Álvaro Matias · Peter Nijkamp
João Romão *Editors*

# Impact Assessment in Tourism Economics

Springer

# Impact Assessment in Tourism Economics

Álvaro Matias • Peter Nijkamp • João Romão
Editors

# Impact Assessment in Tourism Economics

Springer

*Editors*
Álvaro Matias
School of Economics and Business
Universidade Lusíada de Lisboa
Lisboa, Portugal

Peter Nijkamp
VU University Amsterdam
Amsterdam, The Netherlands

João Romão
Centre for Advanced Studies in Management
and Economics (CEFAGE - UE)
University of Algarve
Faro, Portugal

ISBN 978-3-319-14919-6 ISBN 978-3-319-14920-2 (eBook)
DOI 10.1007/978-3-319-14920-2

Library of Congress Control Number: 2016939426



Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG Switzerland

# Contents

# Chapter 1
# Editorial Introduction

**João Romão, Peter Nijkamp, and Álvaro Matias**

This new book in the series Advances in Tourism Economics provides a series of interesting studies on the socio-economic impacts of tourism, with a special focus on the determinants of tourism competitiveness at the destination level. The 16 chapters of the book offer a systematic perspective for these important questions, presenting relevant empirical studies from different parts of the world, based on modern theoretical approaches and adequate analysis tools, with a view to their policy or managerial implications.

Within the context of a growing global competition among tourism destinations and an increasing socio-economic importance of tourism, it becomes crucial to obtain precise and quantified estimations of the tourism impacts, in order to maximize the benefits for the host communities, while preventing the potential negative impacts on local ecosystems, landscapes or cultural values. On the other hand, questions related to local transport networks or usage of public spaces at destination level become more important, as the interaction between local residents and visitors tends to increase.

The book is organised in three parts. The first part is oriented to the analysis and assessment of quantitative tourism impacts on local economies, presenting adequate methodologies for different aspects of the tourism activities. Questions related to the identification of different patterns of propensity to travel among

J. Romão (✉)
Centre for Advanced Studies in Management and Economics (CEFAGE-UE), University of Algarve, Faro, Portugal
e-mail: joao.romao@me.com

P. Nijkamp
VU University Amsterdam, Amsterdam, The Netherlands
e-mail: p.nijkamp@vu.nl

Á. Matias
School of Economics and Business, Universidade Lusíada de Lisboa, Lisboa, Portugal
e-mail: 13000895@edu.ulusiada.pt



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_1

different tourism issuing markets, effects of seasonal fluctuations of demand, sectorial economic effects, impacts of the organisation of major cultural events and potential benefits of tourism for small rural communities will be analysed.

The second part of the book is focused on the role of innovation and human resources as crucial elements to increase the competitiveness of a tourism destination and to maximize the benefits of tourism at the local level. This part starts with a discussion of the relation between the ability to innovate and tourism competitiveness at national level, followed by the analysis of questions related to social capital, human capital, type of leadership and labour competences, analysed at local level. Finally, this chapter concludes with a discussion on the importance of strategic management for innovation and human resources management at company level.

The final part of the book zooms in on different dynamics often observed in tourism destinations, arising from the interaction between tourists and local communities. This part includes a discussion of the social legitimacy of tourism in the face of its positive and negative impacts, an analysis of intermodal processes of competition among transportation modes and a discussion on methods for locational decisions in the hotel sector. The perceptions and evaluations of local communities regarding the classification of World Heritage Sites or the organisation of major cultural events are also analysed at destination level and the book concludes with an original analysis of the role of tourism influencing the cultural and political values of tourists when operating in a different societal context.

## 1.1 Part I: Socio-economic Impacts of Tourism

There is no tourism without tourists. Thus, propensity to travel—or the willingness of a person to be a tourist—is one of the most fundamental concepts of tourism research, deeply rooted into the core of tourism demand, with obvious influences on the economic impacts of tourism. In the first article of this chapter, Ivan Kožić, Josip Mikulić and Damir Krešić discuss, at the macro level, three of the most relevant socio-demographic determinants of propensity to travel (age, education and income), by conducting an empirical analysis based on nonparametric techniques. Among other interesting results, the authors find that age is becoming less important for the travel decisions in contemporary societies, taking into consideration their data for 28 European countries.

The seasonability of tourism activities—and the resulting fluctuations in local economies and employment—is a major issue for many tourism destinations, mostly when the local economic structures are strongly dependent on tourism. The significant role of the tourism sector in Turkey—reflected by its economic importance, but also by the prominent role of tourism within the national and regional development plans—motivated Selim Yıldırım, Inci Oya Coskun to analyze this crucial aspect of the socio-economic impacts of tourism, combining established methodologies with a new approach, with relevant policy implications.

As a multi-sector activity, integrating products and services from other industries, tourism impacts different aspects and sectors of a local or regional economy.

The importance of an adequate assessment of these impacts is stressed in the third chapter by Jeroen Klijs, Jack Peerlings, Tim Steijaert and Wim Heijman. The authors compare and rank four different methods to generate a regional input–output table, based on location quotients, which contribute to rank the resulting output multipliers and to contribute to a more precise and reliable estimation of the impacts of tourism on regional economies.

An important application of the analysis of the impacts of tourism is related to the programme of cultural events, often supported by local or regional authorities and requiring a careful evaluation of the expected benefits for the region. In the fourth chapter, Denise Hawkes, James Kennell, Paul Booth and Emma Abson explore the impact of motivation factors on spending at a London local authority's programme of cultural events. Using motivational and demographic data to develop a regression analysis, the authors identify large variations in spending by different motivational groups of attendees, suggesting ways in which these public sector events can be developed and marketed.

The final chapter of this part of the book focuses on the impacts of tourism in rural areas, which is becoming increasingly important in contemporary societies, featuring most of the historic, culture and heritage assets that attract tourists for its authenticity, combined with proximity of nature and the enjoyment of a relaxed atmosphere. Nancy Chesworth stresses the high economic impacts of these activities on small communities, discussing some relevant problems related to this form of tourism, with a view on new solutions for public policies.

## 1.2 Part II: Innovation and Competitiveness in Tourism

In a globalized world, tourism is becoming more important for local economies but it also implies higher levels of competition between destinations, requiring innovative products and services that differentiate each destination from the others. In Chap. 6, Elisabeth T. Pereira provides an international analysis of the relation between the levels of tourism competitiveness of different countries and their performance in terms of output of different types of innovations.

The importance of human capital for innovation and the competitiveness of tourism services is addressed by María Tugores and Dolores Garcia in the second chapter of this part of the book, focusing their attention on the hotel sector of the Spanish island of Majorca, a major Southern European sun-and-sea destination. Their results show that different education and training levels, and also the manager's attitude towards human capital, positively impact most of the performance indicators analysed to assess competitiveness.

A specific approach to the role of leadership and emotional intelligence in the motivational process of employees in the hotel industry is offered by Barbara Sensen in the next chapter of this part. Developing and presenting a structural equation model based on a quantitative research among employees and leaders of the hotel industry in Germany, the author identifies a positive relation between

leadership and motivation and discusses the potential role of emotional intelligence in order to improve the motivation and performance of human capital.

Nuttapong Jotitasthira, Suebsanti Bhutibhunthu and Ichayaporn Chuaychoo address the specific situation of the human resources involved in the Meeting and Convention sector in Thailand, currently facing an increasing competition resulting from the development of similar services in neighbouring countries. The authors identify the qualification of human resources as an essential factor to reinforce the competitive position of the country and propose a set of crucial key characteristics that human resources should develop to work in this activity.

The final chapter of this part is focused on the importance of strategic analysis and management in order to deal with the economic, technological or cultural transformations influencing the evolution of contemporary tourism organizations. Susana Teles, Manuela Sarmento and Álvaro Matias analyse these aspects within the air transport sector, which is also influenced by important changes in regulatory aspects, namely with the emergence of low cost airlines. With a view to the managerial implications and the human resources management, the authors define a set of decisive criteria for strategic development in the sector.

## 1.3 Part III: Tourism Destinations

The final part of the book is focused on specific dynamics observed at the destination level. In the first chapter, Alfonso Vargas-Sánchez and Francisco J. Riquel-Ligero apply a longitudinal analysis to golf tourism in Andalucia, an important destination for this tourism segment in the South of Spain. With a view to policy recommendations, the authors discuss the economic impacts, social legitimacy, environmental consequences and institutional pressures arising from this activity, aiming to promote a responsible behaviour from the agents involved.

Transport networks are extremely important for tourism destinations and different processes of competition between diverse modes of transportation often emerge. Massimiliano Castellani, Pierpaolo Pattitoni and Lorenzo Zirulia analyse the effects of intermodal competition on a time series of passenger flows to the Emerald Coast (Italy), based on a conceptual framework that suggests negative correlations of arrivals, both within and across transport modes, during low-season periods, and positive correlations during high-season periods. This conceptual framework was supported by the results of Threshold Vector Autoregressive models.

The importance of location and the determinants of business creation in the Spanish hospitality industry are discussed by Rubén Lado-Sestayo, Milagros Vivel-Búa and Luis Otero-González. By means of different econometric models, the results obtained identify how different tourist destinations are accessible to the entry of new competitors, pointing out the mechanisms through which the incumbent firms reduce the entry of competitors. Their main contribution relates to the measurement of anti-competitive practices effects on the entry of competitors and

the identification of the factors that act as drivers and as entry barriers to business creation.

Two chapters of this book are next focused on the resident's perceptions of tourism impacts. In the first case, Laurentina Vareiro and Raquel Mendes focus their attention on the impacts of the World Heritage Site classification of the historic centre of the city of Évora (Portugal), including an analysis of local residents' perceived tourism impacts. Based on factor analysis applied to data collected in a survey to residents of the city, the authors conclude that the local community has a strongly positive perception of the World Heritage Site classification, while the perception of the impacts of tourism is different according to the place of residence of each person.

In the following chapter, Paula Cristina Remoaldo, Laurentina Vareiro, José Cadima Ribeiro and José Freitas Santos investigate the residents' perceptions of the impacts of hosting a major cultural event—the 2012 European Capital of Culture—in the city of Guimarães (Portugal). Based on two surveys applied to residents in the city (before and after the event), the results of a factor analysis reveal significant differences between the perceptions identified before and after the event, both in terms of its positive and its negative impacts.

In the final chapter of the book, Konstantina Zerva, Karima Kourtit and Peter Nijkamp offer an original approach to the motivations and behaviours of tourists in a destination, analysing how they are attracted by the observation and speculation about the behaviours of other tourists. Focusing their analysis on the visitors of the Red Light District of Amsterdam, the authors evaluate how the perceptions of visitors regarding the particular characteristics of the area (free access for adults to prostitution and soft drugs) are influenced after observing and receiving information about the motives and regulations applying to those activities. The analysis identifies relevant shifts on the perception of visitors regarding these questions, revealing an original example of the importance of tourism for educational purposes.

# Part I
# Socio-Economic Impacts of Tourism

The first part of this book is concerned with the analysis and assessment of quantitative tourism impacts on local economies. Using appropriate methodologies to quantify different aspects of tourism activities, all chapters provide and discuss policy implications of the results obtained. Questions related to the identification of different patterns of propensity to travel among different tourism issuing markets (one of the most fundamental items in tourism research and deeply rooted in the core of tourism demand), the effects of seasonal fluctuations of demand and the impacts on the regional socio-economic conditions (especially important in tourism-dependent regions), the multiplier effects on the local economies arising from different sectorial economic relations (assuming tourism as a multi-sectorial activity), the impacts on local communities of the organisation of major cultural events (a prominent element of contemporary territorial branding strategies), or the potential benefits of tourism for small rural communities are all analysed and put in perspective.

# Chapter 2
# Propensity to Travel: What Is the Macro-Data Telling Us?

**Ivan Kožić, Josip Mikulić, and Damir Krešić**

## 2.1 Introduction

Propensity to travel, loosely defined as the willingness of a person to be a tourist, is one of the most fundamental concepts in contemporary tourism research. It is deeply rooted into the core of tourism demand, and draws the attention of actors on tourism supply-side. Nonetheless, it is fairly evident that its significance remains undervalued as is demonstrated by the scarcity of the relevant literature. Still, there are good reasons for that scarcity.

First of all, it should be noted that the propensity to travel is a concept which is not easily measurable because its measurement requires high quality data, which can only be collected via in-depth personal interviews. That is, sophisticated primary research is necessary to uncover a manifestation of the concept. Furthermore, by following such a research, there is, naturally, a significant cost associated with it. The high cost of research can be viewed as being one of the main reasons why microeconomic studies about the propensity to travel is not common. Equally, macroeconomic studies about the propensity to travel are even less common.

The reason why macroeconomic studies about the propensity to travel are scant is quite simple; to date, there was no appropriate micro-data which could be used for the compilation of macro-data. In 2011, however, the European Parliament and the European Council have adopted a regulation by which the Member States are obligated to compile annual data about trips taken by its residents (Regulation (EU) 692/2011). Accordingly, data about tourism participation for personal

I. Kožić (✉)
Institute for Tourism, Zagreb, Croatia
e-mail: ivan.kozic@iztzg.hr

J. Mikulić • D. Krešić
Department of Tourism, Faculty of Economics and Business, University of Zagreb, Zagreb, Croatia



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_2

purposes of EU inhabitants have been recently published by Eurostat. Thus, for the first time there exist relatively high-quality data available for macro-level analysis of propensity to travel.

Generally, macro-level analysis, i.e. macroscopic examination, is a specific type of analysis with several advantages over the analysis at the micro-level. For instance, the statistical moments of a sample of macro-data represent average values of all surveys in the sample. Therefore, the conclusion bias, due to subjective errors made during individual interviews in the primary data collection, is significantly reduced. In addition, macro-level analysis offers a much broader representation of the examined phenomenon, which can reveal facts that cannot be recognized by an examination of partial sets of micro-data. Finally, macro-data serves as a departing point for any kind of deductive analysis which leads to conclusions about a particular phenomenon that holds, even when its particular characteristics are unknown. In other words, a macro-data approach is much better suited for the development of a general theory about a specific phenomenon.

To the authors' best knowledge, this study is the first to use a macroscopic examination of the socio-demographic determinants of propensity to travel by using data from different countries.

For this purpose the EU28 data was used. Two out of the 28-member states, Denmark and Sweden, were, however, excluded from the analysis due to a lack of appropriate data. In this process, the focus was on three most frequently examined determinants of tourism demand:

1. Age;
2. Educational level; and
3. Income.

Particular attention was paid to the variable 'age', as it emerged that age had a noticeably complex influence on travel propensity, which was also confirmed in a number of available case studies, and is confirmed by this study's analysis. The age, which is traditionally considered as one of the most important determinants of propensity to travel, seems to be changing its role. In this context specifically, it would appear that age has a great potential to be an object of a more vigorous investigation in the future, where its specific role and chameleon-like character in the determination of propensity to travel should be more closely scrutinized.

The rest of this chapter is structured as follows. In the next section a review of the relevant literature will highlight existing studies that have dealt with determinants of travel propensity. This is then followed by a macroscopic overview of tourism and travel in the EU. This study's macroscopic analysis of socio-demographic determinants of travel propensity is then presented in Sect. 2.4, while concluding remarks are presented in Sect. 2.5.

## 2.2 Literature Review

### *2.2.1 The Concept of Propensity to Travel in Tourism Demand Studies*

Studies that have focused on the determinants of tourism demand represent a significant share of the tourism economics literature. In reference to the individual determinants of travel demand, it is widely accepted that demand for tourism is a function of socio-demographic variables which involve gender, education, age, marital status, family configuration, and income (Lawson 1994). Among these determinants, age-related variable(s) in travel and tourism research are, notably, the most frequently used socio-demographic characteristic in demand studies (Brida and Scuderi 2013). Studies in this domain often link the influence of age to the family-life cycle (FLC) theory, according to which an individual's behavior may significantly differ at different stages of one's life (Zimmerman 1982; Oppermann 1995). That theory can serve as a logical argument for similar studies where it is expected that people of different ages might have different travel habits, which arguably leads to conclusions that age-related variables influence travel participation and frequency.

When analyzing demand studies from the travel and tourism literature, a plethora focuses on travel expenditure, while as already noted, studies on travel participation and frequency, or the propensity to travel, are scarce. In this context, Alegre and Pou (2004) argued for the need to make a clear distinction between travel expenditure and travel participation, because decisions about travel expenditure have an inherent two-step nature; in the first step, the potential tourist decides whether to travel or not to travel at all, while it is in the subsequent step, step two, when the traveler decides how much to spend on the travel. Therefore, the second step, expenditure level, is conditional on the first one: the decision to travel or to take the trip. This approach was already applied in earlier studies by Hageman (1981) and, in later studies, by Jang and Ham (2009). What is important to note here is that each of the two steps could be, but must not necessarily be, influenced by the same determinants. Alegre and Pou (2004) further noted that even if the determinants were the same, they still may not exhibit the same influence on the participation and expenditure decisions. In a later study, these authors extend their model of travel expenditure decisions by an important third step (Alegre and Pou 2006). Besides travel participation and travel expenditures, *travel frequency* represents another critical aspect of tourism demand which may possibly underlie the influence of a distinct set of determinants. To test this proposition, Alegre and Pou used their updated model to empirically test Spanish household data. Their results revealed that most socio-demographic variables only have explanatory power regarding the participation decision, while all the variables that affect the frequency of travel decision also explain the participation decision.

### 2.2.2 *Determinants of Propensity to Travel*

In an early study using US household data, Hageman (1981) has found that income, family composition and educational attainment, were significant determinants for both travel propensity (probability) and travel expenditure. In their study of travel determinants using Spanish household data, Alegre and Pou (2006) concluded that habit, i.e. previous travel, and disposable income, were the two most relevant factors explaining both the travel participation decision and travel frequency.

The level of education also exhibits a significant positive effect, while age shows an inverted U-shaped relationship with travel propensity. This U-shaped relationship was detected earlier by Alegre and Pou in their 2004 study. Interestingly, the authors stated that, "*. . .as aged households travel less frequently than others, it is common to infer from cross-section data that an aging population will suppose a reduction of the overall future propensity to travel*" (Alegre and Pou 2004, p. 130). The authors also confirmed a high explanatory capacity of income and, as expected, its positive effect. After income, the second most important variable regarding explanatory capacity of propensity to travel is the level of education. The effects of this variable were, as expected, positive and the authors suggested that the "*. . .existence of a high degree of segmentation among the population, according to their level of education, acts as a type of cultural barrier in terms of access to tourism consumption* (p. 139)". It can then be argued that with higher levels of education, the sensitivity of travel propensity to variations in income decreases.

Sakai et al. (2000) have conducted a similar study about the propensity to travel overseas among Japanese citizens. The authors used data as reported by the Japan Travel Bureau. The results of their study revealed that propensity to travel was decreasing with rising age, in contrast to the largest travel propensity share among Japanese who were in their 20s. At the same time, the smallest travel propensity share was present among Japanese who were younger than 20. Therefore, this relationship can also be referred to as inverted U-shaped, thereby being positively skewed. However, it has to be noted that travel decisions have probably not been made autonomously by the young travelers themselves, but by their parents. Thus, the authors concluded that propensity to travel was generally declining with rising age. The authors were cautious to highlight that age was not the only determinant of Japanese demand for international travel. Their study also revealed that membership in specific year-of-birth groups was another important determinant, with propensity to travel being significantly higher among younger birth cohorts, although one can argue that as a result of rapidly ageing population, this determinant might shift or slide toward older age groupings.

