and transformations continuum. Continuum, London, pp 315–332

4. Kotler P, Bowen J, Makens J (2005) Marketing and hospitality for tourism, 4th edn. Prentice Hall International, New Jersey
5. Kontis AP, Skoultos S, Kyriakaki A, Marmara A (2018) Reexamining tourism experience during the new era of peer-to-peer business models: the demand's perspective
6. Skoultsos S, Kontis AP, Sarantakou E (2017) Conceptualization of changes in tourism industry's distribution channels: the case of peer-to-peer (P2P) business models and sharing economy platforms. J Tour Res 16
7. Kontis AP (2014) Factors in multichannel marketing mix configuration for urban hotels: optimisation framework in decision making, based on the data envelopment analysis. PhD Thesis, University of the Aegean (in Greek)
8. Pearce D, Tan R, Schott C (2004) Tourism distribution channels in Wellington, New Zealand. Int J Tour Res 6:397–410
9. Stuart P, Pearce D, Weaver A (2005) Tourism distribution channels in peripheral regions: the case of Southland, New Zealand. Tour Geogr 7(3):235–256
10. Katsoni V (2016) An investigation of the tourism distribution channels in the VFR segment. Acad Turistica 9:19–29
11. Kavoura A, Katsoni V (2013) From e-business to c-commerce: collaboration and network creation for an e-marketing tourism strategy. Tourismos 8:113–128
12. Zhang X, Song H, Huang G (2009) Tourism supply chain management: a new research agenda. Tour Manag 30(3):345–358
13. Pearce D, Taniguchi M (2008) Channel performance in multichannel tourism distribution systems. J Travel Res 46(3):256–267
14. Kontis AP, Lagos D (2016) Data driven marketing decision making: an application of DEA in tourism marketing channels. In: Rontos K, Jose F (eds) Modeling and new trends on tourism: a contribute for social and economic development. Nova Publishers, New York, pp. 195–214. ISBN: 978-1-63485-920-2
15. Pnevmatikoudi K, Stavrinoudis Th (2016) Classification of hotel performance measurement indicators presented in the international scientific research. Eur J Tour Res 12:82–98
16. Kracht J, Wang Y (2010) Examining the tourism distribution channel: evolution and transformation. Int J Contemp Hosp Manag 22:736–757
17. Stern LW, El-Ansaray A (1982) Marketing channels, 2nd edn. Prentice Hall, New Jersey
18. Gartner WC, Bachri T (1994) Tour operators' role in the tourism distribution system: an Indonesian case study. J Int Consum Mark 6:161–179
19. Middleton V, Clarke J (2001) Marketing in travel and tourism, 3rd edn. Butterworth-Heinemann, Oxford
20. Rosenbloom B, Larsen T, Brent S (2004) The effectiveness of upstream influence attempts in high and low context export marketing channels. J Mark Channels 11(4):3–19
21. Harrigan KR (1988) Partner asymmetries. In: Contractor J, Lorange P (eds) Cooperative strategies in international business. Lexington Books, Lexington, pp 205–226
22. Lai CS (2007) The effects of influence strategies on dealer satisfaction and performance in Taiwan's motor industry. Ind Mark Manag 36(4):239–252
23. Zhuang G, Xi Y, Tsang A (2010) Power, conflict, and cooperation: the impact of Guanxi in Chinese marketing channels. Ind Mark Manag 39:137–149
24. Babbie E (2011) Introduction to social research (in Greek). Kritiki, Athens
25. Christou E (1999) Tourism market research (in Greek). Interbooks, Athens
26. Law R, Leung R, Lo A, Leung D, LHN F (2015) Distribution channel in hospitality and tourism: revisiting disintermediation from the perspectives of hotels and travel agencies. Int J Contemp Hosp Manag 27:431–452. https://doi.org/10.1108/IJCHM-11-2013-0498
27. Schegg R (2018) European hotel distribution study: results for the reference year 2017, Hotrec

The Wine Lab: Generating Innovation Between Practice and Research—Exploring the Views from Wine Makers and Policy Makers

Spyridon Mamalis, Irene Kamenidou, Alessio Cavicchi, and Gigliola Paviotti

Abstract The wine sector is very important for Europe, being a key producer, exporter and consumption player. It is composed of small producers, thus facing large problems and challenges to survive in the extreme competitive environment. Under this concept, the Wine Lab project is funded by the European Union and Erasmus+ and is implemented to share knowledge, challenges and solutions and produce innovation in the wine sector. This paper reports the results of a qualitative research conducted under this project. Semi structured interviews were used providing insight from 77 stakeholders in the wine industry, from the four countries participating in the project: Austria, Greece, Hungry, and Italy. Subjects discussed dealt with (a) Perceived difficulties of small wineries in disadvantaged areas; (b) Perceived potential of the cooperation with higher education institutions (c) Perceived potential for territorial development; (d) Perceived skills mismatch between the company needs and the newly graduates worker. Results, conclusions are presented and suggestions for future implementation are provided.