Collins and Tisdell (2000, 2002) conducted an analysis regarding the Australian outbound travel market to assess segments of different age-groups in the overall number of short-term departures. They used the 1991–1994 travel data from the Australian Bureau of Statistics (ABS). In their study, the authors segmented the number of trips across different age groups for different travel purposes, such as: holiday, visiting friends and relatives, business, conference/convention, work, and

education. Their findings revealed some interesting differences in segments relevant to both age and travel motivation. Here, again, the relationship between age and travel participation emerges to be inverted U-shaped, but with differing peak age-levels across the different travel motives. Specifically, their findings indicate that travel participation rises rapidly at first with age, and then declines as rapidly after peaking between 45 and 54 years of age. However, the authors argued that age-related functions of overseas travel by Australians was likely to change in the longer term. On the one hand, the "echo effect" of past immigration from Europe to Australia is likely to decline, since the number of immigrants to Australia is declining; and the post-World War II immigrants are ageing. On the other hand, the number of immigrants from Asia has grown in the same time, which is already having an influence on visits to Asia by Australians.

Due to the ageing population in most of the developed countries, senior citizens world-over wield quite an economic clout as travel consumers. This, among other disciplines, prompted a rush of studies from travel and tourism that focused on the senior traveler segment. For example, Jang and Ham (2009) conducted a comparison of baby boomers to older seniors using US household data from 2005. Not surprisingly, their results revealed that senior citizens were less likely to travel with increasing age, which may be attributed to mobility challenges which seniors often have to face in advancing years. Similar findings were reported by Fleischer and Pizam (2002) in a survey of elderly Israeli travelers. These authors used data from a larger national surveys that have examined tourism activities of the Israeli population aged 55 and over. Their results showed that leisure travel participation in the boomer segment decreased until the retirement age was achieved. Thereafter, the participation rate rose until another age-level was reached, i.e. 74 years of age. After 74-years of age, travel participation decreased, which seems to indicate a deterioration of health which makes it difficult to travel (Jang and Ham 2009). In the same study, the level of education and income were found to have a significant positive influence on the seniors' propensity to travel. These results are also consistent with findings from several previous studies by Zimmer et al. (1995), Hong et al. (2005), and Hong et al. (1999).

Several authors who investigated the influence of age on travel behavior, in general, or travel propensity in particular, emphasized the importance of considering generational or cohort effects in efforts to assess the influence of age on future travel participation. In simpler terms, the question is whether or not future generations will travel as much as earlier ones, when assessing the influence of age of future generations' propensity to travel?

In this context, Zimmerman (1982) noted that changes between successive generations might affect tourism/travel patterns. These may be triggered by periodic effects, referred to by Zimmerman (1982) as being "*. . .general changes over time due to seasonal events and other specific events like wars and acts of terrorism*". These effects, which incidentally were also confirmed by Sakai et al. (2000), may be so significant that they mask the true effect of age. This is because age and generational effects do not have to be positively correlated, as eloquently argued by Alegre and Pou (2004), by saying "*. . .it is thus not obvious*

*that an aging population will necessarily imply a reduction of the overall propensity to travel*". In agreement with Sakai et al. (2000) and Alegre and Pou (2004) confirmed the existence of a cohort effect. The results of their study have clearly indicated that the older the generation is, the smaller is their probability of pleasure tourism consumption. In another study of Japanese travelers, age and cohort membership were found to be significantly connected to destination activity participation patterns (You and O'Leary 2000). To conclude, these researchers posit that the cohort effect can compensate for the negative effect of a greater proportion of aged people in global demand/supply for tourism. Understandably, to identify such complicated generational or cohort effects, repeated cross-section or panel data are going to be needed (Deaton 1997).

## 2.3 Macroscopic Overview of Travel and Tourism in European Union

### *2.3.1 Significance of Tourism in the European Union (EU)*

In the EU, tourism is an exceptional economic activity because it influences, touches, and connects every member-state and its people in some way. It contributes significantly to the economic growth and the GDP of EU member-countries, as well as to the socio-economic development of the less developed, rural and peripheral regions of the EU. The European Commission (2013) stated that Travel and Tourism was the third largest economic activity in Europe, immediately after Distribution and Construction. According to data available from the WTTC (World Travel and Tourism Council (2014)), in 2013, the direct contribution from travel and tourism to the EU's GDP was 3.1 % (US$663.7 billion), while the total contribution, direct and indirect, from tourism to the European GDP was 8.7 % (US$1874.5 billion). At the same time, tourism is largely attributed to job and employment creation, particularly during summer. WTTC estimated that the direct contribution from travel and tourism to employment was 3.1 % (11.9 million jobs) and the total contribution from travel and tourism to employment, was 8.5 % (37.9 million jobs). It is important to emphasize here, that tourism, compared to other economic activities, employs an above-average number of persons that belong to socially disadvantaged groups, such as young people with little education, disadvantaged women, people with disabilities, and people who have lost their regular jobs. Finally, visitor exports generated 5.3 % of total exports in 2013 (US$530.1 billion), while travel and tourism related investment amounted to 4.6 % of total investments in 2013 (US$181.2 billion).

Besides being a key driver of economic growth, travel and tourism also contributes to the sustainable development of EU; to social and regional cohesion of the EU member countries; to protection of natural and cultural heritage; and it has a visible influence in promoting peace, partnership and intercultural dialogue within

the EU member states. These qualities are quite often recognized by the European Commission *vis-à-vis* EU-funded projects that are aimed at furthering tourism development to help: alleviation of poverty; bring together NGOs and governments on issues of tourism development in poorer areas of the EU; environmental protection; affect a more balanced regional and intra-regional development; protection of cultural heritage; and to help bring together disadvantaged and marginalized groups.

Leaving the economic impact of travel and tourism aside for a moment, the other important aspect of the macroscopic analysis of travel and tourism in the EU is the assessment of the physical flows of tourists in EU countries, that is, the number of recorded tourist arrivals and room-nights in commercial accommodations. According to data from the UNWTO (2014), in 2013, European countries recorded 562.8 million tourist arrivals, which accounted for more than one half or 51.8 % of the world's international tourist arrivals. At the same time, the data available from Eurostat (2014b) showed that number of tourist overnights amounted to 2.6 billion in 2013, and EU member-country residents accounted for 55 % of the total number of officially recorded overnights.

Without overstating the obvious, it seems more than reasonable to argue that tourism is an extremely significant economic and social activity in Europe as a whole, which makes perfect sense for exploring the macro-determinants of propensity to travel on a sample from European countries.

### *2.3.2 Travel Data of EU Residents*

This study utilizes official annual data available from Eurostat, describing EU28 residents' (15+ years of age) characteristics of tourism demand, including: (1) participation in tourism travel, (2) number of trips, (3) number of overnights and (4) tourism expenditure. Furthermore, the study used only one part of the available data, specifically the data about participation in travel, i.e. residents, who have made at least one overnight stay at a destination other than at the place of their permanent residence. Data covered only trips made for personal purposes and did not include business-related travel. A breakdown by destination of the travel and by the socio-demographic characteristics of the tourists is also provided.

The data was analyzed for socio-demographic characteristics of the population for every country that was included in the sample, and in order to determine the propensity to travel, this study used data based on the total number of trips, whether they were domestic or outbound. However, before going on further, perhaps it is prudent to briefly highlight how Eurostat collects its data.

At Eurostat, data is firstly collected by the national tourism authorities and/or other affiliated authorities of the EU member-countries which is then incorporated into the Eurostat data base once per year. This data is collected on a monthly or quarterly basis via a sample survey and, to a lesser extent, via border survey, and is

compiled in accordance with the methodology established by EU regulations, which provide for high quality and comparability of the collected data.

In order to ensure high quality of data for publication and distribution, Eurostat does not publish data which is based on 20 or less sample observations and data based on 20–49 sample observations is marked as potentially unreliable due to the small number of observations. Thus, only samples larger than 50 observations is officially considered as sufficiently reliable. The possible source of data error is due to memory loss effect and to the reluctance of the respondents to reveal some personally sensitive information, such as total trip expenditure. Additionally, simple variables such as the number of trips have lower sampling errors compared to the more complex variables, i.e. number of trips by destination. When the data is received by Eurostat, it is then aggregated, and in the case of missing data, an algorithm is used to input missing values, when this is possible and appropriate. All statistical concepts and definitions used for data collection are defined and described in the *Methodological manual for tourism statistics* (Eurostat 2014a), which provides guidelines for achieving harmonized and comparable tourism statistics among all EU 28 member countries.

## 2.4 Socio-demographic Determinants of Propensity to Travel: Which Ones Should Really Matter?

The sample in this study contained macro-data about net propensity to travel, and socio-demographic profiles from the 26 member-countries of the European Union. As noted earlier, two EU members, Denmark and Sweden, were not included in the analysis due to lack of appropriate data. All data were publicly available via the Eurostat website. One of the major advantages of conducting a macro-data analysis is the fact that macro-data is less prone to subjective mistakes made by individuals when surveyed or interviewed.

The focal concept of our analysis was the net propensity to travel. A straightforward definition of the concept can be found in Candela and Figini's (2010, p. 43) textbook, where these authors define the net propensity to travel as the percentage of tourists in the total population of the analyzed region of origin. In our study, it is important to mention that only those trips that were conducted for personal purposes were taken into account. This is important because the focus of this study was on 'true' willingness (of subjects in the sample) to travel, meaning that trips, which have been initiated by any kind of professionally-related needs, or other needs, were not included in this study. In other words, the analysis included only those tourists/travelers who were motivated to travel for pleasure or leisure only.

Since the analyzed sample contained fewer than thirty observations, it was appropriate to consider the sample as being small, meaning that nonparametric statistical analysis techniques had to be used. Therefore, descriptive statistics and Spearman's rank correlation coefficient were used in this study to determine the

**Table 2.1** Statistical association between net propensity to travel and its socio-demographic determinants

| Socio-demographic determinant | Proxy measure of socio-demographic determinant | Spearman's rank correlation coefficient | Test of significance of correlation coefficient ($p$-value) |
|---|---|---|---|
| Age | Percentage of population aged 65 or over | −0.34 | 0.086 |
| Education | Percentage of population with tertiary education attainment | 0.54 | 0.004 |
| Income | GDP per capita adjusted by purchasing power parity (PPP) | 0.72 | 0.000 |

degree of statistical association between the main socio-demographic factors: age; education; and income, on the one hand, and net propensity to travel, on the other hand.

The Spearman's rank coefficient is an appropriate measure when using ordinal data and when normality assumptions are violated. The correlation coefficients with their respective $p$-values are provided in Table 2.1.

The results in Table 2.1 shows that 'education' and 'income' have a relatively strong and significant degree of statistical association with propensity to travel, with both coefficients having a positive value, which is as was expected. In the case of 'age' however, the degree of statistical association is lower and insignificant at the standard 5 % level, suggesting that the effect of age on propensity to travel is something that needs further investigation.

In this context, it was seen as prudent to investigate the net propensity to travel of different age groups, which is presented in the Fig. 2.1. The results show the net propensity to travel of three different age groups: 15–44 years old, 45–64 years old, and 65 or over.

As Fig. 2.1 reveals, the net propensity to travel of the age-group 44–65 is relatively close to the net propensity to travel of the age group 15–44. Also, the net propensities to travel suggest that there is a general tendency for faster decline to travel, only when a person reached 65. In addition, it can also be noticed that the difference in net propensity to travel between the age-groups 15–44 and 45–64 varies across countries, which leads to the following question: What is the degree of statistical association between the difference in net propensity to travel of two younger age groups, and the net propensity to travel of the age group 65+? In other words, do persons aged 65+ travel more in those countries where the net propensities to travel are more balanced between different age groups, and, if so, does this depend on the standard of living? If they do, and if it is more obvious in the higher income countries, could this confirm the diminishing significance of the variable 'age'? In that case it could be proposed that the variable 'age' is gradually losing its influence due to the rising standard of living.

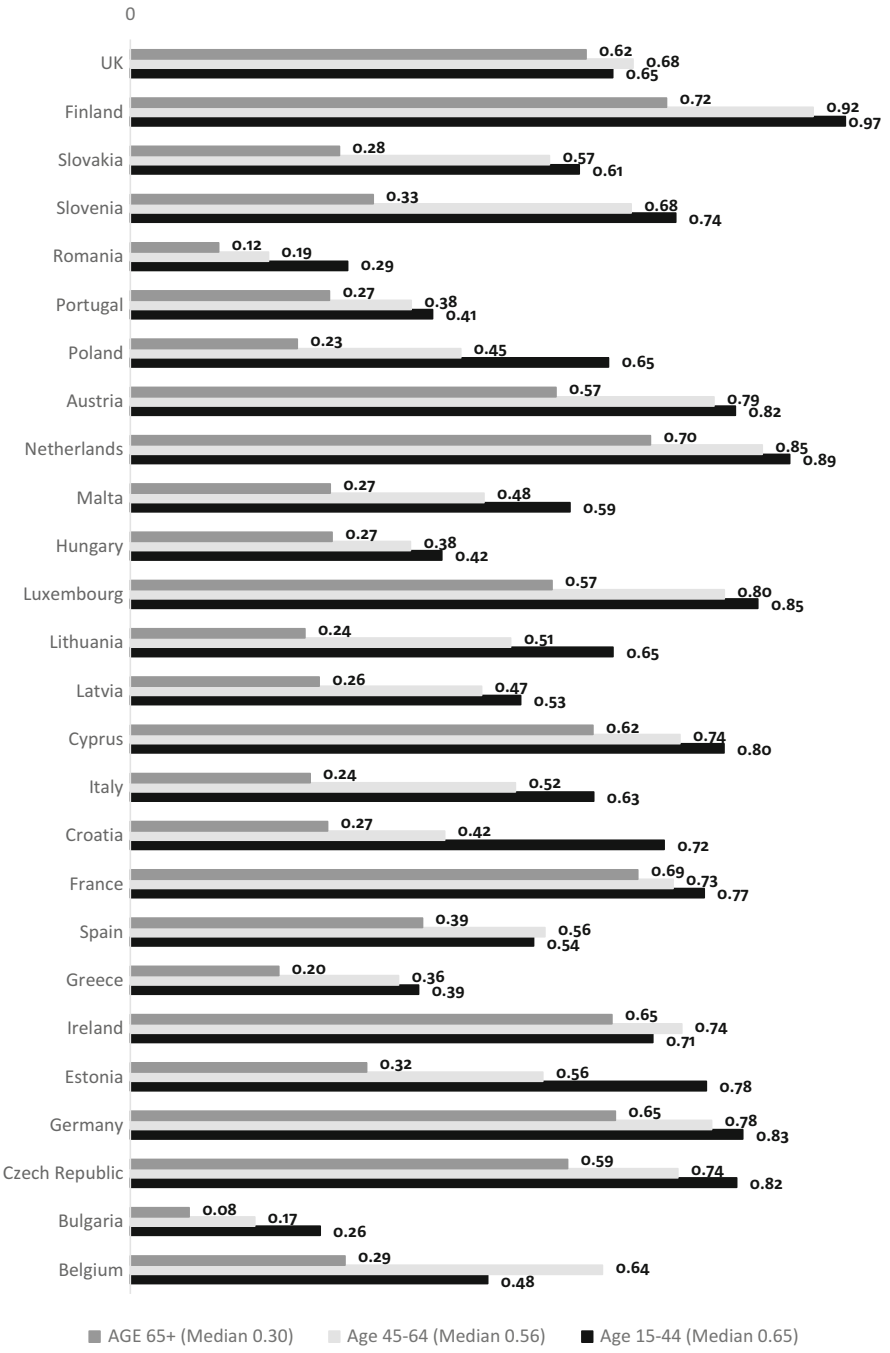


**Fig. 2.1** Net propensity to travel of different age groups

**Table 2.2** Statistical association between the net propensity to travel of age-group 65+ and two factors that could explain its trend

| | Spearman's rank correlation coefficient | Test of significance of correlation coefficient ($p$-value) |
|---|---|---|
| Differences in net propensity to travel between age group 15–44 and 45–64 | −0.42 | 0.031 |
| GDP per capita adjusted by purchasing power parity (PPP) | 0.77 | 0.000 |

To seek an answer to these questions, the Spearman's rank correlation coefficient between age-group 65+ and the differences in net propensities to travel between the two younger age groups was calculated. In addition, we also calculated correlation coefficient between age group 65+ and GDP per capita, adjusted by purchasing power parity (PPP), as shown in Table 2.2.

It can be seen in Table 2.2 that the net propensity to travel of elderly people was higher in countries with greater parity of net propensity to travel between different age groups, in which case, the Spearman's rank correlation coefficient is negative, moderate and significant. What this means is that travel habits of elderly people depend on the overall travel habits in their particular society. Besides, there is a relatively strong evidence that net propensity to travel of elderly people is growing along with the standard of living. In this case, the Spearman's rank correlation coefficient is positive, rather high, and statistically significant. This finding strongly supports the thesis that elderly people in societies with a higher standard of living travel more.

## 2.5 Conclusion

This chapter reports the results of an explorative study analyzing the propensity to travel at the macro-level using macro-data from different EU member-countries about net propensity to travel and socio-demographic profiles.

The central research question guiding the study was: "What can the macro-data tell us about propensity to travel and its determinants?" In particular, this study focused on three of the most frequently examined socio-demographic determinants of propensity to travel: age; education; and income. Due to the small size of the analyzed sample, nonparametric statistical methods were used, primarily Spearman's rank correlation coefficient significance testing.

The major findings of this study can be summarized as follows:

1. The effects sizes of the different socio-demographic determinants are neither equal nor stable. As confirmed in earlier studies, income exhibits the most powerful effect and should thus be considered the most relevant determinant of propensity to travel. Such a conclusion is in line with the widely

acknowledged notion that the standard of living is the main determinant of travel habits of societies, which is empirically confirmed by many studies about tourism demand (see Crouch 1994; Lim 2006; Song and Li 2008). However, it still remains unclear to which extent the effect of income is stronger than the effects of the other two socio-demographic determinants of propensity to travel.
2. This explorative study provides empirical evidence that adds to the discussion on the relevance of age on pleasure travel habits. Expectancy of life is constantly growing and elderly people are apparently healthier than ever. Combining these facts with the constantly growing standard of living, it is likely that age will become an increasingly less important obstacle to travel in the future.
3. The socio-demographic determinants of propensity to travel should not be held isolated of each other. Likewise, their effects should be considered mutually, as it is likely that their mutual effect differs from the simple sum of individual effects. In addition, some determinants may exhibit significant moderating effects on the relationship between other determinants and propensity to travel. Accordingly, future research studies should focus on the interplay between different determinants of travel propensity.

Perhaps one of the most interesting findings in this macro-data analysis is the diminishing influence of the variable 'age' on propensity to travel. As reported in the literature review, age is a very specific socio-demographic factor with a complex influence on travel propensity. The variable 'age' certainly matters, but the extent and nature of its influence remains rather unclear. Several earlier studies discuss the inverted U-shaped relationship of age and propensity to travel (e.g. Alegre and Pou 2004, 2006). Although the macro-level analysis did not confirm the inverted U-shape, it revealed that ageing is associated with reduction in propensity to travel. In particular, the age group 65+ was characterized by the lowest net propensity to travel. However, further investigations of differences in net propensity to travel of elderly people across countries showed that it also depended on the overall travel habits of societies, and upon the standard of living, where elderly people in countries with higher standard of living had higher net propensity to travel. Furthermore, elderly people also traveled more in countries where the difference in net propensity to travel between the two other age groups was lower. One can then deduct that if travelling is an important habit of middle-aged people as well as of the young people in a society, then it can be expected that elderly people will also have a relatively high net propensity to travel. Hence, it could be argued that travelling for pleasure is becoming a highly desirable way of spending free time. This phenomenon is not only relevant to young people, but also very relevant to middle-aged and elderly people, and a phenomenon which is influenced by a rising standard of living. Finally, it is hardly surprising that income seems to be the most important determinant for net propensity to travel.

As outlined earlier, it would be interesting to analyze differences in the form of relationships—age and propensity to travel—across different countries, as it would be interesting to reveal to what extent the relationship between age and propensity to travel is influenced by the standard of living, or even some other important

determinants of tourism demand. Future studies may focus on this kind of moderating effects in order to uncover the true influence of the age variable on travel propensity, and thus to better understand the behavior of the aging tourists.

## References

Alegre J, Pou L (2004) Micro-economic determinants of the probability of tourism consumption. Tour Econ 10(2):125–144

Alegre J, Pou L (2006) An analysis of the microeconomic determinants of travel frequency. Department of Applied Economics, Universitat de les Illes Balears

Brida JG, Scuderi R (2013) Determinants of tourist expenditure: a review of microeconometric models. Tour Manag Perspect 6:28–40

Candela G, Figini P (2010) The economics of tourism destinations, 2nd edn. Springer, Berlin

Collins D, Tisdell C (2000) Changing travel patterns with age: Australian evidence and the need to modify current theories. Aust J Hosp Manag 7(1):15–26

Collins D, Tisdell C (2002) Age-related lifecycles: purpose variations. Ann Tour Res 29 (3):801–818

Crouch GI (1994) The study of international tourism demand: a review of findings. J Travel Res 33 (1):12–23

Deaton A (1997) The analysis of household surveys: a microeconometric approach to development policy. World Bank and John Hopkins University Press, Baltimore

European Commission (2013) Challenges and opportunities for sustainable tourism development. United Nations Sustainable Development Knowledge Plat from: http://sustainabledevelopment.un.org/content/documents/4119I.LELONEK_HUSTING_UN%20Expert%20meeting_Final.pdf. Retrieved 28 Apr 2014

European Union (2011) Regulation (EU) 692/2011. European Union, Bruxelles

Eurostat (2014a) Methodological manual for tourism statistics. Publications Office of the European Union, Luxembourg

Eurostat (2014b) Record level of 2.6 bn nights spent in tourist accommodation in the EU28 in 2013. Eurostat Press Office, Luxembourg

Fleischer A, Pizam A (2002) Tourism constraints among Israeli seniors. Ann Tour Res 29 (1):106–123

Hageman RP (1981) The determinants of household vacation travel: some empirical evidence. Appl Econ 13:225–234

Hong GS, Fan JX, Palmer L, Bhargava V (2005) Leisure travel expenditure patterns by family life cycle stages. J Travel Tour Market 18(2):15–30

Hong GS, Kim SY, Lee J (1999) Travel expenditure patterns of elderly households in the US. Tour Recreation J 24(1):43–52

Jang SS, Ham S (2009) A double-hurdle analysis of travel expenditure: Baby boomer seniors versus older seniors. Tour Manage 30(3):372–380

Lawson R (1994) Demographic segmentation. Tourism, marketing and management handbook. Prentice-Hall, New York, pp 311–315

Lim C (2006) A survey of tourism demand modeling practice: issues and implications, International handbook on the economics of tourism. Edward Elgar, Cheltenham, pp 45–72

Oppermann M (1995) Travel life cycle. Ann Tour Res 22(3):535–552

Sakai M, Brown J, Mak J (2000) Population aging and Japanese international travel in the 21st century. J Travel Res 38(3):212–220

Song H, Li G (2008) Tourism demand modelling and forecasting: a review of recent research. Tour Manage 29(2):203–220

UNWTO (2014) UNWTO world tourism barometer. UNWTO, Madrid

World Travel and Tourism Council (2014) Travel & tourism in Europe – economic impact 2014 Europe. World Travel and Tourism Council, London

You X, O'leary JT (2000) Age and cohort effects: an examination of older Japanese travelers. J Travel Tour Market 9(1–2):21–42

Zimmer Z, Brayley RE, Searle MS (1995) Whether to go and where to go: identification of important influences on senior and decisions to travel. J Travel Res 33(3):3–10

Zimmerman CA (1982) The life cycle concept as a tool for travel research. Transportation 11 (1):51–69

# Chapter 3
# Seasonal Dynamics of Demand in Major Turkish Inbound Tourism Markets

**Selim Yıldırım and Inci Oya Coskun**

## 3.1 Introduction

Seasonality is a chronic problem for the tourism industry, in case of 'uneven nature of the demand and the fixed nature of the supply fixed in time and space' (Connell et al. 2015). Jang (2004) argues that seasonality is accepted as an important factor in tourism analysis, in case it creates difficulty in maintaining service quality, inability to cover fixed costs because of high revenues during peak season but low revenues during low season, in addition to vulnerability to events that may negatively affect tourism activity, such as terrorism, safety trouble, and environmental pollution as a result of the peak crowd. As Connell et al. (2015) states, tourism enterprises are fragile to seasonal fluctuations in market and product demand. Hence, peaks and troughs in the number of visitors and tourism revenues, necessitate appropriate strategies and policies in product development and market diversification for the low season. Many companies choose/are obliged to partially or completely shut down during low season due to cost/revenue imbalances.

Hagen-Grant (1998) quotes Butler (1994)'s definition of seasonality as "... a temporal imbalance in the phenomenon of tourism, and may be expressed in terms of dimensions of such elements as number of visitors, expenditure of visitors, traffic on highways and other forms of transportation, employment, and admissions to attractions". Seasonality appears due to some factors such as social pressure or fashion, sporting season, and tradition in addition to natural and institutional seasonality. As Pegg et al. (2012) describe, natural seasonality refers to variations

S. Yıldırım (✉)
Department of Economics and Administrative Sciences, Anadolu University, Eskisehir, Turkey
e-mail: selimy@anadolu.edu.tr

I.O. Coskun
Department of Tourism Management, Anadolu University, Eskisehir, Turkey



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_3

in natural phenomena such as the climate, weather and seasons of the year, where institutional seasonality is primarily linked with public or religious and school holidays in addition to factors affecting travel habits and motivations, such as changing tastes, fashion or social pressure.

Tourism has emerged after the World War II and become a crucial industry for the global economy. International tourist arrivals have reached over one billion in 2013 with a total contribution of USD6990 billion (9.5 % share) to the world economy (UNWTO 2014a, b). For many developing countries, tourism is one of the main sources of income and leads to exports of goods and services, generates employment, and creates opportunities for economic development (Chang et al. 2010). After the enactment of the Tourism Incentive Law in 1982, number of tourist arrivals increased along with the investments and tourism capacity. Turkey became the 6th top tourism destination in the world in 2013 (UNWTO 2014a, b). Tourism is an indispensable source of income for foreign exchange earnings, current account deficits, balance of payments and employment for the Turkish economy. The number of inbound tourists was recorded as 39.2 million, generating USD32.3 billion of tourism receipts in 2013 (Ministry of Culture and Tourism 2014). According to the World Travel and Tourism Council (WTTC) country report (2014), the direct and total contribution of tourism to GDP was USD37.4 billion and USD101.2 billion respectively, an the contribution of tourism to employment was 9 % creating over 2.3 million jobs.

One of the main characteristics of the Turkish tourism industry is seasonality; therefore investigating the causes and effects of this phenomenon is an important concern for future research. Kulendran and King (1997) point out that seasonality is an important feature in the tourist arrivals time series and requires careful handling to better understand the dynamics and implement correct policies. It has long been viewed as one of the most unique and worrisome facets of the tourism industry (Jang 2004; Shen et al. 2009).

Travel for holidays, recreation and leisure accounted for just over half of all international tourist arrivals in the world with a 52 % in 2012 (UNWTO 2013). It is a fact that world tourism is mostly driven by holiday mass tourism. The main characteristics of this type of tourism is that it is usually taken on summer and school holidays, religious fests etc., creating a seasonal concentration on tourism products. The Turkish tourism industry follows the same patterns (Table 3.1). According to Table 3.1, the main purpose of tourists to prefer Turkey as a holiday destination is travel, entertainment, sportive or cultural activities. Turkey is also chosen mainly for holiday tourism and it creates certain conditions in the distribution of tourists throughout a year. Inbound tourist arrivals show strong seasonality, where peak season occurs during the warmer months, covering the period of April to September. In the remaining part of the year, especially during winter, the number of tourists is sparse.

Figure 3.1 shows the monthly tourist arrivals for the period 1985–2013 (Ministry of Culture and Tourism 2014). The positive trend in the number of tourist arrivals has almost no effect on seasonality; hence, the number during low season almost has not changed since 1985. The gap between low and peak season is increasing

**Table 3.1** Inbound tourists' purpose of visit (2009) (TUIK 2009)

| Purpose of visit | Total | % |
|---|---|---|
| Travel, entertainment, sportive or cultural activities | 15,680,337 | 57.41 |
| Visiting relatives or friends | 2,825,952 | 10.35 |
| Education, training | 196,409 | 0.72 |
| Health or medical reasons | 132,677 | 0.49 |
| Religion/Pilgrimage | 124,408 | 0.46 |
| Shopping | 1,142,515 | 4.18 |
| Transit | 636,604 | 2.33 |
| Business | 1,397,262 | 5.12 |
| Other | 955,733 | 3.50 |
| Accompanying persons | 4,222,309 | 15.46 |
| Total | 27,314,205 | 57.41 |

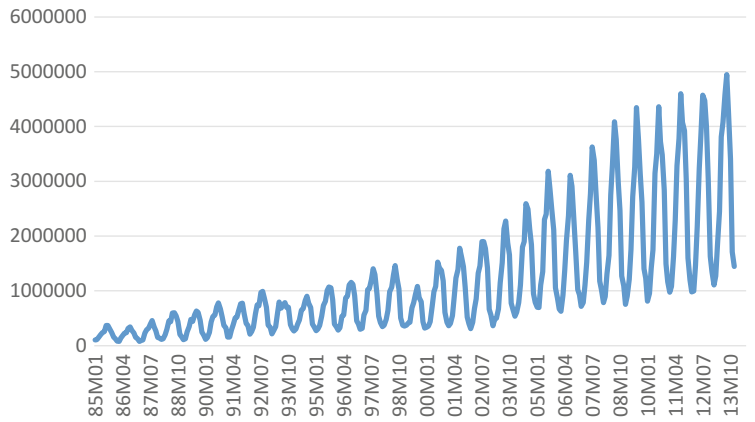


**Fig. 3.1** Monthly total inbound tourist arrivals from 1985 to 2013 (Ministry of Culture and Tourism 2014)

every year, implying that seasonality is a structural problem for the Turkish tourism industry.

Tourist arrivals from the main tourist generating countries for Turkey, namely the Community of Independent States (CIS), Germany, the United Kingdom (UK), France and the Netherlands, are given in Fig. 3.2, with each bar representing one month. These countries generate an average of 52.5 % of the overall tourist arrivals for the period in the last two years. The figure supports the seasonality pattern for Turkey.

The selected countries are well-known sources of tourists during the peak season, preferring Turkey for sun and sand. It is evident from Fig. 3.2 that the same seasonality pattern is valid for all countries. This shows a predominance of sun and sand mass tourism encouraged by the nature of Turkish tourism and investments, climate and holiday seasons, and the activities of tour operators.

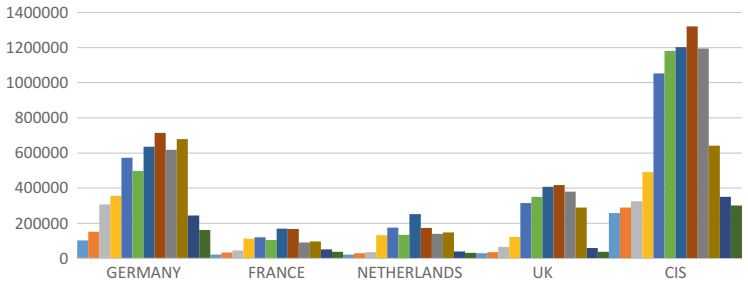


**Fig. 3.2** Monthly tourist arrivals in Turkey from top tourist generating countries in 2013 (Ministry of Culture and Tourism 2014)

Policy makers have long realized the fact that seasonality is a distinctive characteristic of the tourism industry in Turkey, and attempted to address the problem since the 1990s, through implementing development plans. Proposed solutions range from diversifying the tourism product, encouraging investments in less developed areas by incentives, new promotional strategies for alternative tourism types and regions. The final report on tourism strategies for the year 2023 covers these policies, emphasizing on reducing seasonality by diversifying the tourism product (Ministry of Culture and Tourism 2007).

Assuming seasonality as an important factor for Turkish tourism industry, the main purpose of this paper is to investigate the dynamics of seasonality. The structure of the paper is as follows: Sect. 3.2 summarizes the literature on tourism seasonality, Sect. 3.3 explains the conventional and seasonal unit root methodology and Sect. 3.4 describes the data and provides empirical results. Finally, the paper concludes with recommendations on tourism policies concerning seasonality.

## 3.2 Literature Review

Substantial seasonal variations may define many of the monthly or quarterly economic time series as well as the tourism demand series (Gasmi 2013; Hylleberg et al. 1990; Kunst and Reutter 2000). Thus it should be considered in data analysis and model selection procedures. However, there is little consensus on how the seasonal component of a time series is to be handled in empirical analysis (Gil-Alana et al. 2010).

Franses (1998) has revealed out that seasonality was approached as a form of data contamination and the solution was to remove the seasonal component prior to further analysis. This could be a valid approach for deterministic seasonality, recognizing it as a static component that does not vary over time (Shen et al. 2008). As Alleyne (2003), Gasmi (2013) and Gil-Alana (2005) point out, in some occasions, seasonality itself could be the main interest and removing it with

seasonal adjustment techniques may not give reliable results. In that case, stochastic seasonality may occur implying that the seasonal component evolves over time.

The confusion in handling seasonality becomes evident in the relevant literature. Gasmi (2013: 120) proposes a list of various tests to detect the presence of seasonality in a time series:

- Autocorrelations (ACF and PACF graphics)
- Traditional tests (stable and moving seasonality tests based on model analysis of the variance)
- Seasonal unit root tests (Dickey, Hazsa, Fuller (DHF) and HEGY tests)
- Seasonal adjustment methods (TRAMO-SEATS, X-12-ARIMA), and
- Seasonal differentiation and seasonal modeling (SARIMA)

In the literature, seasonality has been studied from many perspectives (De Cantis and Ferrante 2011); such as causes (Butler 1994), economic impacts (Sutcliffe and Sinclair 1980), modeling (Lim 1997; Goh and Law 2002; Lim and McAleer 2002) and measuring seasonal variations (Sørensen 1999). Mostly they used the results of seasonal analysis for modeling, but did not discuss the results of seasonal dynamics.

Generally, an economic series should be tested for possible non-seasonal and seasonal unit roots (Pulina 2010). The non-seasonal unit roots are traditionally analyzed by conventional unit root tests: the Augmented Dickey-Fuller (ADF) test (Dickey and Fuller 1979) and the Philips-Peron (PP) test (Phillips and Perron 1988). The analysis of seasonal unit root tests is mostly influenced by the pioneering study of Hylleberg et al. (1990), who developed the HEGY test. A large number of academic researches use the HEGY test or its extended versions (Franses 1991; Beaulieu and Miron 1993). The results of these studies show that "some variables have deterministic seasonal patterns while others tend to be characterized by (stochastic) seasonal movements that change slowly over time" (Tasseven 2008: 465).

There are a great number of studies in tourism using the HEGY test or its extended versions [by Franses (1991) or Beaulieu and Miron (1993)], and they mostly consider seasonal variations in time series forecasting procedures. Lim and McAleer (2000) used HEGY test to examine seasonal patterns of tourist arrivals from Singapore to Australia for further forecast modeling. Lim and Chan (2009) examined the seasonality of hotel occupancy in New Zealand using monthly series from 1997 to 2007 and found presence of seasonal unit roots by the HEGY test. Kulendran and Wong (2005) compared HEGY and conventional unit root test results for different types of visits for the period of 1975–2002 to analyze the UK outbound tourism to Australia and Greece. Alleyne (2003) employed HEGY test in modeling tourism demand for Jamaica. Some of the other researches employing the HEGY test for further demand modeling and forecasting are; Gustavsson and Nordström (1999), Pulina and O'Brien (2002), Pulina (2003, 2010), Sørensen (2004), Kim and Moosa (2005), Gil-Alana et al. (2008), Shen et al. (2008, 2009), Song et al. (2008, 2009), Chang et al. (2009), Chang and Liao (2010), Chaovanapoonphol et al. (2010), Gasmi (2013), Nanthakumar et al. (2013), and Chaiboonsri et al. (2014).

There are also some examples of studies using HEGY test with different empirical analysis methods. For example, Chang et al. (2010) used monthly HEGY test discussed by Franses (1991) to analyze four leading destinations in ASEAN countries with multivariate conditional volatility models. Jintranun et al. (2011) employed panel data analysis and an extended version of HEGY test (CHEGY-IPS). They estimated the number of international tourists to Thailand from 1997 to 2010 using the GMM method. The results revealed seasonal unit roots in the series. Gil-Alana et al. (2010) investigated the persistence in the short and long-term tourist arrivals to Australia by using Beaulieu and Miron (1993) test. The results show that in all cases stochastic seasonality is evident. Hoti et al. (2005) examined the volatility of tourism demand to the Balearic Islands for the period of 1987–2003. HEGY test was used with additive outliers.

Ouerfelli (2008) used ADF and HEGY tests for further analysis of European tourism demand to Tunisia by cointegration analysis. Rahman et al. (1996) conducted HEGY test for pre-data analysis and employed cointegration techniques for Japanese tourism demand for Singapore. Collins and Tisdell (2003) examined the long-run relationship between Australian business returns and international business tourism demand for the period of 1974–1999 with cointegration techniques. ADF and HEGY tests were employed for pre-data analysis.

Zortuk and Bayrak (2013) modelled Turkish tourism demand with its determinants using quarterly time series. HEGY test results show seasonal unit roots for the number of tourists and tourism receipts variables. Koc and Altinay (2007) used BM test for the Turkish inbound tourism per person spending. They also conducted seasonal adjustment techniques (TRAMO-SEATS and X-12-ARIMA) and concluded that series show strong seasonal evidence while different tests or methods give similar results.

Although there are many studies analyzing seasonal unit roots, most of them have not interpreted the test results revealing useful information for the tourism industry, especially for Turkey, except the study of Zortuk and Bayrak (2013). Therefore this study attempts to understand the structure of seasonality and the underlying information on the effects of seasonal shocks for better policy designation.