Keywords Wine Lab project · European wine industry · Marketing research

1 Introduction

The wine sector in Europe is considered a key asset for economic growth [1]. Moreover, Europe is a leading producer of wine. Producing some 175m hl every year, it accounts for 45% of wine-growing areas, 65% of production, 57% of global

S. Mamalis (✉) · I. Kamenidou
Tei Eastern Macedonia and Thrace, Kavala, Greece
e-mail: mamalis@econ.auth.gr; mamalis@teiemt.gr

A. Cavicchi · G. Paviotti
University of Macerata, Macerata, Italy

consumption and 70% of exports in global terms (DG Agriculture data). As the CEEV (Comité Européen des Entreprises de Vin) points out, the Wine sector permeates many levels of the European life, contributing significantly to society in socio-economic, environmental and societal terms. Moreover, the wine business is a fast-growing industry for many countries that base their economy in agriculture [2].

The wine industry is facing globalisation and wineries must promptly respond to rapid changes [3]. The economic crisis and new emerging consumers' needs have reshaped wineries' strategies. At the same time the Wine sector "is composed by an overwhelming majority of small producers and is therefore extremely atomised in comparison with other food and drinks industries". Small size wineries share similar problems with small companies in other sectors. Small wineries face: difficult access to capital. Also they heavily rely on distributors, and they may encounter difficulties in exporting their products to foreign markets [4]. In addition to this, small and micro wineries should deal with the specific-sector difficulties, related to territory. Small producers who are located in disadvantaged areas experience more problems than those who are settled in highly accessible locations.

2 Wine Lab Project

The project addresses the problems of small wineries in disadvantaged areas, by creating the basis for a dialogue between research, business and regional communities based upon clustering and networking, providing learning opportunities applying action research and action learning, and exploiting knowledge on regional bases towards new methods and approaches in policy planning. Moreover, The Wine Lab project aims at developing structured university-business cooperation in the field of wine, and at pursuing co-creation of knowledge and innovation between the two fields. The partnership is composed by 12 partners, from five European countries (Austria, Cyprus, Italy, Greece, and Hungary). In four countries, namely Austria, Greece, Hungary and Italy, at least one university and one small wine firm is represented. Main results expected during the project include: The creation of hubs (clusters) as groups of interest The enhancement of opportunities of higher education students to develop entrepreneurial mind-set, through traineeship and internship; The development of mechanisms for structured sharing of knowledge between research and business; The establishment of new forms of cooperation between universities and enterprises to increase lifelong learning opportunities; The contribution to policy debate through dialogue between regional hubs and decision makers.

3   Methodology

In the frame of the project, preliminary research activities have been carried out in order to set up the theoretical and practical ground of the following work, in order to identify perceived opportunities, constraints and needs of the sector.

Exploratory research has been carried by the means of semi–structured interviews. The research was conducted from August 2017 to January 2018. Interviews addressed two target groups, namely small wine producers, and policy makers or including other stakeholders involved in the sector, which can act as key informants. For both groups, the same research themes have been explored, by defining questions according to the profiles (a) Perceived difficulties of small wineries in disadvantaged areas, particularly in relation to the market; (b) Perceived potential of the cooperation with higher education institutions (c) Perceived potential for territorial development; (d) Perceived skills mismatch between the company's needs and the newly graduates workers.

4   Findings

Interviews collected were 77 in total, 56 from wine makers and stakeholders, and 21 from policy makers in four different countries that participate in the project: Collected data were clustered on the basis of topics' frequency, and then further clustered by similarity. Additional relevant topics and quotes were also pointed out to contribute to general understanding of the sector.

4.1   Wine Makers

Consulted owners and workers of the wineries come mainly from disadvantaged areas (Austria regions of Wagram, Wachau, Kamptal, Traisenthal, and Burgenland; Greece regions of Drama, Florina, Athens; Hungary regions of Balatonfured-Csopak; Badacsony; Nagy-Somlo; Mor; Italy regions of Tuscany, Marche, and Valle d'Aosta).