## 3.3 Methodology

Stationarity is a recurrent and almost vital characteristic of time series research. It is closely related to asymptotical correlation and an important indication of stability in time series. Stability indicates the persistence of a shock to the series, and that means how long its effect would last. Shocks can be defined as an unexpected change in a variable at a particular time. Unit root procedures are eligible methods to identify whether a series is stationary or non-stationary. The presence or absence of unit roots helps to identify the effects of shocks to a series. If a series has no unit roots, it is called to be stationary, where the absence of unit roots implies that the

series has a finite variance and the effects of shocks would dissipate gradually. On the contrary, if the series has a unit root, it is called to be non-stationary and the effects of shocks are permanent (Libanio 2004). In addition, if the series is stationary when a trend is included in the unit root test, then it is trend stationary; while it is seasonally stationary when seasonal component is inserted in the model. From a policy perspective, therefore, it is important to know whether an economic series is highly stable or not through time. For example, if the shock is a new policy, how long the policy would impact the variable has a significant weight during the decision process, or if the shock were a fluctuation in the exchange rates, the impact of it on supply and demand sides of an industry would change company policies or consumer behavior. For the purposes of this study if the inbound tourist series are stationary and, therefore, has little or no asymptotic autocorrelation, the number of inbound tourists would not affect the series behavior in the long run. This implies a policy that affects inbound tourism markets have short-term impacts.

Existence of unit root is investigated by two approaches in this study. Firstly, the selected inbound tourism demand series are seasonally adjusted by TRAMO/SEATS method and then subjected to ADF and PP unit root tests. In the second approach, seasonality is not extracted but instead a unit root test that takes the seasonality component into account is employed for analysis.

ADF unit root test is based on the study by Dickey and Fuller (1979) that extends the original Dickey-Fuller test so that it would be able to regard the presence of serial correlation. The data generating process considered for the series is as follows:

$$\phi(L)x_t = \varepsilon_t, \tag{3.1}$$

In Eq. (3.1), ϕ(L) is a lag operator polynomial such that ϕ(L) = (1-L) ϕ*(L) in which ϕ*(L) is a stationary autoregressive polynomial. Furthermore, Tsay (2014) states $\phi^*(1) \neq 0$, meaning that $x_t$ has a single unit root. Three models employed in the testing procedure are:

- without constant

$$\Delta x_t = \beta x_{t-1} + \sum_{i=1}^{p-1} \phi_i^* \Delta x_{t-i} + \varepsilon_t \tag{3.2}$$

- with constant

$$\Delta x_t = \alpha + \beta x_{t-1} + \sum_{i=1}^{p-1} \phi_i^* \Delta x_{t-i} + \varepsilon_t \tag{3.3}$$

- with constant and trend

$$\Delta x_t = \alpha_0 + \alpha_1 t + \beta x_{t-1} + \sum_{i=1}^{p-1} \phi_i^* \Delta x_{t-i} + \varepsilon_t \tag{3.4}$$

where $\phi_i^* = -\sum_{k=i+1}^{p} \phi_k$, such that ϕ is the AR($k$) coefficient.

The ADF tests the null hypothesis of unit root ($\beta = 0$) against the alternative hypothesis of stationarity using the pertinent t-statistics. PP test, although is similar to ADF, corrects for serial correlation and heteroscedasticity in the errors of the test regression. PP also tests the null hypothesis of unit root against the alternative hypothesis of stationarity using modified t-statistics.

The second approach used in this study accepts seasonality as an essential element of the series and tests for unit root while retaining seasonality. Seasonality is defined as the presence of systematic variation around trend. Hylleberg (1992) also stresses that it is systematic, but not necessarily regular. It is a prominent component of almost every economic series, however, it is generally considered nuisance and purged out of the series. Darné and Diebolt (2002) argue that a recently emerged viewpoint accepts it not as nuisance, but as an integral part of economic data. Therefore, seasonal fluctuations should not be ignored or obscured, but rather be incorporated in model evaluation and forecasting. The seminal work that has incorporated this viewpoint into unit root is Hasza and Fuller's (1982) which is the followed by Dicke et al. (1984). Hasza and Fuller's (1982) test had complications with the interpretation of the test results, which are extirpated in the test DHF developed by Dicke et al. (1984). DHF test is later followed by Hylleberg et al. (1990) study. The HEGY seasonal unit root test developed by Hylleberg et al. (1990) is able to detect unit roots independent from the existence of unit roots at other frequencies (Ghysels et al. 1994). DHF test, on the other hand, is lacking to make distinction between frequencies and could only inform that there is a unit root at one of the frequencies. HEGY test investigates presence of unit root only in quarterly data. Beaulieu and Miron (1993)'s BM test extended it, so that the test works for monthly data as well.

BM seasonal unit root test evaluates the stationarity of the series against the null hypothesis of existence of unit root in zero and specific seasonal frequencies. The data generating process considered in the BM test is of the form:

$$\varphi(L) x_t = \varepsilon_t, \tag{3.5}$$

where φ($L$) is a lag operator polynomial, $x_t$ is the series under scrutiny, and $\varepsilon_t$ is a white noise process. The test procedure requires linearization of φ($L$) polynomial around zero frequency and eleven seasonal unit roots, so that Eq. (3.5) is written as follows:

$$\varphi^*(L) y_{13t} = \sum_{k=1}^{12} \pi_k y_{k,t-1} + \varepsilon_t, \tag{3.6}$$

where $\varepsilon_t$ is white noise and $\varphi^*(L)$ is a remainder with unit roots outside the unit circle using the following equations in (3.7):

$$
\begin{aligned}
y_{1t} &= \left(1 + L + L^2 + L^3 + L^4 + L^5 + L^6 + L^7 + L^8 + L^9 + L^{10} + L^{11}\right)x_t \\
y_{2t} &= -\left(1 - L + L^2 - L^3 + L^4 - L^5 + L^6 - L^7 + L^8 - L^9 + L^{10} - L^{11}\right)x_t \\
y_{3t} &= -\left(L - L^3 + L^5 - L^7 + L^9 - L^{11}\right)x_t \\
y_{4t} &= -\left(1 - L^2 + L^4 - L^6 + L^8 - L^{10}\right)x_t \\
y_{5t} &= -\frac{1}{2}\left(1 + L - 2L^2 + L^3 + L^4 - 2L^5 + L^6 + L^7 - 2L^8 + L^9 + L^{10} - 2L^{11}\right) \times x_t \\
y_{6t} &= \frac{\sqrt{3}}{2}\left(1 - L + L^3 - L^4 + L^6 - L^7 + L^9 - L^{10}\right)x_t \\
y_{7t} &= \frac{1}{2}\left(1 - L - 2L^2 - L^3 + L^4 + 2L^5 + L^6 - L^7 - 2L^8 - L^9 + L^{10} + 2L^{11}\right)x_t \\
y_{8t} &= -\frac{\sqrt{3}}{2}\left(1 + L - L^3 - L^4 + L^6 + L^7 - L^9 - L^{10}\right)x_t \\
y_{9t} &= -\frac{1}{2}\left(\sqrt{3} - L + L^3 - \sqrt{3}L^4 + 2L^5 - \sqrt{3}L^6 + L^7 - L^9 + \sqrt{3}L^{10} - 2L^{11}\right) \times x_t \\
y_{10t} &= \frac{1}{2}\left(1 - \sqrt{3}L + 2L^2 - \sqrt{3}L^3 + L^4 - L^6 + \sqrt{3}L^7 - 2L^8 + \sqrt{3}L^9 - L^{10}\right)x_t \\
y_{11t} &= \frac{1}{2}\left(\sqrt{3} + L - L^3 - \sqrt{3}L^4 - 2L^5 + \sqrt{3}L^6 - L^7 + L^9 + \sqrt{3}L^{10} + 2L^{11}\right)x_t \\
y_{12t} &= -\frac{1}{2}\left(1 + \sqrt{3}L + 2L^2 + \sqrt{3}L^3 + L^4 - L^6 - \sqrt{3}L^7 - 2L^8 - \sqrt{3}L^9 - L^{10}\right) \times x_t \\
y_{13t} &= \left(1 - L^{12}\right)x_t .
\end{aligned}
\tag{3.7}
$$

Furthermore Eq. (3.6) may be extended to include a constant seasonal dummy and a time trend as follows:

$$\varphi^*(L)y_{13t} = \sum_{k=1}^{12} \pi_k y_{k,t-1} + m_0 t + m_1 + \sum_{k=1}^{12} m_k S_{kt} + \varepsilon_t, \tag{3.8}$$

In Eq. (3.8), $m_0$ and $m_1$ are time trend and constant, respectively, while $S_{kt}$ is the seasonal dummy. BM test consists of $\pi_k$ coefficients to be tested with t and F statistics. The coefficients and the pertinent frequencies, as well as the corresponding cycles within a year are presented in Table 3.2. For frequencies 0 and $\pi$, the null hypothesis of $\pi_{k=0}$ is tested against $\pi_{k<0}$ the alternative hypothesis. For other frequencies, the $\pi_{k-1} = \pi_{k=0}$ null hypothesis is tested.

## 3.4 Data and Empirical Results

This study investigates the unit root properties of the number of inbound tourist arrivals from the CIS, Germany, the UK, France and Netherlands, as well as the total inbound tourist arrivals to Turkey. Monthly data is employed for the period

**Table 3.2** Coefficients employed in the BM test with the corresponding frequencies and cycles

| Coefficients | Frequency | Cycles (within a year) |
|---|---|---|
| $\pi_1$ | 0 | trend (0) |
| $\pi_2$ | $\pi$ | 6 |
| $\pi_3$, $\pi_4$ | $\pi/2$ | 3 |
| $\pi_5$, $\pi_6$ | $2\pi/3$ | 4 |
| $\pi_7$, $\pi_8$ | $\pi/3$ | 2 |
| $\pi_9$, $\pi_{10}$ | $5\pi/6$ | 5 |
| $\pi_{11}$, $\pi_{12}$ | $\pi/6$ | 1 |

1985:01 to 2013:12. Data is derived from the Republic of Turkey, Ministry of Culture and Tourism website.[1]

The raw, unadjusted data is transformed via natural logarithm and is illustrated in Fig. 3.3. Seasonality component in raw data can be recognized and is substantiated to be a significant factor in all series. In such strong case of seasonality, there are two approaches on how to proceed in investigating the unit root dynamics of the series, as was mentioned in the methodology section. The first approach is seasonally adjusting the series, and then testing for unit root with conventional methods. For this purpose, the TRAMO/SEATS method is used and the resulting seasonally adjusted series are illustrated in Fig. 3.4. As seen in the figure, seasonality is filtered out, leaving only the three other components of a time series (trend, cyclical and random components) behind.

The seasonally adjusted data is then subjected to traditional unit root testing procedures, where the null hypothesis is "the series has unit root". The results of the ADF and PP tests on the seasonally adjusted data are presented in Table 3.3. In the table, both tests are conducted with level and first difference series. "Constant" indicates that the test regression includes an intercept and "trend" indicates the test regression includes a time trend and an intercept. The double dash (--) in the trended model for the first difference series indicates these tests are not conducted, since the series are already stationary at their level values.

Table 3.3 shows that while no series can reject the null hypothesis of unit root presence at the level values, the first differences reject the unit root hypothesis at the 99 % confidence interval, when only constant is included in the test regression. Since the seasonally adjusted series illustrated in Fig. 3.4 demonstrate existence of a time trend, primary focus is on the test results where trend was included. In that case the null hypothesis of unit root is rejected within a 99 % confidence interval for Germany, the UK, France, and the total number of tourist arrivals, whereas it is rejected within a 95 % confidence interval for the Netherlands.

Consequently, empirical results express trend stationarity for Germany, the UK, France, The Netherlands and the total number of tourist arrivals. On the other hand, the CIS and the series is first-difference stationary, meaning the data can reject the unit root hypothesis only at their first differences.

[1] See http://www.ktbyatirimisletmeler.gov.tr/TR,9854/sinir-giris-cikis-istatistikleri.html

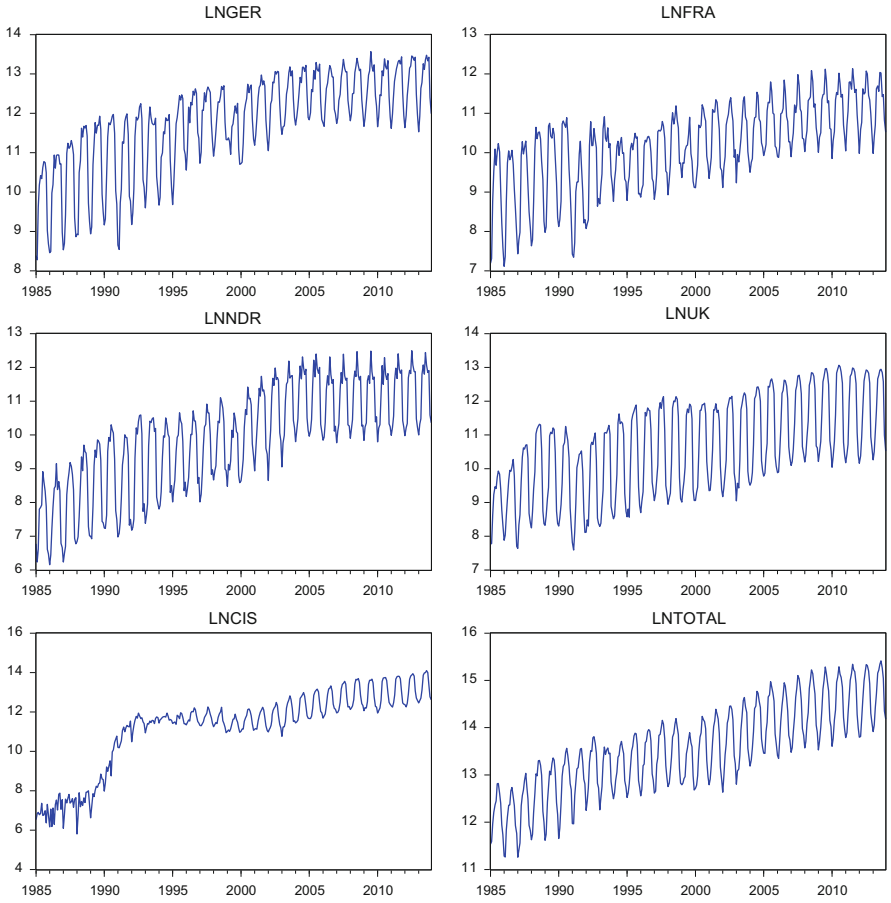


**Fig. 3.3** Number of inbound tourist arrivals

Regarding the seasonal unit root dynamics of series, BM test is used and the results are represented in Table 3.4. The BM test separates frequencies and tests the existence of the unit roots through these separate frequencies. The frequencies obtained from the test statistics columns in Table 3.4 ($\pi_k$, k = 1, 2, ...12) are the coefficients used in the testing procedure and their interpretation provided in Table 3.2.

The test is conducted with four different test regressions. "Const." includes intercept only; "Seas. Dum." includes intercept and eleven seasonal dummies; "Trend" includes intercept and trend; and finally "Seas. Trend" includes intercept, seasonal dummies and trend. In the table, corresponding frequencies and cycles for the coefficient combinations are listed in detail.

At first glance, Table 3.4 reveals that the null hypothesis is rejected at all frequencies for all series in the seasonal trend model. In this model, single coefficients and coefficient pairs mentioned in Table 3.2 are tested. For Germany,

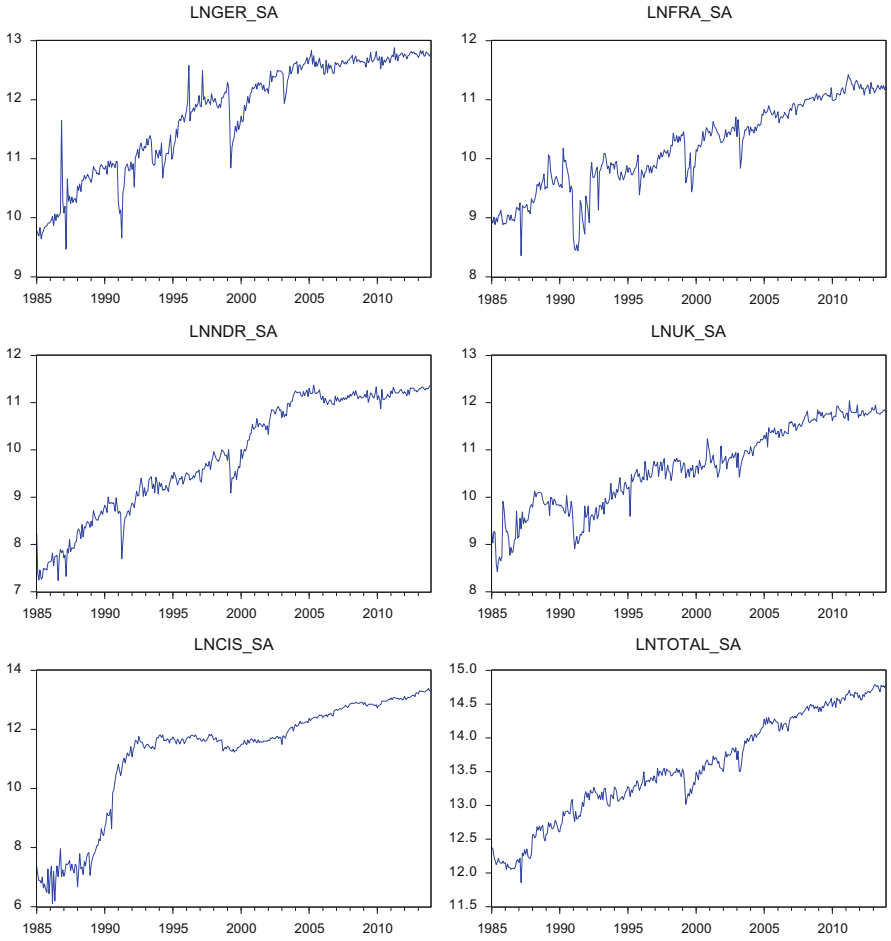


**Fig. 3.4** Seasonally adjusted inbound tourist arrivals

although the $\pi_9$ coefficient is only significant at 10 %, the test jointly calculates the $\pi_9$ and $\pi_{10}$ coefficients together in order to test the unit root at a $5\pi/6$ frequency; and the joint test clearly rejects the null hypothesis of unit root. Furthermore, all series indicate that the trend model itself is enough to show that the series are stationary. In the trend model, neither seasonal dummies nor any seasonal trend are incorporated to the test regression. Then, for the CIS series, the results are not the same in the BM test and the traditional tests. The answer lies in the test regression; Eq. (3.6) and the ADF equations are indubitably different. In the equation, without any deterministic seasonality, the stochastic seasonality is modeled; the terms "Seas. Dum." and "Seas". "Trend" in Table 3.4 only indicates the deterministic element in the seasonality. Consequently, the "Trend" component only includes intercept and

**Table 3.3** ADF and PP unit root test results for the seasonally adjusted series

| | Level | | First difference | |
|---|---|---|---|---|
| Countries | Constant | Trend | Constant | Trend |
| *ADF test results* | | | | |
| Germany | −1.974673 | −4.385154*** | −13.57520*** | -- |
| France | −1.614065 | −7.042092*** | −17.17414*** | -- |
| Netherlands | −1.759043 | −2.861922** | −18.66619*** | -- |
| UK | −1.316063 | −4.378822*** | −18.78808*** | -- |
| CIS | −2.331718 | −1.286565 | −5.57115*** | −5.96757*** |
| Total | −0.665982 | −4.031572*** | −25.43032*** | -- |
| *PP test results* | | | | |
| Germany | −1.936499 | −6.450475*** | −46.94098*** | -- |
| France | −1.795398 | −7.418814*** | −24.89854*** | -- |
| Netherlands | −0.820893 | −3.631549** | −34.33869*** | -- |
| UK | −1.345217 | −7.658802*** | −36.09358*** | -- |
| CIS | −1.740829 | −1.462026 | −32.89312*** | −31.22758*** |
| Total | −0.452779 | −5.091882*** | −29.82863*** | -- |

**Represent 5 % significance level for Mac Kinnon one-sided critical values
***Represent 1 % significance level for Mac Kinnon one-sided critical values
Critical values for 1 % significance level is −3.44 and 5 % significance level is −2.86 for ADF and PP tests for constant model and −3.98 and −3.42 respectively for the constant and trend model

trend, where stochastic seasonality in the model leads to the result that the series are all trend stationary within the seasonal frequencies.

## 3.5 Conclusion

This study attempts to identify the dynamics of seasonality for the major inbound tourist markets of Turkey. BM seasonal unit root test was used for analysis with raw data, and ADF and PP unit root tests were employed with seasonally adjusted time series to verify the results.

The results of the BM test confirm that Germany, the UK, France and the Netherlands as well as the total inbound tourist series are trend stationary. ADF and PP tests of the seasonally adjusted series for the CIS indicate this series to be first difference stationary. On the other hand, the BM test of the raw series indicates that series of all countries including the CIS are trend stationary when seasonality is modeled as a part of the unit root test rather than removed. The BM test shows seasonality to be stochastic, rather than deterministic. This is apparent in Table 3.4, as the results under the "Trend" column—which includes no deterministic term—are not extremely different from the results listed under the "Seas. Trend" column—where seasonal trend is included. When seasonality is stochastic rather than deterministic, seasonal adjustment may cause loss of important information and may be unreliable as suggested in the studies of Alleyne (2003), Gasmi (2013) and

**Table 3.4** Results of BM seasonal unit root test

| | Germany | | | | France | | | | Netherlands | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test statistics | Constant | Seas. Dum. | Trend | Seas. Trend | Constant | Seas. Dum. | Trend | Seas. Trend | Constant | Seas. Dum. | Trend | Seas. Trend |
| $\pi_1$ | $-2.97^{***}$ | $-1.60^{***}$ | $-3.69^{***}$ | $-2.49^{***}$ | $-1.33^{***}$ | $-2.07^{***}$ | $-3.67^{***}$ | $-3.59^{***}$ | $-3.45^{***}$ | $-0.52^{***}$ | $-5.46^{***}$ | $-2.57^{***}$ |
| $\pi_2$ | $-6.06^{***}$ | $-6.07^{***}$ | $-6.05^{***}$ | $-6.07^{***}$ | $-2.92^{***}$ | $-2.94^{***}$ | $-4.71^{***}$ | $-4.75^{***}$ | $-3.45^{***}$ | $-3.44^{***}$ | $-4.57^{***}$ | $-4.58^{***}$ |
| $\pi_3$ | $-5.19^{***}$ | $-5.20^{***}$ | $-4.52^{***}$ | $-4.56^{***}$ | $-3.64^{***}$ | $-3.71^{***}$ | $-3.33^{***}$ | $-3.46^{***}$ | $-4.08^{***}$ | $-4.06^{***}$ | $-4.88^{***}$ | $-4.89^{***}$ |
| $\pi_4$ | $-4.39^{***}$ | $-4.37^{***}$ | $-4.04^{***}$ | $-4.02^{***}$ | $-3.84^{***}$ | $-3.81^{***}$ | $-4.64^{***}$ | $-4.57^{***}$ | $-2.31^{***}$ | $-2.31^{***}$ | $-2.28^{***}$ | $-2.28^{***}$ |
| $\pi_5$ | $-6.42^{***}$ | $-6.42^{***}$ | $-7.98^{***}$ | $-8.00^{***}$ | $-5.30^{***}$ | $-5.33^{***}$ | $-7.45^{***}$ | $-7.56^{***}$ | $-3.20^{***}$ | $-3.19^{***}$ | $-5.59^{***}$ | $-5.59^{***}$ |
| $\pi_6$ | $-0.57^{***}$ | $-0.57^{***}$ | $-1.08^{***}$ | $-1.07^{***}$ | $2.24^{***}$ | $2.23^{***}$ | $3.18^{***}$ | $3.15^{***}$ | $1.21^{***}$ | $1.21^{**}$ | $1.80^{***}$ | $1.80^{***}$ |
| $\pi_7$ | $-1.96^{***}$ | $-1.97^{***}$ | $-3.84^{***}$ | $-3.89^{***}$ | $-2.95^{***}$ | $-3.03^{***}$ | $-3.93^{***}$ | $-4.12^{***}$ | $-2.39^{***}$ | $-2.37^{***}$ | $-4.62^{***}$ | $-4.64^{***}$ |
| $\pi_8$ | $-2.46^{***}$ | $-2.46^{***}$ | $-4.33^{***}$ | $-4.33^{***}$ | $-3.94^{***}$ | $-3.90^{***}$ | $-4.91^{***}$ | $-4.85^{***}$ | $-3.68^{***}$ | $-3.68^{***}$ | $-5.43^{***}$ | $-5.42^{***}$ |
| $\pi_9$ | $-4.75^{***}$ | $-4.76^{***}$ | $-8.42^{***}$ | $-8.45^{***}$ | $-5.84^{***}$ | $-5.88^{***}$ | $-6.47^{***}$ | $-6.56^{***}$ | $-2.51^{**}$ | $-2.50^{***}$ | $-7.20^{***}$ | $-7.20^{***}$ |
| $\pi_{10}$ | 0.39 | 0.39 | 0.44 | $0.45^{*}$ | $2.18^{**}$ | $2.17^{**}$ | $3.04^{***}$ | $3.01^{***}$ | 0.42 | 0.41 | $0.79^{***}$ | $0.79^{***}$ |
| $\pi_{11}$ | −1.25 | −1.26 | $-2.94^{**}$ | $-3.02^{**}$ | $-1.64^{*}$ | $-1.71^{**}$ | $-3.50^{***}$ | $-3.87^{***}$ | −0.71 | −0.70 | $-3.05^{***}$ | $-3.08^{***}$ |
| $\pi_{12}$ | $-1.34^{***}$ | $-1.33^{***}$ | $-2.92^{***}$ | $-2.94^{***}$ | $-2.02^{***}$ | $-1.96^{***}$ | $-5.18^{***}$ | $-5.10^{***}$ | $-1.12^{***}$ | $-1.12^{***}$ | $-4.80^{***}$ | $-4.81^{***}$ |
| $\pi_{3,}\ \pi_4$ | $24.80^{***}$ | $24.82^{***}$ | $19.49^{***}$ | $19.57^{***}$ | $14.57^{***}$ | $14.71^{***}$ | $17.08^{***}$ | $17.26^{***}$ | $11.23^{***}$ | $11.16^{***}$ | $14.91^{***}$ | $14.93^{***}$ |
| $\pi_{5,}\ \pi_6$ | $20.84^{***}$ | $20.86^{***}$ | $32.75^{***}$ | $32.90^{***}$ | $17.01^{***}$ | $17.16^{***}$ | $34.76^{***}$ | $35.49^{***}$ | $5.88^{***}$ | $5.85^{***}$ | $17.58^{***}$ | $17.59^{***}$ |
| $\pi_{7,}\ \pi_8$ | $5.00^{***}$ | $5.01^{***}$ | $17.53^{***}$ | $17.74^{***}$ | $12.43^{***}$ | $12.54^{***}$ | $20.78^{***}$ | $21.36^{***}$ | $9.88^{***}$ | $9.82^{***}$ | $27.49^{***}$ | $27.55^{***}$ |
| $\pi_{9,}\ \pi_{10}$ | $11.37^{***}$ | $11.40^{***}$ | $35.61^{***}$ | $35.83^{***}$ | $19.93^{***}$ | $20.14^{***}$ | $26.87^{***}$ | $27.38^{***}$ | $3.23^{**}$ | $3.21^{**}$ | $26.37^{***}$ | $26.39^{***}$ |
| $\pi_{11,}\ \pi_{12}$ | 1.45 | 1.46 | $7.62^{**}$ | $7.87^{**}$ | $2.94^{*}$ | $2.94^{**}$ | $17.62^{***}$ | $18.55^{***}$ | 0.78 | 0.78 | $14.77^{***}$ | $14.85^{***}$ |

| Test statistics | United Kingdom | | | | CIS countries | | | | Total inbound tourists | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Constant | Seas. Dum. | Trend | Seas. trend | Constant | Seas. Dum. | Trend | Seas. trend | Constant | Seas. Dum. | Trend | Seas. trend |
| $\pi_1$ | $-1.74^{***}$ | $-1.35^{***}$ | $-5.60^{***}$ | $-3.50^{***}$ | $-4.65^{***}$ | $-2.41^{***}$ | $-6.23^{***}$ | $-4.23^{***}$ | $-1.18^{***}$ | $-1.40^{***}$ | $-6.09^{***}$ | $-3.76^{***}$ |
| $\pi_2$ | $-5.16^{***}$ | $-5.17^{***}$ | $-4.94^{***}$ | $-4.97^{***}$ | $-4.88^{***}$ | $-4.87^{***}$ | $-4.82^{***}$ | $4.81^{***}$ | $-5.54^{***}$ | $-5.55^{***}$ | $-4.82^{***}$ | $-4.84^{***}$ |
| $\pi_3$ | $-2.06^{***}$ | $-2.06^{***}$ | $-6.42^{***}$ | $-6.45^{***}$ | $-5.50^{***}$ | $-5.48^{***}$ | $-5.29^{***}$ | $-5.28^{***}$ | $-3.94^{***}$ | $-3.96^{***}$ | $-3.28^{***}$ | $-3.33^{***}$ |
| $\pi_4$ | $-0.91^{***}$ | $-0.91^{***}$ | $-1.64^{***}$ | $-1.62^{***}$ | $-2.87^{***}$ | $-2.86^{***}$ | $-2.67^{***}$ | $-2.66^{***}$ | $-4.53^{***}$ | $-4.52^{***}$ | $-4.41^{***}$ | $-4.38^{***}$ |
| $\pi_5$ | $-7.58^{**}$ | $-7.59^{***}$ | $-7.46^{***}$ | $-7.51^{***}$ | $-6.47^{***}$ | $-6.45^{***}$ | $-7.73^{***}$ | $-7.71^{***}$ | $-7.47^{***}$ | $-7.49^{***}$ | $-7.50^{***}$ | $-7.54^{***}$ |
| $\pi_6$ | $2.72^{***}$ | $2.72^{***}$ | $2.24^{***}$ | $2.23^{***}$ | $1.10^{***}$ | $1.09^{***}$ | $1.14^{***}$ | $1.14^{***}$ | $0.91^{***}$ | $0.91^{***}$ | $0.23^{***}$ | $0.23^{***}$ |
| $\pi_7$ | $-2.67^{***}$ | $-2.69^{***}$ | $-5.92^{***}$ | $-6.01^{***}$ | $-4.42^{***}$ | $-4.40^{***}$ | $-4.41^{***}$ | $-4.39^{***}$ | $-2.10^{***}$ | $-2.14^{***}$ | $-3.76^{***}$ | $-3.86^{***}$ |
| $\pi_8$ | $-2.50^{***}$ | $-2.49^{***}$ | $-4.09^{***}$ | $-4.06^{***}$ | $-6.15^{***}$ | $-6.14^{***}$ | $-5.96^{***}$ | $-5.95^{***}$ | $-3.60^{***}$ | $-3.58^{***}$ | $-6.02^{***}$ | $-5.98^{***}$ |
| $\pi_9$ | $-2.91^{***}$ | $-2.91^{***}$ | $-5.97^{***}$ | $-6.01^{***}$ | $-6.52^{***}$ | $-6.50^{***}$ | $-6.83^{***}$ | $-6.81^{***}$ | $-3.75^{***}$ | $-3.76^{***}$ | $-7.46^{***}$ | $-7.50^{***}$ |
| $\pi_{10}$ | 1.03 | 1.02 | $1.90^{***}$ | $1.89^{***}$ | $4.26^{***}$ | $4.26^{***}$ | $4.30^{***}$ | $4.30^{***}$ | 0.87 | 0.87 | $1.57^{***}$ | $1.56^{***}$ |
| $\pi_{11}$ | 0.00 | −0.02 | $-4.57^{***}$ | $-4.75^{***}$ | $-1.36^{**}$ | $-1.34^{***}$ | $-3.45^{***}$ | $-3.42^{***}$ | −0.36 | −0.38 | $-4.01^{***}$ | $-4.22^{***}$ |
| $\pi_{12}$ | $-0.68^{*}$ | $-0.68^{*}$ | $-6.14^{***}$ | $-6.07^{***}$ | $-2.46^{***}$ | $-2.46^{***}$ | $-4.81^{***}$ | $-4.80^{***}$ | $-0.92^{***}$ | $-0.91^{***}$ | $-6.30^{***}$ | $-6.25^{***}$ |
| $\pi_{3,}\ \pi_4$ | $2.54^{*}$ | $2.54^{*}$ | $22.36^{***}$ | $22.52^{***}$ | $20.05^{***}$ | $19.92^{***}$ | $18.19^{***}$ | $18.09^{***}$ | $19.08^{***}$ | $19.11^{***}$ | $15.81^{***}$ | $15.84^{***}$ |
| $\pi_{5,}\ \pi_6$ | $33.92^{***}$ | $34.00^{***}$ | $31.38^{***}$ | $31.73^{***}$ | $21.65^{***}$ | $21.53^{***}$ | $30.71^{***}$ | $30.56^{***}$ | $28.49^{***}$ | $28.58^{***}$ | $28.15^{***}$ | $28.44^{***}$ |
| $\pi_{7,}\ \pi_8$ | $6.83^{***}$ | $6.86^{***}$ | $27.94^{***}$ | $28.38^{***}$ | $31.17^{***}$ | $30.97^{***}$ | $29.75^{***}$ | $29.59^{***}$ | $8.88^{***}$ | $8.89^{***}$ | $26.77^{***}$ | $26.97^{***}$ |
| $\pi_{9,}\ \pi_{10}$ | $4.79^{***}$ | $4.81^{***}$ | $20.04^{***}$ | $20.24^{***}$ | $32.29^{***}$ | $32.12^{***}$ | $34.76^{***}$ | $34.60^{***}$ | $7.46^{***}$ | $7.49^{***}$ | $29.53^{***}$ | $29.82^{***}$ |
| $\pi_{11,}\ \pi_{12}$ | 0.24 | 0.23 | $26.09^{***}$ | $26.55^{***}$ | $3.55^{**}$ | $3.53^{**}$ | $15.96^{***}$ | $15.87^{***}$ | 0.44 | 0.44 | $25.93^{***}$ | $26.47^{***}$ |

$^{*}$, $^{**}$ and $^{***}$ represent 10 %, 5 % and 1 % significance level respectively

Gil-Alana (2005). As stated above, BM test is appropriate for a time series showing stochastic seasonality.

The BM test shows that any shock to the tourism demand is transitory; indicating any positive or negative shock has only temporary effects. In terms of economic policy, this has important implications. For example, negative circumstances hindering tourist arrivals such as exchange rate shocks, terrorist attacks, natural disasters etc. have temporary effects that would fade out eventually. On the other hand, positive shocks, such as government interventions through economic policies and development plans in order to increase tourist arrivals in low season, are bound to fail unless a fundamentally structural change is carried out.

The results of our empirical analysis point out two important dynamic factors affecting the Turkish tourism industry: seasonality and stationarity. Seasonality is a (stochastic or deterministic) systematic variation that is related to the month or the quarter that the observation is collected for the series. For the tourism industry, such seasonal dynamics basically mean provision of a huge amount of labor and capital (in the form of companies and infrastructure), which remains idle in low season.

Evident differences between peak and low season combined with the stochastic seasonal variations imply seasonality to be a structural problem for Turkey. Seasonality causes tourism concentration in certain geographical areas, especially in the western and southern coasts. The sun and sand type of tourism provided by that region is plausible only for summer months. As a result, the summer months present themselves as the peak season, creating the seasonal factor in the tourism industry. These circumstances result in higher competition for the accommodation, transportation and food and beverage sectors of the tourism industry during a peak season. In addition to the pressure for low prices from tour operators, this competition has suppressed the tourism receipts. As the companies are so concerned about profits, they decrease prices (sometimes by waiving quality) to increase the number of tourists.

Moreover, the stationary dynamics evident in the industry basically indicates that any policy to remedy this fact is only short-lived. Some measures have been proposed and implemented since the 1990s about diversifying the tourism services or creating alternative tourism regions; however they seem to be insufficient to prevent seasonality and to spread the tourism activities throughout the year. Structural seasonality needs complex measures and complete actions to be dissolved. This structure seems to continue, unless the government and decision-makers successfully manage to apply appropriate measures. Therefore, fundamental changes such as large-scale incentives for alternative types of tourism, removal of permits to new holiday mass tourism investments, increasing prices of accommodation services by enhanced quality in a peak season and so on, should be taken into consideration at once altogether.

The application of these policies requires all players in the tourism industry (e.g. government, companies, regional tourism organizations, employees etc.) to work and act together. These structural changes in tourism policies may result in a reorganization of the tourism industry in Turkey, as well as reshaping the seasonal behavior of inbound tourists. The government and the players of the industry should

recognize that one precaution may not create a structural change by itself; tourism policy has to be designed with a holistic approach to decrease or even eradicate seasonality. In that respect, the impacts of seasonality such as wasting of scarce resources, excess capacity, environmental damages, loss of income and seasonal unemployment must be clearly put forth in addition to the governmental policies.

This study is clearly limited to the selected countries, which are well-known tourist generating countries for holiday mass tourism, and the total number of tourist arrivals. Future research addressing different tourism markets and their seasonal dynamics may provide useful information on tourist behavior, visiting purposes and seasonal dynamics in addition to a basis for new marketing strategies and policies.