Difficulties of Wineries The most mentioned difficulty for respondents (27 interviewees out of 60) relates to the burden of bureaucracy, which affects also in general small companies. Environmental regulations are considered to burden the wineries with additional bureaucracy:

Also limited access to financial resources is shared among the four groups of respondents: this is particularly relevant in Greece, where access to bank credit seems to be a challenge, and in Italy, where the limited resources are mostly defined as "high costs". Also, lack of financial capacity affects both investments in

production and selling: Among the problems related to financial issues, the low bargaining power with retailers and sales agents were mentioned by four respondents.

Disadvantaged areas create also a lack of infrastructures (13 respondents), hindering the easy accessibility of the cellars and selling points, as well an increased cost of transport, or lack of services (11 respondents), that turns out to be a difficulty in being competitive. As consequence, wineries have lower access to direct selling (local and touristic market), but also their prices can increase due to the costs of production and transportation:

A common and shared problem is represented by labour shortages and the degree of professionalisation of staff (20 respondents). It includes issues, such as: (a) difficulties in finding local workers (b) high costs and bureaucracy and (c) lack of professionalism. To some extent, these problems can be also be considered common with small companies, (cost of hiring educated staff, seasonality), however some problems are very specific, such as in example the low attraction of disadvantaged areas for skilled workers. An additional common difficulty, sometimes differently described but referring to the same problematic area, is the need of skills other than wine production to succeed the market. At least two skills areas can be identified: business skills—including strategic thinking, organisational planning, management skills—and commercial skills, particularly marketing. Part of this difficulty is due to the size of the companies: Other mentioned issues, were: costs of raw materials; difficulty of compliance with Appellation rules; tax on wine production.

Potential of Cooperation Asked about the potential of cooperation with higher education institutions and research centres, the answer from respondents is clearly positive by 60% of the sample across countries. This takes already place in many cases, in terms of research, internship/placements, joint events, like local seminars. In general, there is a positive attitude of respondents to increase cooperation with universities and research centres, particularly in relation to the students, which is the most common form of cooperation, and technical research (e.g. product development). There is less attention to other potential support, as support to access the market, or support for specific problems. In Greece, universities are also considered as potential training providers for wineries. Also, local and national cooperation is well considered by the greater part of respondents, and in some area is already taking place between wineries and between wineries and touristic players.

Potential for Development This part sought to explore in particular the linkages of wine with the culture of the territory, as material and immaterial cultural heritage. This was addressed in particular to understand the interest of wineries to put themselves on the line in the creation of networks. The opportunity was in general considered as positive, and somewhat as 'natural evolution', as wine is closely related to cultural heritage as a product itself. Wine tourism was mentioned in all countries as very important for further development of the wine sector, particularly in Austria, (eight respondents out of ten) but also in other countries. Gastronomy and

local traditions are the most mentioned strengths by all regions involved in the research, even if other opportunities were mentioned.

Skills Mismatch The first topic that is shared among respondents is that internship is very important as often graduates lack of practical knowledge. There is a need of linking theory to practice and also there is a need of having a shared 'formative plan' with established role and tasks of the intern within the company. Hard skills needs (e.g. technical skills in wine production) are pointed out by the respondents, while others stress the importance of transversal skills, as in example foreign languages, and soft skills, such as team working, communication/negotiation, and time management.

4.2 Policy Makers

Consulted policy makers represent national, regional and intermediate bodies (e.g. Chamber of Commerce, Development agencies) and key respondents (e.g. Touristic bodies) from the four addressed countries, with the involvement of more than one region in Italy, and many Departments at the Ministry of Agriculture in Greece.

Difficulties of Wineries Differently from the winemakers, bureaucracy and heavy taxation are mentioned as difficulties only in Greece, while the most relevant issue identified by policymakers is related to staff, both labour shortages and low degree of professionalisation (12 out of 16 respondents). About the half of respondents, distributed in all four addressed countries, point out also the size of the company as a main problem: this relates both to the limited production volume and to the capacity of having specialised staff taking care of marketing and sales.

Other difficulties pointed out include low access to capital and banks loans, lack of infrastructures and services, position (proximity to the markets), low bargaining power with retailers and sales agents, lack of raw materials, global competition, which is hardly accessible to small players. Moreover, low connection with other local markets, particularly tourism. A specific difficulty is pointed out by Greek respondents is the Lack of investment in local varieties and lack of a national genetic bank of vines.

Potential of Cooperation and Development The cooperation between wine companies and universities is considered significant by the policymakers. Specific potential for development is given to linkages between tourism and wine and to linkages with cultural heritage. Potential obstacles to the development of territorial touristic offer that includes wine could be related to the 'culture' of wineries: Among other issues, the most relevant development is deemed to take place by making stronger the relationship between universities and business through internships and mobility of students, and by providing training to companies. Additional suggestions include joint organisation of food and wine festivals.

Skills Mismatch The main identified difficulty is again on a limited link between theory and practice that can be better addressed by the increase of quality internship periods. However, skills mismatch is well identified with regards to a specific set of skills, as in example business and marketing skills, which would require a revision of study curricula. A few also mention the potential role of the students in the frame of knowledge/innovation transfer, and in the role of the alumni as mentors, or informants, linking the university with the market.

5   Conclusive Remarks

In general, by comparing the data provided by the two target groups, some elements are identified and shared across regions and countries in all explored dimensions, as follows: (a) The size of the company makes a considerable difference: small companies have difficulties to access markets and have strong positions in bargaining, to have resources to invest and get loans from the banks, to attract qualified workers, to manage the business beyond production. This is shared in the views of the two samples. (b) Location of the company also plays a relevant role, as disadvantaged locations entail higher costs of transportation, which impact on the price of the final product, difficulties with the attraction of workers, also seasonal workers, and challenging mechanisation. (c) Networking is considered relevant, but the meaning and goal of networking are not always understood, as meant mostly as mutual support or considered as a strength for development by winemakers. Policy makers recognise networking between universities, companies and policymakers as an asset, but seem to consider less crucial local networking. (d) Development of a territorial-based action (links with identity, cultural heritage, traditions etc.) is considered relevant, but requires investments most probably from policymakers regarding financial support and policy planning, and from winemakers in terms of time and effort. Tourism, including wine tourism, is considered the most promising field for development. (e) Mismatch of skills is mostly related to a missing link between theory and practice, and a lack of educational offer in business, marketing, and financial skills, which are fundamental for a small company. Transversal and soft skills are also considered important. Some divergent view can be retrieved in the evaluation of the impact of bureaucracy and taxation (policymakers do not consider these among the main issues, while the companies pinpoint this as difficulty). Contextual elements, national or regional-based, make a difference in evaluating difficulties particularly much more than opportunities, as are related to the geographical position or climate, or to legal frameworks (appellations, regulations, bureaucracy, taxation etc.).

References

1. Anderson K (ed) (2004) The world's wine markets: globalization at work. Edward Elgar, Cheltenham
2. Bitsani E, Kavoura A (2012) Connecting enological and gastronomical tourism at the Wine Roads, Veneto, Italy for the promotion and development of agrotourism. J Vacat Mark 18:301–312. https://doi.org/10.1177/1356766712460738
3. Cholette S, Castaldi R, Frederick A (2005) Globalization and the emergence of new business models in the wine industry. Int Bus Econ Res J 4(3):21–30. https://doi.org/10.19030/iber.v4i3.3577
4. Taplin IM (2006) Competitive pressures and strategic repositioning in the California premium wine industry. Int J Wine Mark 18(1):61–70. https://doi.org/10.1108/09547540610657687

How Artificial Intelligence Affects Digital Marketing

Prokopis K. Theodoridis and Dimitris C. Gkikas

Abstract This paper describes the current and potential relationship between digital marketing and artificial intelligence (AI), proposing, at the same time, ways of artificial intelligence (AI) engagement in app development. As a genuine branch of Marketing science, digital marketing managed to create value to the organizations and increased the engagement with the customers through electronic services. Digital era has helped industries monitor their procedures including branding, promotion, advertising, production, channel distribution etc. Based on gathered data, interactive customer experience and a digital overview of procedures and sales, business managers could make more accurate and data driven decisions. Due to the excessive amount of data which is daily generated customers journey and experience turn to become extremely complicated. Organizations invest high budgets to cover the lack of information or the potential customers which have never been mapped. The large volume of data generated lead to a chaotic environment which marketer must handle. Users data daily change and decision makers must deal with this reality. The need of use smart applications within organizations emerges to better analyze, classify, optimize and target audiences. Technology aware customers lead industries to bigger financial investments and sophisticated solutions. Based on a high complex data world, marketers must identify their needs and search for advanced technological solutions. Business world manage to implement smart apps which directly affect marketing world and decision makers. Intelligent data-based driven models could lead to customer action predictions based on dependent variables of interest. Data mining, artificial intelligence (AI), machine learning, deep learning could act complementary to marketing science. User profiling, data classification, content optimization, optimized targeted audiences, predictive models, search engine ranking factors optimizations are some of the benefits that artificial intelligence (AI) could provide and generate highly accurate results.