## References

Alleyne D (2003) Forecasting tourist arrivals: the use of seasonal unit root pre-testing to improve forecasting accuracy. Central Bank of Barbados Working Papers

Butler RW (1994) Seasonality in tourism: issues and implications. In: Seaton AV (ed) Tourism—a state of art. Wiley, Chichester, pp 332–339

Beaulieu JJ, Miron JA (1993) Seasonal unit roots in aggregate U.S. data. J Econ 55:305–328

Chaiboonsri C, Chaitip P, Ranade R (2014) A non-linear model for forecasting international tourism demand for India, Chiang Mai University, Thailand. In: 7th Economic theory and policy conference national ınstitute of public finance and policy, 20–22 Feb 2014

Chang C-L, Sriboonchitta S, Wiboonpongse A (2009) Modelling and forecasting tourism from East Asia to Thailand under temporal and spatial aggregation. Math Comp Simul 79:1730–1744

Chang C-L, Khamkaew T, McAleer M, Tansuchat R (2010) Interdependence of international tourism demand and volatility in leading ASEAN destinations. Working Papers in Economics 10/27, University of Canterbury, Department of Economics and Finance

Chang Y-W, Liao M-Y (2010) A seasonal ARIMA model of tourism forecasting: the case of Taiwan. Asia Pac J Tour Res 15(2):215–221

Chaovanapoonphol Y, Lim C, McAleer MJ, Wiboonpongse A (2010) Time series modelling of tourism demand from the USA, Japan and Malaysia to Thailand, Econometric Institute Research Papers EI 2010-18, Erasmus University Rotterdam, Erasmus School of Economics (ESE), Econometric Institute

Collins D, Tisdell C (2003) Outbound business travel depends on business returns: Australian evidence. Economic Theory, Applications and Issues Working Papers No 90527, University of Queensland, School of Economics. http://EconPapers.repec.org/RePEc:ags:uqseet:90527

Connell J, Page SJ, Meyer D (2015) Visitor attractions and events: responding to seasonality. Tour Manage 46:283–298

Darné O, Diebolt C (2002) A note on seasonal unit root test. Qual Quant 36:305–310

De Cantis S, Ferrante M (2011) Measuring seasonality: performance of accommodation establishments in Sicily through the analysis of occupancy rates. In: Matias A et al (eds) Tourism economics. Springer, Berlin, pp 261–280

Dicke DA, Hasza DP, Fuller W (1984) Testing for unit roots in seasonal time series. J Am Stat Assoc 79:355–367

Dickey DA, Fuller WA (1979) Distribution of estimators for autoregressive time series with a unit root. J Am Stat Assoc 74:427–431

Franses PH (1991) Seasonality, non-stationarity and the forecasting of monthly time series. Int J Forecast 7:199–208
Franses PH (1998) Time series models for business and economic forecasting. Cambridge University Press, Cambridge
Gasmi A (2013) Seasonal adjustment versus seasonality modelling: effect on tourism demand forecasting. Adv Manage Appl Econ 3(4):119–132
Ghysels E, Lee HS, Noh J (1994) Testing for unit roots in seasonal time series: some theoretical extensions and a Monte Carlo investigation. J Econ 62:425–442
Gil-Alana LA (2005) Modelling international monthly arrivals using seasonal univariate long-memory processes. Tour Manage 26:867–878
Gil-Alana LA, Barros CP, Assaf A (2010) Persistence in the short and long term tourist arrivals to Australia. Working Paper No 02/10, Facultad de Ciencias Economicas y Empresariales, Universidad de Navarra
Gil-Alana LA, Cunado J, De Gracia FP (2008) Tourism in the Canary Islands: forecasting using several seasonal time series models. J Forecast 27:621–636
Goh C, Law R (2002) Modelling and forecasting tourism demand for arrivals with stochastic nonstationary seasonality and intervention. Tour Manage 23:499–510
Gustavsson P, Nordström J (1999) The impact of seasonal unit roots and vector ARMA modeling on forecasting monthly tourism flows. Working Paper Series 150, Trade Union Institute for Economic Research, revised 01 Jul 2000
Hagen-Grant L (1998) Lessons from the edge: seasonality in tourism in the Small Islands of the North Atlantic. Institute of Island Studies, University of Prince Edward Island, Charlottetown
Hasza DP, Fuller W (1982) Testing for nonstationarity parameter specifications in seasonal time series models. Ann Stat 10:1209–1216
Hoti S, McAleer M, Sansó A (2005) Specialization, diversification and segmentation of British and German tourists to the Balearic Islands. In: Kachitvichyanakul V et al (eds) Proceedings of the 2005 international conference on simulation and modelling
Hylleberg S (1992) Modelling seasonality. Oxford University Press, Oxford
Hylleberg S, Engle R, Granger CWJ, Yoo BS (1990) Seasonal integration and co-integration. J Econ 44:215–238
Jang SC (Shawn) (2004) Mitigating tourism seasonality a quantitative approach. Ann Tour Res 31 (4):819–836
Jintranun J, Sriboonchitta S, Calkins P, Chaiboonsri C (2011) Thailand's international tourism demand: seasonal panel unit roots and the related cointegration model. Rev Econ Finance 1:63–76
Kim JH, Moosa IA (2005) Forecasting international tourist flows to Australia: a comparison between the direct and indirect methods. Tour Manage 26:69–78
Koc E, Altinay G (2007) An analysis of seasonality in monthly per person tourist spending in Turkish inbound tourism from a market segmentation perspective. Tour Manage 28:227–237
Kulendran N, King ML (1997) Forecasting international quarterly tourist flows using error-correction and time-series models. Int J Forecast 13:319–327
Kulendran N, Wong KF (2005) Modeling seasonality in tourism forecasting. J Travel Res 44:163–170
Kunst RM, Reutter M (2000) Decisions on seasonal unit roots. CESifo Working Paper Series 286, CESifo Group Munich
Libanio GA (2004) Unit roots in macroeconomic time series: theory, implications, and evidence. Textos para Discussão Cedeplar-UFMG td228, Cedeplar, Universidade Federal de Minas Gerais. http://www.scielo.br/pdf/neco/v15n3/v15n3a06. Accessed 15 May 2014
Lim C (1997) Review of international tourism demand models. Ann Tour Res 24(4):835–849
Lim C, Chan F (2009) Forecasting tourist accommodation demand in New Zealand. In: 18th World IMACS/MODSIM congress, Cairns, Australia 13–17 July 2009. http://mssanz.org.au/modsim09. Accessed 15 May 2014

Lim C, McAleer M (2000) A seasonal analysis of Asian tourist arrivals to Australia. Appl Econ 32:499–509
Lim C, McAleer M (2002) Time series forecasts of international travel demand for Australia. Tour Manage 23:389–396
Ministry of Culture and Tourism (2007) Türkiye Turizm Stratejisi 2023 Turizm Eylem Planı 2007–2013
Ministry of Culture and Tourism (2014). http://www.ktbyatirimisletmeler.gov.tr/TR,9854/sinir-giris-cikis-istatistikleri.html. Accessed 15 May 2014
Nanthakumar L, Ang SH, Kogid M (2013) Demand for Indonesia, Singapore and Thailand tourist to Malaysia: seasonal unit root and multivariate analysis. Int J Econ Empir Res 1(2):15–23
Ouerfelli C (2008) Co-integration analysis of quarterly European tourism demand in Tunisia. Tour Manage 29:127–137
Pegg S, Patterson I, Gariddo PV (2012) The impact of seasonality on tourism and hospitality operations in the alpine region of New South Wales, Australia. Int J Hosp Manage 31:659–666
Phillips PCB, Perron P (1988) Testing for a unit root in time series regression. Biometrika 75:335–346
Pulina M (2003) Quantitative forecasting for tourism: OLS and ARIMAX approaches. Contributi di ricerca/CRENoS, Centro ricerche economiche nord sud, Università degli studi di Cagliari, Università degli studi di Sassari, Solter
Pulina M, O'Brien RJ (2002) Monthly, annual and quarterly frequencies: a comparison of models for tourism in Sardinia. Discussion Paper, Southampton University
Pulina M (2010) Modelling and forecasting length of stay. Anatolia 21(2):305–321
Rahman S, Tan KG, Chen YY (1996) Seasonal integration and cointegration: modelling tourism demand in Singapore. Appl Econ Res Ser 2:403–421
Shen S, Li G, Song H (2008) An assessment of combining tourism demand forecasts over different time horizons. J Travel Res 47(2):197–207
Shen S, Li G, Song H (2009) Effect of seasonality treatment on the forecasting performance of tourism demand models. Tour Econ 15(4):693–708
Song H, Smeral E, Li G, Chen JL (2008) Tourism forecasting: accuracy of alternative econometric models revisited. WIFO Working Papers, No. 326
Song H, Witt SF, Wong KF, Wu DC (2009) An empirical study of forecast combination in tourism. J Hosp Tour Res 33(1):3–29
Sørensen N (1999) Modelling the seasonality of hotel nights in Denmark by county and nationality. Tour Econ 5(1):9–23
Sørensen NK (2004) Model selection, forecasting and monthly seasonality of hotel nights in Denmark. ERSA conference papers, European Regional Science Association. http://EconPapers.repec.org/RePEc:wiw:wiwrsa:ersa04p92. Accessed 15 May 2014
Sutcliffe CM, Sinclair MT (1980) The measurement of seasonality within the tourist industry: an application to tourist arrivals in Spain. Appl Econ 12(4):429–441
Tasseven O (2008) Modelling seasonality – an extension of the HEGY approach in the presence of two structural breaks. Panoeconomicus 4:465–484
Tsay RS (2014) Multivariate time series analysis with R and financial applications. Wiley, Hoboken
TUIK (2009) Turizm İstatistikleri 2009. http://www.ktbyatirimisletmeler.gov.tr/TR,9865/yabanci-ziyaretciler-ve-vatandas-arastirmasi.html. Accessed 15 May 2014
UNWTO (2013) Annual report. http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/unwto_annual_report_2013_0.pdf. Accessed 8 Feb 2016
UNWTO (2014a) Tourism highlights. http://mkt.unwto.org/publication/unwto-tourism-highlights-2014-edition. Accessed 15 May 2014
UNWTO (2014b) Tourism barometer news release, Jan 2014. http://media.unwto.org/press-release/2014-01-20/international-tourism-exceeds-expectations-arrivals-52-million-2013. Accessed 15 May 2014
WTTC (2014) Travel and tourism economic impact 2014 Turkey Country Report
Zortuk M, Bayrak S (2013) Seçilmiş ülkelere göre Türkiye'nin turizm talebi. Ekonometri ve İstatistik 19:38–58

# Chapter 4
# Regionalising Input-Output Tables: Comparison of Four Location Quotient Methods

**Jeroen Klijs, Jack Peerlings, Tim Steijaert, and Wim Heijman**

## 4.1 Introduction

In this chapter we compare four methods to generate a regional input-output table (RIOT). A RIOT is a requirement for a regional input-output (IO) analysis. Any over- or underestimation of regional input-output coefficients (RIOCs) contained in the RIOT can lead to over- or underestimation of economic impacts. It is therefore important to understand the differences between methods to generate a RIOT. Although this applies for any regional economic impact analysis, the relevance for tourism is especially prevalent as IO analysis is commonly used in this domain, for reasons of data availability, comparability, and simplicity (Klijs et al. 2012; Sun and Wong 2014). Moreover, because impact analyses in tourism often involve changes of output in many sectors (as tourism is not a separate sector of the IO table) the realism of the results is strongly dependent on a realistic estimation of all RIOCs—whereas the realism of analyses in other domains might depend more strongly on RIOCs in one or only a few sectors.

Based on a review of articles published in the last 10 years (2004–2014) in the journals 'Annals of Tourism Research', 'Tourism Management', 'Journal of Travel Research', and 'Tourism Economics', we found 26 articles in which IO analyses are

J. Klijs (✉)
Academy for Tourism, NHTV Wageningen University, Wageningen, The Netherlands

Agricultural Economics and Rural Policy Group, Wageningen University, Wageningen, The Netherlands
e-mail: Klijs.J@nhtv.nl

J. Peerlings • T. Steijaert • W. Heijman
Agricultural Economics and Rural Policy Group, Wageningen University, Wageningen, The Netherlands



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_4

used to calculate regional economic impacts of tourism.[1] Starting from the (change of) final demand caused by tourism, IO analyses are used to calculate the total (direct and indirect) impacts on output, value added, income, and/or employment—in all sectors of the regional economy. For 24 of these 26 articles the IO analyses were based on a RIOT that was readily available from either IMPLAN[2] (11 articles), a statistical institute (10 articles) or a university (3 articles). In the two remaining cases the source of the RIOT was not specified.

In this chapter we focus on the situation where researchers are *not* in the fortunate condition to have an existing RIOT at their disposal. In fact, a RIOT does not exist for the majority of regions throughout the world. In those cases a RIOT needs to be created before IO analyses can be applied. Several methods are available. These are often categorized into non-survey methods (deriving regional IO-coefficients from the national IO-table, through mathematical procedures), survey methods (based solely on regional data, obtained from expert interviews, survey of industries and final consumers) and hybrid methods (non-survey methods combined with regional data) (Jensen 1990; Bonfiglio and Chelli 2008).[3] Although non-survey methods are sometimes criticised as being highly pragmatic in style, and lacking theoretical and empirical support and logical consistency, there are many (empirical) studies for which time, money, data or knowledge limitations rule out survey and hybrid methods (e.g. Flegg and Tohmo 2011). Within the non-survey methods there are three subcategories: Commodity Balance methods, LQ methods, and Iterative Balance methods (Round 1983; Kronenberg 2009; Kowalewski 2012). In a Commodity Balance method (Isard 1953) estimated regional commodity demand (based on the national IO-table) is matched with regional commodity supplies to determine regional IO-coefficients (RIOCs) (Kronenberg 2009). LQ methods use information about relative sector sizes (on national and regional level) to determine export and import orientation of sectors and RIOCs. In Iterative Balance methods technical procedures, such as RAS or entropy-maximising techniques, are used to adjust first-round estimates of RIOCs to satisfy certain known constraints (e.g., total intermediate sectorial sales in a region).

[1] This includes the impacts of events (e.g. Daniels 2004; Bonn and Harrington 2008; Barajas et al. 2014), exogenous changes in tourism (e.g. Polo et al. 2008), visits to specific tourism attractions (e.g. Viu et al. 2008), specific types of tourists (e.g. Murillo et al. 2013), and the tourism industry in general (e.g. Romero and Tejada 2011). These articles make clear that regional economic impact analyses in tourism poses many challenges to a researcher. Besides the creation of a RIOT (the topic of this chapter), this relates e.g. to the estimation of final demand (which often involves differentiating between tourists and locals) and the interpretation and explanations of model results.

[2] IMPLAN is the USA system of open-access county-level secondary data input-output models.

[3] Boundaries between categories are, to some degree, arbitrary (Richardson 1985): Mathematical procedures applied in non-survey methods require some regional-level data (Morrison and Smith 1974; Round 1983) and survey method are based to some degree on mathematical procedures and professional judgement, because some data will inevitably be unavailable (Jensen 1990).

This chapter deals with the subcategory of LQ methods. When the choice is made to apply a LQ method, the researcher has to decide which LQ method to use, since several alternatives are available. The four LQ methods most often discussed in the literature and used in empirical applications (Flegg and Tohmo 2013) are Simple Location Quotient (SLQ), Cross Industry Location Quotient (CILQ), Round's Location Quotient (RLQ), and Flegg's Location Quotient (FLQ). Several earlier studies have compared two or more of these LQ methods, attempting to measure which one comes closest to replicating 'true values' of RIOCs and to give insight into the 'bias' of the results. Overviews are given in Bonfiglio and Chelli (2008) and Round (1983). Most of these studies apply the same methodology. RIOCs are derived from a national IO-table by applying different LQ methods. These RIOCs are then compared to 'true' (survey based) RIOCs (Schaffer and Chu 1969; Morrison and Smith 1974; e.g. Harrigan et al. 1980; Stevens et al. 1989; Harris and Liu 1998). Bonfiglio and Chelli (2008) have the same objective but apply a different methodology. They use Monte Carlo simulations to generate random RIOTs ('true RIOTs'), aggregate these to national IO-tables, apply different LQ methods to generate RIOTs, derive output multipliers and, finally, compare output multipliers based on the 'true RIOTs' to the ones based on the LQ methods, to determine which LQ methods comes closest to replicating 'true' output multipliers.

In this chapter we have a different objective and methodology. Our objective is to provide an explanation for the sign of the difference between RIOCs calculated between two alternative LQ methods, for all combinations of demanding and supplying sectors. Although the existing literature discusses differences between LQ methods and provides some explanations for 'bias' (e.g. explanations why FLQ is likely to lead to smaller RIOCs than the other three LQ methods for most combinations between demanding and supplying sectors and why SLQ is likely to lead to overestimated RIOCs) a structured and complete analysis of the differences was missing. To achieve this objective we use the formulas of the LQ methods to determine a ranking in size of the RIOCs, generated by the LQ methods, for all possible combinations of demanding and supplying sectors. Furthermore, we derive and discuss the differences in ranking of the size of total output multipliers. The chapter can help a researcher to choose the most appropriate LQ method to generate a RIOT for regional IO-analysis.

This chapter is organised as follows. In Sect. 4.2 we describe the four LQ methods. In Sect. 4.3 we determine the ranking in size of RIOCs. Section 4.4 discusses the implications for the ranking in size of total output multipliers. Section 4.5 contains the empirical case study of Antwerp (Belgium) Sect. 4.6 draws conclusions.

## 4.2 Location Quotient Methods

### *4.2.1 Simple Location Quotient (SLQ)*

The SLQ is given by Eq. (4.1):

$$SLQ_i = \frac{x_i^R / x_i^N}{x^R / x^N} = \frac{I}{S}, \tag{4.1}$$

where: $SLQ_i$ is the SLQ of the intermediate supply of supplying sector i to demanding sector j, x is output, R and N refer to the region and the nation, I is the output of supplying sector ion the regional level relative to the output of sector i on the national level $\left(x_i^R / x_i^N\right)$ and S is the regional output relative to the national output $\left(x^R / x^N\right)$. After calculating $SLQ_i$ RIOCs can be calculated from national IO-coefficients:

$$a_{ij}^N = \frac{s_{ij}^N}{x_j^N} \tag{4.2}$$

$$t_{ij} = \begin{cases} \text{if } SLQ_i \geq 1, t_{ij} = 1 \\ \text{if } SLQ_i < 1, t_{ij} = SLQ_i \end{cases} \tag{4.3}$$

$$a_{ij} = t_{ij} \cdot a_{ij}^N, \tag{4.4}$$

where: $a_{ij}^N$ are national IO-coefficients (intermediate input i per unit output of demanding sector j, excluding imports), $s_{ij}^N$ is the value of intermediate input i supplied to demanding sector j (excluding imports), $t_{ij}$ are trade coefficients (Round 1983) equalling the share of within region supply in total supply of intermediate input i, and $a_{ij}$ are RIOCs.

When $SLQ_i > 1$, it is assumed that supplying sector i is sufficiently present in a region to fulfil the needs of all demanding sectors, which implies that the trade coefficients are equal to one and the RIOCs and national IO-coefficients are equal (Round 1983; Flegg and Webber 1997; Flegg and Tohmo 2011). When $SLQ_i < 1$, it is assumed that supplying sector i is not sufficiently present at the regional level to fulfil the needs of demanding sectors and import from other regions is required. The trade coefficient is then equal to SLQ and the regional IO-coefficient is smaller than the national IO-coefficient.

This procedure implies that SLQ is based on maximal intraregional trade and minimal interregional trade (Buyst and Bilsen 2000; Kronenberg 2009; Flegg and Tohmo 2011, 2013). When $SLQ_i > 1$, supplying sector i sells to sectors in the region and exports any surplus. When $SLQ_i > 1$, supplying sector i sells to demanding sectors in the region and the remainder is imported from other regions. In both cases there is no cross-hauling (simultaneous exporting and importing of commodities produced by the same supplying sector). In reality cross-hauling can

exist because of the heterogeneity of a product. Supplying sectors can produce different varieties of a product and demanding sectors are not necessarily indifferent for the differences in varieties (Kronenberg 2009). Not taking cross-hauling into account, which can lead to overestimated RIOCs, might be particularly problematic in smaller regions, where cross-hauling is likely to be a particularly important feature (Harris and Liu 1998).