P. K. Theodoridis · D. C. Gkikas (✉)
University of Patras, Agrinio, Greece
e-mail: dgkikas@upatras.gr

1   Introduction

On early twentieth century following the steps of technological evolution, digital
marketing had a major increase of value where the need of digital promotion, digital
advertising, digital distribution and digital customer experience emerged [1]. Since
1988 when the term "Digital Marketing" first originated there has been a radical
expansion to business world starting from small running to large scale businesses
around the globe. Due to the technological advances in the scientific area of artificial
intelligence (AI), data mining and computational analysis, digital marketing met a
transition period of changes which led from an absolute data-based driven approach
to a new approach of data and knowledge-based decision-making systems [2]. To
make a qualitative marketing, user and data analysis the need of saving and analysis
emerges. Targeted audiences are the key to success and profitable marketing cam-
paigns. Marketing managers could use the technology for their benefit to define the
factors that affect marketing share. Such technology could lead to effective and
efficient decision making. Even though artificial intelligence (AI) applies to a wide
range of applications in several scientific fields it shows that in Marketing Science
struggles to apply [3]. Due to qualitative, quantitative and strategic nature of the
problems that may occur it seems that digital marketing decision makers need more
than an efficient computational approach. Factors like knowledge that comes from
professional experience, field of expertise, judgment calls and multidimensional
constantly changing and demanding environment make decision making seem
very hard task. The amount of data that is produced daily give marketers the
opportunity to analyze, design and implement applications that combine scientific
multifactor data aiming smart knowledge-based decision-making patterns
development.

2   Digital Marketing

Digital marketing manages to create a new market perception and a way of increas-
ing sales through internet. Digital era has given the consumers the opportunity to
express themselves and voice their opinion, giving them, at the same time, the power
of choice and influence. Brands have the chance to dynamically interact with
customers and users have the chance to search for information, product or services.
Digital marketing gave the ability to the businesses to expand their reach. Digital
marketing has created value for the consumers and the businesses. Brands primary
goal is to build trust and friendliness among their customers who buy their products

or services. Due to its personalized use, people who work for digital marketing industry can customize the content to be more human-centric and user friendly. Users can post comments and publish content in way that it can influence people and opinions for a brand. Content, time, comments, interface, reviews, speed, image have a key role in digital era. Users tend to reply positively to brands when the later manages to create a warm and customer-oriented environment. User profile, targeted audiences and consumer behavior engage the internet user with the business and create high quality services, high volume of revenues and great user experience satisfaction [4–8].

2.1 Digital Marketing Customer Lifecycle

Digital marketing platforms were researched based on pRACE (plan, Reach, Act, Convert, Engage).

Plan: Analysis and planning are the first steps that an organization must make to identify any potential strength, weaknesses, opportunities or threads in the market and identify the market share [9, 10].

Reach: Reach defines the start of the customer's lifecycle. Main goal is to attract more potential customers providing an engagement experience that will drive them to purchase and eventually to create brand-products-services awareness [9, 10].

Act (Interact): This stage of the consumer journey is supposed to start drawing the potential customers in and let them know about any product or service provided by the organization. It refers to potential client persuasion to visit company's website or social media business pages, this is called lead generation. The company must carefully create the pathway that the visitor will follow and keep interacting with the company [9, 10].

Convert: Conversions or Conversion Optimization is a marketing tactic where any potential customer is converted in an organization member or customer and encouraged to take a specific action. Conversion also refers to any desired action that marketers have set as goal. Conversion refers to any action from a previews state to a new one like "Purchased", "Added to Basket", "Registered as a member" etc. [9, 10].

Engage: Once the desired conversion is made, it is important to make all the necessary actions to satisfy the customers keep interacting with the organization through e-mailing, social media commenting or sharing, purchasing or reviewing. It is a post-sale behavior that builds awareness, creates trust and leads to potential new purchases or attract new customers [9, 10].

2.2 Digital Marketing Platforms

Some of the most representing software applications were researched and presented.

Plan Platforms: Google Analytics tracks and reports website traffic, analyze advertisements data and tracks social media traffic, browser technology, mobile-tablet-website visits, user behavior, keyword searches, landing pages, geolocation etc. providing an overview of the website behavior helping marketers identify potential opportunities and strengths or threads and miscalculations [11]. Salesforce CRM helps companies manage their relationships and interactions with customers and potential customers. It maps business needs, solve problems, identifies opportunities allowing companies remotely manage their work [12].

Reach Platforms: Websites consist of several web pages that can be accessed from a browser. A website provides information depending upon different subject areas. Different subject areas are the key to reach internet users and potential customers [13]. Blogger enables even simple users to create blogs, allowing at the same time multi-user commenting and posting. Posts are displayed in a chronological order, where the most recent are displayed first [14]. MailChimp helps industries find, reach and engage potential customers through, product selling and surveys to news sharing and special offers, newsletter [15]. SEMRush conducts SEO scans and reviews search engines ranking factors to create the optimal content for high quality content and eventually high ranking in search engine results [16]. Alexa provides technical support, problem checking and reports to monitor the website condition keep aligned with search engines ranking policies [17]. Google Ads creates advertisements for businesses, products, services, increase brand awareness, drive traffic and increase customers engagement. Advertisements consist of text, website link, landing page link, sitelinks. When the number of click exceeds the total budget, the Ads stop running [18].

Act Platforms: Hootsuite monitors, manages and schedules posts to multiple social media profiles providing broadcast digital services like post scheduling, account/pages monitoring, content management, social media insights, team management, security and post/page boosting [19].

Convert Platforms: Crazy Egg records any user action and keeps visual records to understand users' behavior in a website. It conducts A/B testing, to justify the proper use of content, buttons, shapes, colors, fonts, images, etc. so eventually increase users' experience and which will lead to potential conversions [20].

Engage Platforms: Google AdWords Remarketing can re-engage the audience of an organization through remarketing and retargeting techniques reaching potential customers who have left the website without performing any purchase action [21].

3   Artificial Intelligence (AI)

3.1   What is Artificial Intelligence (AI)

Artificial Intelligence (AI) is the study that includes computational procedures to perform actions that human beings do and require a certain amount of intelligence. Communication and learning represent the ways that humans show their

intelligence. Both ways require certain mental skills like synthesis, analysis, decision making, judgment, organizing, reasoning, hypothesis, interpretation etc. [22]. Artificial intelligence (AI) involves knowledge representation, search, perception and inference. To generate results, artificial intelligence (AI) must define and read the data in forms that will allow representation and processing. The way to succeed that is search and inference. Referring to search there must sophisticated search algorithms to find the optimal solutions. Then inferences are drawn for each situation. The way through artificial intelligence (AI) leads to decision making start from data selection process, continues pre-processing data, then data transformation, data mining plays a key role to entire process, finally results evaluation will lead to decision making [23].

3.2 Artificial Intelligence (AI) and Digital Marketing in Business

According to Domo.com internet users daily generate 2.5 quintillion bytes of data. Since customers attention is distracted by the huge volume of advertisements and data across the marketing channels there must be a way to personalize data and target audiences to increase conversions and revenues. Companies manage to increase their revenues by optimizing the digital marketing campaigns, channels, audiences and markets performances, measuring the impact to customers, revenues and improving customers satisfaction creating personalized content. Artificial intelligence (AI), data mining, predictive modeling and machine learning tend to satisfy marketers by helping them identify strengths, weaknesses, opportunities, threads, market needs, analyze users and target audiences [24]. Effective and efficient data processing will classify customers' needs, increase ROI, customer satisfaction and driving growth [25]. Artificial intelligence (AI) takes as input data coming from websites, sales, analytic reports, social media insights and process them to produce optimized, accurate, highly predictive results [26, 27].

3.3 Artificial Intelligence (AI) 'Runs' the RACE

Artificial intelligence (AI) successfully 'runs' the RACE providing data-based intelligent decision applications [9, 26].

Reach: Smart Content Curation identifies, classifies and suggests content according past purchased products. Programmatic Advertising defines the targeted audiences and applies advertisements to the most relevant users. Content Creation refers to content writing applications that creates human-centric content based on optimized personalized targeted words or phrases that trigger specific groups of

customers. Natural Language Processing increases customers reach and applies to voice searches and voice commands through PDAs (personal digital assistants) [27].

Act: Propensity Modeling gathers and processes large datasets of previous users' actions to predict users' behavior. Ad Targeting predicts and defines which advertisements high perform on specific users' groups, in what buying stages. Predictive Analytics predicts customer behavior before the customer has even started the buying process. Lead Scoring examines the value of a potential sales lead and if it worth the effort, based on data prediction analysis [27].

Convert: Dynamic Pricing identifies potential customers who need an extra motive to convert. It invests money reducing at the same time profit from one product but manages to increase customers. Re-Targeting creates users profiling and identifies those who will revisit a website to purchase. Web & App Personalization personalizes the content and the interface of a web page or app to increase conversion rates. Chatbots, answer like humans to users' questions, suggesting buys, completing orders etc. [27].