An important assumption underlying $SLQ_i$ is that the production structures of demanding sectors are equal on the national and the regional level. SLQ only corrects for the fact that some commodities are supplied from outside the region. This assumption is not specific for SLQ; it is used by all four LQ methods (Round 1983; Flegg and Webber 1997; Bonfiglio and Chelli 2008; Stoeckl 2010).

### 4.2.2 Cross Industry Location Quotient (CILQ)

The CILQ, attributed by Schaffer and Chu (1969) to Charles Leven, is given by:

$$CILQ_{ij} = \frac{SLQ_i}{SLQ_j} = \frac{\frac{X_i^R / X_i^N}{X^R / X^N}}{\frac{X_j^R / X_j^N}{X^R / X^N}} = \frac{\frac{I}{S}}{\frac{J}{S}} = \frac{I}{J} \tag{4.5}$$

$$t_{ij} = \begin{cases} \text{if } CILQ_{ij} \geq 1, t_{ij} = 1 \\ \text{if } CILQ_{ij} < 1, t_{ij} = CILQ_{ij} \end{cases}, \tag{4.6}$$

where: $CILQ_{ij}$ is the CILQ of the intermediate supply from supplying sector i to demanding sector j and J is the output of demanding sector j on the regional level relative to the output of demanding sector j on the national level $\left(X_j^R / X_j^N\right)$.[4] The amount of intra- and interregional trade is determined by the ratio of I and J. When applying SLQ to a supplying sector i for which $SLQ_i < 1$ it assumed that this supplying sector is unable to fulfil the demand of any demanding sector, leading to imports. When applying CILQ to the same supplying sector less or even no imports are assumed to be required, when this supplying sectors is confronted with a demanding sector for which $SLQ_j < 1$. In these cases the application of SLQ might lead to an underestimation of the RIOCs, which is avoided by CILQ. CILQ also leaves open the possibility of cross-hauling. Even when a supplying sector is

[4] Morrison and Smith (1974) have suggested a modification to $CILQ_{ij}$. They proposed that $CILQ_{ij}$ should be replaced with $SLQ_i$ along the primary axis (when $i = j$). The original formula namely implies that supplying sector i can always meet the demand for its commodities from its own industries (internal deliveries from and to sector i), independently of sector size. In this chapter we use the original $CILQ_{ij}$.

well represented in the region ($SLQ_i > 1$) commodities supplied by this sector are still imported when $SLQ_j > SLQ_i$ (Flegg and Webber 1997). Finally, note that CILQ does not take into account regional size (the factors S in the nominator and denominator cancel out).

### 4.2.3 Round's Location Quotient (RLQ)

According to Round (1978) LQ methods should take into account both the size of supplying and demanding sectors and regional size. This criterion is fulfilled by neither SLQ nor CILQ. Round (1978) has therefore developed an alternative, called RLQ:

$$RLQ_{ij} = \frac{SLQ_i}{LOG_2(1 + SLQ_j)} = \frac{\frac{X_i^R / X_i^N}{X^R / X^N}}{LOG_2\left(1 + \frac{X_j^R / X_j^N}{X^R / X^N}\right)} = \frac{1/s}{LOG_2(1 + 1/s)} \tag{4.7}$$

$$t_{ij} = \begin{matrix} \text{if } RLQ_{ij} \geq 1, t_{ij} = 1 \\ \text{if } RLQ_i < 1, t_{ij} = RLQ_{ij} \end{matrix}, \tag{4.8}$$

where: $RLQ_{ij}$ is RLQ of the intermediate supply from supplying sector i to demanding sector j. Regional size is taken into account because of the logistic transformation, which implies that the factors S in the nominator and denominator do not cancel out. RLQ was developed in such a way to produce a LQ that is 'in between' SLQ and CILQ.

### 4.2.4 Flegg's Location Quotient (FLQ)

The final LQ method, FLQ, is based on the idea that, even though CILQ allows for cross-hauling, the phenomenon is underestimated and no account is taken of the role of regional size. Flegg et al. (1995) base their own LQ method on the hypothesis that there is an inverse relationship between regional size on the one hand and heterogeneity and cross-hauling on the other hand. In a larger region supplying sectors are likely to produce more heterogeneous commodities, making it easier for supplying sectors to accommodate demand, and cross-hauling is less likely to occur.[5]

[5] Questions can be raised regarding the manner in which Flegg et al. (1995) have included this relationship in the FLQ formula: Do heterogeneity of supply and cross-hauling only depend on regional size (as assumed by FLQ)? Or does this (partly) depend on the size of supplying sectors? (Kowalewski 2012) Or are there other intervening factors?

$$FLQ_{ij} = CILQ_{ij} \cdot \lambda^{\beta} = \frac{I \cdot \lambda^{\beta}}{J} \tag{4.9}$$

$$\lambda^{\beta} = \frac{x^R/x^N}{LOG_2\left(1 + \frac{x^R}{x^N}\right)} = \frac{S}{\log_2(1+S)} \tag{4.10}$$

$$t_{ij} = \begin{cases} \text{if } FLQ_{ij} \geq 1, t_{ij} = 1 \\ \text{if } FLQ_{ij} < 1, t_{ij} = FLQ_{ij} \end{cases}, \tag{4.11}$$

where: $FLQ_{ij}$ is FLQ of the intermediate supply from supplying sector i to demanding sector j. $CILQ_{ij}$ is decreased by the regional scalar $\lambda^{\beta}$, which is inversely related to regional size.

Responding the criticism by Brand (1997) Flegg and Webber (1997) have later developed a modified function for the regional scalar $\lambda^*$, which replaces $\lambda^{\beta}$ in the original equation.

$$\lambda^* = \left[LOG_2\left(1 + \frac{x^R}{x^N}\right)\right]^{\delta} = [LOG_2(1+S)]^{\delta}, (0 \leq \delta < 1), \tag{4.12}$$

where: $\delta$ is a weighting parameter for the size of the region. The new regional scalar is more sensitive for changes in S. Our analysis is based on this modified formula.

Flegg and Webber (1997) present the FLQ as an improvement on all three earlier LQ methods. In SLQ cross-hauling is not possible and regional size is included in a manner Flegg and Webber (1997) deem to be counter-intuitive, as for a given I and J the smaller the region (S) the smaller the allowance for imports. CILQ does allow for cross-hauling, but not enough corrections are made and regional size does not enter the equation. RLQ allows for cross-hauling and takes into accounts regional size, but Flegg and Webber (1997) are critical on the 'implicit and obscure' way this enters the equation (via the logistic transformation). More importantly, RLQ suffers from the same weakness as SLQ in that bigger regional imports are allowed in a larger region than in a smaller one that is equivalent in all other aspects.

## 4.3 Ranking in Size of Regional IO-Coefficients

In this section we determined the ranking in size of the RIOCs generated by the four LQ methods, for any combination between demanding and supplying sectors. This requires, however, that we first establish the ranking in size of LQs and trade coefficients.

### 4.3.1 Location Quotients

Equation (4.13) calculates the difference between two LQs:

$$DLQ_{ij}^{AB} = LQ_{ij}^{A} - LQ_{ij}^{B} \tag{4.13}$$

where: $DLQ_{ij}^{AB}$ is the difference between the LQs for supplying sector i and demanding sector j, generated by LQ methods A and B. The third column of Table 4.1 shows the results for $DLQ_{ij}^{AB}$. Note that $DLQ_{ij}^{BA}$ is equal to $-DLQ_{ij}^{AB}$. Starting from the conditions under which $DLQ_{ij}^{AB} = 0$ (fourth column) we can determine the conditions under which $DLQ_{ij}^{AB}$ is positive and $LQ_{ij}^{A} > LQ_{ij}^{B}$ (final column).

Based on these conditions we conclude that the sign of the difference between the LQs for any combination between demanding and supplying sector depends on J (output of demanding sector j on the regional level relative to the output of demanding sector j on the national level), relative to S, $S \cdot \lambda^*$ and Z*. Table 4.2 shows this ranking in size, for all values of J, and Fig. 4.1 provides a graphical illustration. When J = S then SLQ = CILQ = RLQ. When $J < S$ then CILQ is larger than SLQ and when $J > S$ then CILQ is smaller than SLQ. The explanation is that CILQ decreases when J increases, while SLQ is independent of J. As mentioned in the previous section, RLQ produces LQs that are 'in between' SLQ and CILQ. When $J < S$ the ranking in size is CILQ > RLQ > SLQ and when $J > S$ the ranking in size is reversed. To generate FLQs values of CILQs are lowered by a factor λ*, to account for cross-hauling and avoid overestimation of RIOCs. FLQ produces the smallest LQs when $J > S \cdot \lambda^*$. When $J < S \cdot \lambda^*$ then SLQ is smaller and when $J < Z^*$ both SLQ and RLQ are smaller.

**Table 4.1** Difference between LQs and conditions for a positive difference between LQs

| $LQ_{ij}^{A}$ | $LQ_{ij}^{B}$ | $DLQ_{ij}^{AB}$ | $DLQ_{ij}^{AB} = 0$ | $DLQ_{ij}^{AB} > 0$ |
|---|---|---|---|---|
| CILQ | SLQ | $\frac{I}{J} - \frac{I}{S}$ | J = S | $J < S$ |
| RLQ | SLQ | $\frac{I/S}{LOG_2(1+J/S)} - \frac{I}{S}$ | $\frac{I}{S} \cdot \left(\frac{1}{LOG_2(1+J/S)} - 1\right) = 0 \Rightarrow J = S$ | $J < S$ |
| RLQ | CILQ | $\frac{I/S}{LOG_2(1+J/S)} - \frac{I}{J}$ | $\frac{1}{LOG_2(1+J/S)} = \frac{S}{J} \Rightarrow J = S$ | $J < S$ |
| FLQ | SLQ | $\frac{I \cdot \lambda^*}{J} - \frac{I}{S}$ | $I \cdot \left(\frac{\lambda^*}{J} - \frac{I}{S}\right) = 0 \Rightarrow J = S \cdot \lambda^*$ | $J < S \cdot \lambda^*$ |
| FLQ | CILQ | $\frac{I \cdot \lambda^*}{J} - \frac{I}{J}$ | $\frac{I}{J} \cdot (\lambda^* - 1) = 0 \Rightarrow$ N.A. | N.A. |
| FLQ | RLQ | $\frac{I \cdot \lambda^*}{J} - \frac{I/S}{LOG_2(1+J/S)}$ | $J = S \cdot \lambda^* \cdot LOG_2\left(1 + \frac{J}{S}\right) \Rightarrow J = Z^*$[7] | $J < Z^*$ |

**Table 4.2** Ranking in size of location quotients

| $J < Z^*$ | $J = Z^*$ | $Z^* < J < S \cdot \lambda^*$ | $J = S \cdot \lambda^*$ | $S \cdot \lambda^* < J < S$ | $J = S$ | $J > S$ |
|---|---|---|---|---|---|---|
| CILQ | CILQ | CILQ | CILQ | CILQ | CILQ = RLQ = SLQ | SLQ |
| FLQ | FLQ = RLQ | RLQ | RLQ | RLQ | | RLQ |
| RLQ | | FLQ | FLQ = SLQ | SLQ | | CILQ |
| SLQ | SLQ | SLQ | | FLQ | FLQ | FLQ |

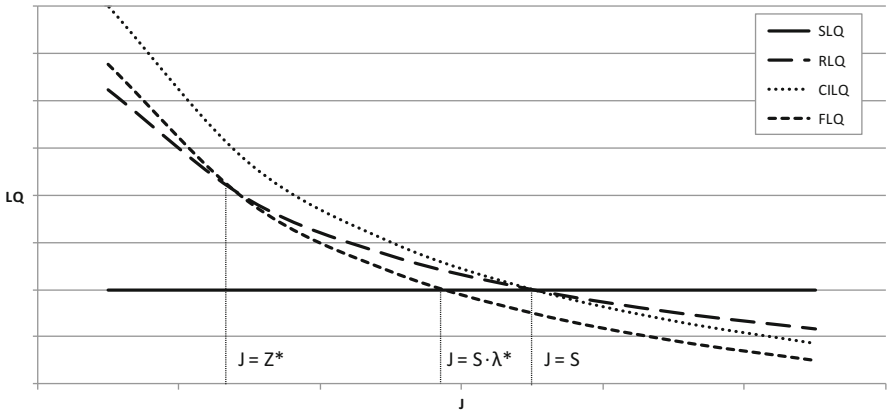


**Fig. 4.1** Size of LQs

### *4.3.2 Trade Coefficients*

Equation (4.14) calculates the difference between two trade coefficients:

$$DT_{ij}^{AB} = t_{ij}^{A} - t_{ij}^{B}, \tag{4.14}$$

where: $DT_{ij}^{AB}$ is the difference between trade coefficients for supplying sector i and demanding sector j, generated by LQ methods A and B, $t_{ij}^{A}$ is the trade coefficient for supplying sector i and demanding sector j, generated by LQ method A, and $LC_{ij}^{B}$ is the trade coefficient for supplying sector i and demanding sector j, generated by LQ method B.

Table 4.3 shows the conditions for a positive and negative $DT_{ij}^{AB}$. We conclude that the sign of the difference between trade coefficients depends on whether or not LQs are larger than one and, when both LQs are smaller than one, on the value of J relative to S, $S \cdot \lambda^{*}$ and Z*. When both LQs are smaller than one, trade coefficients are equal to LQs and the conditions for a positive difference between trade coefficients are the same as the conditions for a positive difference between LQs (final column of Table 4.1). When LQ A is larger than one and LQ B is smaller than one the difference between trade coefficients must be positive. When LQ A is smaller than one and LQ B is larger than one the difference between trade coefficients must be negative. When both LQs are larger than one both trade coefficients equal one and the differences is zero. Table 4.4 presents the conditions under which LQs are larger than one.

For $CILQ > 1$ and $SLQ < 1$, and the difference between trade coefficients to be positive (first row and third column of Table 4.3) the conditions in Table 4.4 imply that $J < S$. This implies that the overall condition for a positive difference between the trade coefficients of CILQ and SLQ is $J < S$, independent of whether or not CILQ is larger than one. Via the same line of reasoning we can establish that the only condition for a negative difference is $J > S$. Equivalent conclusions can be

**Table 4.3** Conditions for a positive and negative sign of the difference between trade coefficients

| $t_{ij}^{A}$ | $t_{ij}^{B}$ | $LQ_{ij}^{A} < 1, LQ_{ij}^{B} < 1$ | $LQ_{ij}^{A} > 1, LQ_{ij}^{B} < 1$ | $LQ_{ij}^{A} < 1, LQ_{ij}^{B} > 1$ | $LQ_{ij}^{A} > 1, LQ_{ij}^{B} > 1$ |
|---|---|---|---|---|---|
| CILQ | SLQ | Positive when $J < S$ | Positive | Negative | Zero |
| | | Negative when $J > S$ | | | |
| RLQ | SLQ | Positive when $J < S$ | Positive | Negative | Zero |
| | | Negative when $J > S$ | | | |
| RLQ | CILQ | Positive when $J > S$ | Positive | Negative | Zero |
| | | Negative when $J < S$ | | | |
| FLQ | SLQ | Positive when $J < S \cdot \lambda^{*}$ | Positive | Negative | Zero |
| | | Negative when $J > S \cdot \lambda^{*}$ | | | |
| FLQ | CILQ | Negative | N.A. | Negative | Zero |
| FLQ | RLQ | Positive when $J < Z^{*}$ | Positive | Negative | Zero |
| | | Negative when $J > Z^{*}$ | | | |

**Table 4.4** Conditions under which LQs are larger than one

| $LQ_{ij}$ | Condition for $LQ_{ij} > 1$ |
|---|---|
| SLQ | $\frac{I}{S} > 1 \Rightarrow I > S$ |
| CILQ | $\frac{I}{J} > 1 \Rightarrow I > J$ |
| RLQ | $\frac{I/S}{LOG_2(1+J/S)} > 1 \Rightarrow I > S \cdot LOG_2\left(1+\frac{I}{S}\right)$ |
| FLQ | $\frac{I\lambda^*}{J} > 1 \Rightarrow I > \frac{J}{\lambda^*}$ |

reached for all six comparisons between trade coefficients. The implication is that the ranking in size of LQs, as established in Table 4.2, also applies to trade coefficients. The only exception is that, independently of the value of J, there is equality between trade coefficients when both LQs are larger than one. In that case, both trade coefficients are one, and the difference is zero.

### *4.3.3 Regional IO-Coefficients*

Equation (4.15) calculates the difference between two RIOCs:

$$DA_{ij}^{AB} = a_{ij}^{A} - a_{ij}^{B}, \tag{4.15}$$

where: $DA_{ij}^{AB}$ is the difference between the RIOC for supplying sector i and demanding sector j, generated by LQ methods A and B, $a_{ij}^{A}$ is the RIOC for supplying sector i and demanding sector j, generated by LQ method A, and $a_{ij}^{A}$ is the RIOC for supplying sector i and demanding sector j, generated by LQ method B. Equation (4.16) shows that the sign of $DA_{ij}^{AB}$ must be equal to the sign of $DT_{ij}^{AB}$. The only exception is the situation where $a_{ij}^{N} = 0$. In that case, both RIOCs equal zero and $DA_{ij}^{AB}$ will be zero as well.

$$DA_{ij}^{AB} = a_{ij}^{A} - a_{ij}^{B} = t_{ij}^{A} \cdot a_{ij}^{N} - t_{ij}^{B} \cdot a_{ij}^{N} = \left(t_{ij}^{A} - t_{ij}^{B}\right) \cdot a_{ij}^{N} = DT_{ij}^{AB} \cdot a_{ij}^{N} \tag{4.16}$$

The conclusion is that the same ranking in size applies to LQs, trade coefficients and RIOCs, generated by alternative LQ methods (Table 4.2).The sign of the difference between LQs, trade coefficients, and RIOCs calculated between two alternative LQ methods depends on the J-value of the demanding sector, relative S, λ* and Z*. The only exceptions are situations where the LQs generated by two LQ methods are larger than one (conditions presented in Table 4.4) or when $a_{ij}^{N} = 0$. In those situations the RIOCs generated by two LQ methods are equal.

Table 4.5 shows the calculation of LQs, trade coefficients, and RIOCs for a hypothetical four sector regional economy, providing an illustration of these conclusions.