Engage: Predictive Customer Service specifies and engages clients by reaching them with offers, coupon and suggested info after completing purchases to increase the engaging audience and avoid churning. Marketing Automation classifies customers and use optimized content according to what time should contact them, what phrases would trigger them and what offers should they make the business wants to reach them. 1:1 Dynamic Emailing makes sophisticated promotion of products and services relevant to the recipients [27].

According to eMarketer.com survey about what the differences are between artificial intelligence (AI), predictive modeling and machine learning, revealed that marketers seem to not clearly understand. The problem lies to the point that instead of using the words 'machine learning', 'data mining', 'predictive modeling' in different conversations, they constantly use the word 'artificial intelligence or AI [27, 28].

3.4   Artificial Intelligence (AI) in Digital Marketing Business Platforms

Some of the most representing AI software applications were researched and presented.

Reach AI Platforms: RankBrain is continuously sorting search results and help Google process search queries [29, 30]. Siri is personalized to each user and handles voice commands like answer questions, make suggestions and performing tasks [31]. Gupshup sends personalized campaigns to targeted customers, enables transactions from right within the campaign, qualifies leads and route them to the right sales person, schedules meetings automatically etc. [32]. Meetcortex creates better content by producing photo, video and text content optimized for audience and manages to reach customers through content deployment at the right times to drive

results [33]. Atomic Reach delivers content marketing value, understands what content drives conversions and creates optimized content for that purpose [34].

Act AI Platforms: SAS delivers intelligent, automated predictive analysis solutions [35]. Phrasee creates unique marketing language for businesses that sounds human [36]. Evergage converts website visitors from targeted audiences to customers and interact individually with users, creating at the same time leads [37].

Convert AI Platforms. SentientAscend provides high conversion by web & app personalization and smart website testing [38]. Messenger Chatbot enables businesses build chatbot to drive awareness, acquire customers, enable transactions etc. [39].

Engage AI Platforms. Seventh Sense sends marketing individually emails to customers at optimal time and frequency. It identifies customers' needs and sends email when is most probable to be opened and responded [40].

4 Research Proposition

Search engines over the last years have been used by millions of users for information retrieval. Sophisticated algorithms assemble a search engine and it highly difficult for someone to understand or predict the outcome of search queries [41]. Search engines rank websites and webpages based on ranking factor system. Known ranking factors are almost 200 and each one weights differently [42]. Marketers in order to manage increase conversion and sales try to create a traffic towards the websites. Traffic is based on how qualitative search engine optimization a website has. There have been several attempts from IT engineers and marketers to prove the importance of search engine ranking factors [41, 43–46]. Despite that search engines use more than 200 factors to rank webpages we propose to use only a subset of them and manage to rank a webpage. A decision tree algorithm and a genetic algorithm wrapper will be used. Each subset will get a fitness through a fitness model and then it be classified from a decision tree algorithm. Only the best subsets will manage to pass from one generation to the next. We will try to prove statistically that instead of using 200+ ranking factors we will use only 10 and we will have the same accuracies, or we will try to prove the importance of each factors by adding a certain weight on every of 200 factors [47].

5 Conclusion

This research has showed how adaptive can artificial intelligence (AI) be in humans' daily life. It is a powerful sector of Computer Science that applies in every science and it can be beneficial to some and dangerous to others. Thus, there must be organizations which tries to keep artificial intelligence (AI) research mostly academic, rather than a private research. Artificial intelligence (AI) also successfully

answers digital marketing problems. Due to artificial intelligence (AI) contribution, digital marketing success depends on proper data management and handling, personalized content, targeted audiences, adaptive services and correct timing. Data help industries sell their products by targeting proper audiences, at the correct time, in the correct language, with the correct message. Marketers manage to have high revenues. Businesses either invest money on research centers to provide them applications either they build in house research laboratories to optimize digital marketing techniques. Customer enjoy qualitative content, services and experience. Digital marketing has a more dynamic pace than ever before and creates sales out of nowhere. There are also some other benefits which comes from the use of artificial intelligence (AI) in marketing. Unemployment is decreased, and new jobs are created every day. Data generation and processing gives birth to new knowledge, providing a unique opportunity to provide customers with products they really need, saving at the same time the planet's resources.

References

1. Sismeiro C, Bucklin RE (2004) Modeling purchase behavior at an E-commerce web site: a task completion approach. J Mark Res 41:306–323
2. Casillas J, Martínez López FJ (eds) (2010) Marketing intelligence systems. STUDFUZZ 258. Springer, Berlin, pp 1–8
3. AAAI. http://www.aaai.org/Magazine/ailandscape.php
4. Redandyellow. https://www.redandyellow.co.za/content/uploads/woocommerce_uploads/2017/10/emarketing_textbook_download.pdf
5. Carvalhosa P, Portela F, Santos MF, Abelha A, Machado J (2017) Pervasiveness in digital marketing – a global overview. In: Rocha Á, Correia A, Adeli H, Reis L, Costanzo S (eds) Recent advances in information systems and technologies. WorldCIST 2017. Advances in intelligent systems and computing, vol 571. Springer, Cham
6. Wierenga B (2010) Marketing and artificial intelligence: great opportunities, reluctant partners. In: Casillas J, Martínez-López FJ (eds) Marketing intelligent systems using soft computing. Studies in fuzziness and soft computing, vol 258. Springer, Berlin
7. Blythe J (2013) Digital marketing and social media. In: Principles and practice of marketing. Sage, London, pp 668–704
8. Ryan D, Jones C (2009) Understanding digital marketing: marketing strategies for engaging the digital generation. Kogan Page, London
9. Smart Insights Homepage. https://www.smartinsights.com/digital-marketing-strategy/race-a-practical-framework-to-improve-your-digital-marketing
10. Smart Insights. https://www.smartinsights.com/digital-marketing-strategy/10-marketing-trends/attachment/customer-lifecycle-b2c-retail
11. Google Analytics. https://analyticsacademy.withgoogle.com
12. Salesforce. https://www.salesforce.com/eu
13. Computer Hope. https://www.computerhope.com/jargon/w/website.htm
14. Blogger. https://www.blogger.com
15. MailChimp. https://mailchimp.com
16. SEMRush. https://www.semrush.com
17. Alexa. https://www.alexa.com
18. Google Ads. https://support.google.com/google-ads/answer/6319?hl=en
19. Hootsuite. https://hootsuite.com

20. CrazyEgg. https://www.crazyegg.com
21. Google Ads Remarketing. https://support.google.com/google-ads/topic/3122874?hl=en&ref_topic=3121935
22. Tanimoto S (1987) The elements of artificial intelligence an introduction using lisp. Computer Science Press, New York
23. Encyclopaedia Britannica. https://www.britannica.com/technology/artificial-intelligence
24. Marketing Profs. https://www.marketingprofs.com/charts/2017/32531/the-incredible-amount-of-data-generated-online-every-minute-infographic
25. Datorama. https://cdn2.hubspot.net/hubfs/2635477/How%20AI%20is%20Transforming%20Marketing_Datorama.pdf
26. Smart Insights. https://www.smartinsights.com/tag/artificial-intelligence-ai-for-marketing
27. The Financial Brand. https://thefinancialbrand.com/71350/ai-machine-learning-analytics-marketing-banking-trends
28. eMarketer. https://www.emarketer.com/content/why-marketers-struggle-to-define-artificial-intelligence
29. Top Rank Marketing. http://www.toprankblog.com/2018/02/artificial-intelligence-transforming-marketing
30. Backlinko. https://backlinko.com/google-rankbrain-seo
31. Apple Siri. https://www.apple.com/ios/siri
32. Gipshup. https://www.gupshup.io/developer/overview
33. Meetcortex. https://www.meetcortex.com
34. Atomic Reach. https://www.atomicreach.com/platform
35. SAS. https://www.sas.com
36. Phrasee. https://phrasee.co
37. Evergage. https://www.evergage.com
38. SentientAscend. https://www.ascend.ai
39. Facebook Messenger. https://messenger.fb.com
40. Seventh Sense. https://www.theseventhsense.com
41. Su A-J, Hu YC, Kuzmanovic A, Koh C-K (2014) How to improve your search engine ranking: myths and reality. ACM Trans Web 8(2):Article 8, 25 p
42. Backlinko. https://backlinko.com/google-ranking-factors
43. Zhu V, Wu G, Yunfeg M (2011) Research and analysis of search engine optimization factors based on reverse engineering. In: Proceedings of 3rd international conference on multimedia information networking and security, pp 225–228
44. Berry MW, Browne M (2005) Understanding search engines: mathematical modeling and text retrieval. SIAM, Philadelphia
45. Mavridis T, Symeonidis A (2015) Identifying valid search engine ranking factors in a Web 2.0 and Web 3.0 context for building efficient SEO mechanisms. Eng Appl Artif Intell 41:75–91
46. Xia F, Liu TY, Wang J, Zhang W, Li H (2008) Listwise approach to learning to rank – theory and algorithm. In: International conference on machine learning (ICML)
47. Mitchell T (1997) Machine learning. McGraw Hill, New York. ISBN: 0-07-042807-7