**Table 4.5** LQs, trade coefficients, and RIOCs for a hypothetical four sector region

| Parameters | | | $\lambda^*$, $S \cdot \lambda^*$ and $Z^*$ | | Demanding sector | | J | $a^N_{Bj}$ |
|---|---|---|---|---|---|---|---|---|
| S | 0.050 | | $\lambda^*$ | 0.880 | A | | 0.020 | 0.015 |
| δ | 0.050 | | $S \cdot \lambda^*$ | 0.048 | B | | 0.030 | 0.000 |
| | | | $Z^*$ | 0.028 | C | | 0.045 | 0.015 |
| | | | | | D | | 0.060 | 0.015 |
| *LQs (for supplying sector B)* | | | | | | | | |
| Demanding sector | SLQ | CILQ | RLQ | FLQ | Conditions | | Ranking in size | |
| A | 0.600 | 1.500 | 1.236 | 1.314 | $J < Z^*$ | | CILQ > FLQ > RLQ > SLQ | |
| B | 0.600 | 1.000 | 0.885 | 0.876 | $Z^* < J < S \cdot \lambda^*$ | | CILQ > RLQ > FLQ > SLQ | |
| C | 0.600 | 0.667 | 0.648 | 0.584 | $S \cdot \lambda^* < J < S$ | | CILQ > RLQ > SLQ > FLQ | |
| D | 0.600 | 0.500 | 0.527 | 0.438 | $J > S$ | | SLQ > RLQ > CILQ > FLQ | |
| *Trade coefficients (for supplying sector B)* | | | | | | | | |
| Demanding sector | SLQ | CILQ | RLQ | FLQ | Equality conditions | | Ranking in size | |
| A | 0.600 | 1.000 | 1.000 | 1.000 | CILQ, RLQ, FLQ > 1 | | CILQ = FLQ = RLQ > SLQ | |
| B | 0.600 | 1.000 | 0.885 | 0.876 | | | CILQ > RLQ > FLQ > SLQ | |
| C | 0.600 | 0.667 | 0.648 | 0.584 | | | CILQ > RLQ > SLQ > FLQ | |
| D | 0.600 | 0.500 | 0.527 | 0.438 | | | SLQ > RLQ > CILQ > FLQ | |
| *RIOCs (for supplying sector B)* | | | | | | | | |
| Demanding sector | SLQ | CILQ | RLQ | FLQ | Equality conditions | | Ranking in size | |
| A | 0.090 | 0.150 | 0.150 | 0.150 | CILQ, RLQ, FLQ > 1 | | CILQ = FLQ = RLQ > SLQ | |
| B | 0.000 | 0.000 | 0.000 | 0.000 | $a^N_{BB} = 0.000$ | | CILQ = RLQ = FLQ = SLQ | |
| C | 0.090 | 0.100 | 0.097 | 0.088 | | | CILQ > RLQ > SLQ > FLQ | |
| D | 0.090 | 0.075 | 0.079 | 0.066 | | | SLQ > RLQ > CILQ > FLQ | |

## 4.4 Ranking in Size of Total Output Multipliers

RIOCs (contained in the matrix A) form the basis of a regional IO Model. A technical operation on the A-matrix (Miller and Blair 2009) leads to the Leontief inverse matrix (L):

$$L = (I - A)^{-1} \tag{4.17}$$

where: L is the Leontief inverse matrix and I is the unity matrix. Equations (4.18) and (4.19) show that the Leontief inverse enables the calculation, for any level of final demand (Y) or change of final demand (ΔY), the required level (X) or change (ΔX) in output in all sectors of the regional economy:

$$X = L \cdot Y \tag{4.18}$$

$$\Delta X = L \cdot \Delta Y \tag{4.19}$$

Elements of the matrix L are so-called output multipliers ($L_{ij}$) showing the output in supplying sector i required to produce one unit of final demand of sector j. The sum of the output multipliers for demanding sector j (column total), i.e. the total output multiplier ($L_j$), shows the output required to produce one unit of final demand of sector j. As established in the previous sections the same ranking in size applies to LQs, trade coefficients, and RIOCs, for a demanding sector j. It is not necessarily the case that the same ranking in size also applies to total output multipliers. This is caused by the mathematics involved in the calculation of the Leontief inverse, whereby the value of each $L_{ij}$ depends on all RIOCs $a_{ij}$. Dependent on the ranking in size of LQs of LQ methods A and B ($LQ_{ij}^A$ and $LQ_{ij}^B$) there are three possible outcomes regarding the ranking in size of total output multipliers $L_j^A$ and $L_j^B$:

1. When all $LQ_{ij}^A \geq LQ_{ij}^B$ and at least one $a_{ij}^A > a_{ij}^B$, then $L_j^A \geq L_j^B$ for all demanding sectors.[6]

[6] Output multipliers $L_{ij}$ consist of (1) $a_{ij}$; intermediate delivery of supplying sector i to demanding sector j, caused by the final demand for products of sector j (2) intermediary deliveries of supplying sector i to all demanding sectors, caused by final demand for products of sector j, in addition to $a_{ij}$. An increase (decrease) of $a_{ij}$ between any two supplying and demanding sectors can increase (decrease) factor, via the inter-sectorial relationships (3) For $L_{ij}$ along the diagonal ($L_{ii}$) one is added, to account for direct output (Schaffer 1999). We find $L_j^A > L_j^B$ for demanding sector in which there is at least one $L_{ij}$ for which $a_{ij}^A > a_{ij}^B$ (factor one) and/or for which factor two is higher for LQ method A. We find $L_j^A = L_j^B$ in (1) demanding sectors for which all $a_{ij}^N = 0$, implying that all $a_{ij}^A = a_{ij}^B = 0$ and $L_j^A = L_j^B = 1$ (2) demanding sectors for which all $LQ_{ij}^A, LQ_{ij}^B > 1$ or all $LQ_{ij}^A = LQ_{ij}^B$, implying that all $a_{ij}^A = a_{ij}^B$, and for which for there is no $L_{ij}$ for which factor 2 is higher for LQ method A (no inter-sectorial relationships between sectors in which $a_{ij}^A > a_{ij}^B$ and sector j).

2. When $LQ_{ij}^{A} < LQ_{ij}^{B}$ in some demanding sectors and $LQ_{ij}^{A} > LQ_{ij}^{B}$ in other demanding sectors, then $L_j^A \gtreqless L_j^B$. The empirical data $(J, I, S, a_{ij}^{N})$ and (for comparisons including FLQ) choice of δ determine whether or not the same ranking in size of $LQ_{ij}^{A}$ and $LQ_{ij}^{B}$ applies to $L_j^A$ and $L_j^B$, for each demanding sector.
3. When all $LQ_{ij}^{A} = LQ_{ij}^{B}$ and/or when all $a_{ij}^{A} = a_{ij}^{B}$, then $L_j^A = L_j^B$ for all demanding sectors.

When we combine these outcomes with the ranking in size in Table 4.2 and the fact that a region necessarily consists of some demanding sectors for which $J < S$ and some demanding sectors for which $J > S$[7] we know that outcome 2 must apply for any comparison between SLQ, RLQ, and FLQ. This is because the ranking in size is CILQ > RLQ > SLQ for demanding sectors for which $J < S$ and CILQ < RLQ < SLQ for the demanding sectors for which $J > S$. Outcome 1 applies for comparisons between FLQ and any of the other three LQ methods, when all demanding sectors have $J > S \cdot \lambda^{*}$. Based on Table 4.2 we know this implies that FLQ leads to LQs equal or smaller than LQs of any other LQ method. When there are demanding sectors for which $J < S \cdot \lambda^{*}$ (demanding sectors that are relatively poorly represented on the regional level), SLQ and/or RLQ produce LQs equal or smaller than FLQ, for these demanding sectors we then face outcome 2. Outcome 3 is not relevant for comparisons between the four LQ methods.[8] The implication is that the ranking in size of total output multipliers is not necessarily the same as the ranking in size of LQs. The exception is the comparison between FLQ and any other LQ method, when all demanding sector have $J > S \cdot \lambda^{*}$.

This is illustrated in Table 4.6, which is a continuation of the calculations from Table 4.5. The Table shows the ranking in size of LQs, RIOCs, and total output multipliers. Although the ranking in size of total output multipliers is very similar to LQs, we find a different ranking in size for the comparison between FLQ and SLQ in demanding sector C.[9] We conclude that although the ranking in size based on Table 4.2, which applies for LQs, trade coefficients and RIOCs, can apply for total

[7] $S = \frac{x^{R}}{x^{N}} = \frac{\sum_{j=1}^{j=n} X_j^{R}}{\sum_{j=1}^{j=n} X_j^{N}}$ and $J = \frac{X_j^{R}}{X_j^{N}}$. When all $J > S$ then $\frac{\sum_{j=1}^{j=n} X_j^{R}}{\sum_{j=1}^{j=n} X_j^{N}} > S$ which conflicts the definition of S. An equivalent conflict is found when all $J < S$. A region necessarily consists of sectors with $J < S$ and sector with $J > S$, except when $J = S$ for all sectors.

[8] There are three scenarios to find $LQ_{ij}^{A} = LQ_{ij}^{B}$ and/or all $a_{ij}^{A} = a_{ij}^{B}$: (1) All $a_{ij}^{N} = 0$ (2) $J = S$, for all sectors (3) $LQ_{A}^{ij}, LQ_{B}^{ij} > 1$ or $LQ_{A}^{ij} = LQ_{B}^{ij}$ for all combinations between demanding and supplying sectors. Formulas of SLQ, CILQ, RLQ, and FLQ and the presence of some demanding sectors for which $J < S$ and some demanding sectors for which $J > S$ imply the last scenario is impossible. The first two scenarios are (highly) unrealistic.

[9] The ranking in size of total output multipliers of CILQ, FLQ, and RLQ in sector A changes back from equality (RIOCs) to the inequality of LQs. Differences between RIOCs of CILQ, FLQ, and RLQ for other combinations between sectors lead to inequality between total output multipliers. In sector B $a_{iB}^{N} = 0$ and $a_{iB} = 0$. Production of output by sector j does not lead to any intermediary supplies. Total output multiplier are then equal to one.

**Table 4.6** LQs, RIOCs, output multipliers, and total output multipliers for a hypothetical four sector region

| *LQs (for supplying sector B)* | | | | | | |
|---|---|---|---|---|---|---|
| Demanding sector | SLQ | CILQ | RLQ | FLQ | Conditions | Ranking in size |
| A | 0.600 | 1.500 | 1.236 | 1.314 | $J < Z^*$ | CILQ > FLQ > RLQ > SLQ |
| B | 0.600 | 1.000 | 0.885 | 0.876 | $Z^* < J < S \cdot \lambda^*$ | CILQ > RLQ > FLQ > SLQ |
| C | 0.600 | 0.667 | 0.648 | 0.584 | $S \cdot \lambda^* < J < S$ | CILQ > RLQ > SLQ > FLQ |
| D | 0.600 | 0.500 | 0.527 | 0.438 | $J > S$ | SLQ > RLQ > CILQ > FLQ |
| National IO-coefficients | | | | | | |
| Demanding sector | Supplying sector | | | | | |
| | A | B | C | D | | |
| A | 0.200 | 0.150 | 0.100 | 0.050 | | |
| B | 0.000 | 0.000 | 0.000 | 0.000 | | |
| C | 0.200 | 0.150 | 0.100 | 0.050 | | |
| D | 0.200 | 0.150 | 0.100 | 0.050 | | |
| *RIOCs (for supplying sector B)* | | | | | | |
| Demanding sector | SLQ | CILQ | RLQ | FLQ | Equality conditions | Ranking in size |
| A | 0.090 | 0.150 | 0.150 | 0.150 | $CILQ, RLQ, FLQ > 1$ | CILQ = FLQ = RLQ > SLQ |
| B | 0.000 | 0.000 | 0.000 | 0.000 | $a^N_{BB} = 0$ | CILQ = RLQ = FLQ = SLQ |
| C | 0.090 | 0.100 | 0.097 | 0.088 | | CILQ > RLQ > SLQ > FLQ |
| D | 0.090 | 0.075 | 0.079 | 0.066 | | SLQ > RLQ > CILQ > FLQ |
| *Total output multipliers* | | | | | | |
| Demanding sector | SLQ | CILQ | RLQ | FLQ | | Ranking in size |
| A | 1.397 | 1.706 | 1.633 | 1.644 | | CILQ > FLQ > RLQ > SLQ |
| B | 1.000 | 1.000 | 1.000 | 1.000 | | CILQ = RLQ = FLQ = SLQ |
| C | 1.397 | 1.467 | 1.448 | 1.404 | | CILQ > RLQ > FLQ > SLQ |
| D | 1.397 | 1.367 | 1.377 | 1.311 | | SLQ > RLQ > CILQ > FLQ |

output multipliers in many demanding industries, there is no guarantee it applies to all industries. This conclusion is dependent on the empirical data $(J, I, S, a_{ij}^{N})$ and choice of δ.

## 4.5 Empirical Case Study: Antwerp (Belgium)

We applied the LQ methods to calculate RIOCs and total output multipliers for the region of Antwerp in Belgium. For FLQ we assumed δ to be 0.25. There is an on-going debate regarding the optimal value of δ (Flegg and Tohmo 2011, 2013; Kowalewski 2012). Flegg and Tohmo (2011) have developed a regression equation, whereby the optimal value of δ depends on regional size, the region's propensity to import (relative to other regions) and the region's average use of intermediate inputs (relative to other regions). However, they also recommend using $\delta = 0.25$ as the best single value, when the data is lacking to calculate the optimal value of δ.

We applied the LQ methods to the national Belgian IO-table (Eurostat 2012). According to Kronenberg (2007; 2009) non-survey methods can only be applied to IO-tables in which imports are included 'directly' i.e. there is an import row in the IO-table showing the aggregate imports of each sector in the column. For the Belgian IO-table Kronenberg's requirement is fulfilled. Because there was no data about regional output per sector national and regional employment (per sector) were used to calculate $x_j^R$, $x^R$, $x_j^N$ and $x^N$, assuming that labour productivity per sector is equal on the regional and national level (Round 1983; Johns and Leat 1987). Employment data was obtained from BelgoStat (2012). National and regional employment data were only available for 16 aggregated sectors (see Table 4.7). Therefore, the data in the national IO-table was first aggregated into these 16 sectors, before applying the LQs.

The first part of Table 4.8 shows the sum of RIOCs, per demanding sector J. Because the ranking in size of RIOCs (Table 4.2) depends on the J-value of demanding sectors the same ranking in size applies to individual RIOCs and the sum of RIOCs, per demanding sector. Note that demanding sectors are subdivided into three groups: Demanding sectors for which $Z^* < J < (S \cdot \lambda^*)$, demanding sectors for which $(S \cdot \lambda^*) < J < S$ and demanding sector for which $J > S$. Each group has a different ranking in size of the (sum of) RIOCs, which can be explained based on Table 4.2. Because there are two demanding sectors for which $Z^* < J < (S \cdot \lambda^*)$ FLQ does not lead to the smallest (sum of) regional IO- coefficients for all demanding sectors. This implies that outcome 2 applies for all comparisons between LQ methods and it depends on the empirical data and (for comparisons including FLQ) the choice of the weighting parameter δ whether or not the ranking in size or RIOCs also applies for the size of total output multipliers.

Nonetheless, the second part of Table 4.8, that presents total output multipliers for each demanding sector, shows that the ranking in size of total output multipliers matches the ranking in size of (sum of) RIOCs. The only exception is the ranking in

**Table 4.7** Aggregated sectors for which national and regional employment data is available

| | |
|---|---|
| A | Agriculture, forestry and fishery |
| B | Raw materials |
| C | Industry |
| D | Production and distribution of electricity, gas, stream, cooled air and water |
| E | Construction |
| F | Retail, reparation of computers and consumer articles |
| G | Accommodation and meals |
| H | Transport, storage, postal services and telecommunication |
| I | Financial services and insurances |
| J | Exploitation of trade and real estate |
| K | Business services |
| L | Government, defence; social security |
| M | Education |
| N | Health care |
| O | Associations |
| P | Arts, amusement and recreation |

size of SLQ and FLQ for the two demanding sectors for which $Z^* < J < \left(S \cdot \lambda^*\right)$. Here we find that total output multipliers of SLQ are larger than total output multipliers of FLQ. For this empirical case study FLQ leads to the smallest total output multipliers, for all demanding sectors. An IO model based on FLQ will produce the smallest impacts, independently of the distribution of final demand over sectors.

## 4.6 Conclusion

In this chapter we have compared the four most used LQ methods: SLQ, CILQ, RLQ and FLQ. These LQ methods are used to generate a RIOT, which is requirement for a regional IO analysis. The size of the RIOCs, which can be derived from the RIOT, directly influences the results of the analysis. An over- or underestimation of RIOCs can lead to over- or underestimation of economic impacts. It is therefore very important to understand the differences between LQ methods and the consequences for the RIOCs. This applies to any economic impact analysis, including analyses in the domain of tourism, where IO models are commonly used. Input-output analyses in tourism are most often commissioned in contexts where money, data, time, and/or knowledge to apply other regionalisation methods is absent.

Contrary to earlier studies that have compared RIOCs generated by LQ methods to survey based RIOCs, to determine how close LQ methods come to replicating these survey based RIOCs, our objective was to provide an explanation for the sign of the difference between RIOCs calculated between two alternative LQ methods.

**Table 4.8** Sum of RIOCs and total output multipliers for the region of Antwerp (Belgium)

| | B | L | A | I | G | J | M | P | E | F | D | K | C | H | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $Z^* < J < S \cdot \lambda^*$ | | $S \cdot \lambda^* < J < S$ | | | | | | | | $J > S$ | | | | | |
| *Sum of RIOCs* | | | | | | | | | | | | | | | | |
| SLQ | 0.33 | 0.16 | 0.47 | 0.35 | 0.47 | 0.20 | 0.07 | 0.38 | 0.58 | 0.34 | 0.34 | 0.41 | 0.34 | 0.41 | 0.27 | 0.31 |
| CILQ | 0.37 | 0.17 | 0.50 | 0.41 | 0.48 | 0.22 | 0.08 | 0.40 | 0.60 | 0.34 | 0.34 | 0.40 | 0.33 | 0.38 | 0.23 | 0.14 |
| RLQ | 0.36 | 0.17 | 0.49 | 0.39 | 0.48 | 0.22 | 0.07 | 0.40 | 0.59 | 0.34 | 0.34 | 0.41 | 0.33 | 0.39 | 0.24 | 0.19 |
| FLQ | 0.36 | 0.17 | 0.48 | 0.35 | 0.46 | 0.19 | 0.07 | 0.34 | 0.49 | 0.30 | 0.27 | 0.31 | 0.25 | 0.29 | 0.17 | 0.11 |
| | CILQ > RLQ > FLQ > SLQ | | CILQ > RLQ > SLQ > FLQ | | | | | | | | SLQ > RLQ > CILQ > FLQ | | | | | |
| *Total output multipliers* | | | | | | | | | | | | | | | | |
| SLQ | 1.52 | 1.26 | 1.74 | 1.55 | 1.73 | 1.33 | 1.11 | 1.62 | 2.02 | 1.55 | 1.56 | 1.67 | 1.54 | 1.67 | 1.42 | 1.50 |
| CILQ | 1.59 | 1.27 | 1.76 | 1.67 | 1.75 | 1.37 | 1.12 | 1.66 | 2.08 | 1.55 | 1.55 | 1.66 | 1.51 | 1.61 | 1.34 | 1.23 |
| RLQ | 1.58 | 1.27 | 1.76 | 1.63 | 1.75 | 1.36 | 1.12 | 1.65 | 2.06 | 1.55 | 1.55 | 1.66 | 1.52 | 1.63 | 1.37 | 1.31 |
| FLQ | 1.50 | 1.23 | 1.63 | 1.47 | 1.60 | 1.26 | 1.08 | 1.44 | 1.68 | 1.39 | 1.35 | 1.41 | 1.32 | 1.37 | 1.21 | 1.14 |
| | CILQ > RLQ > SLQ > FLQ | | | | | | | | | | SLQ > RLQ > CILQ > FLQ | | | | | |

This provides valuable insight for any researcher facing the choice between LQ methods.

We used the formulas of the LQ methods to establish a ranking in size of RIOCs generated by the four LQ methods (Table 4.2). This ranking in size shows, for any combination of demanding and supplying sector, if the use of a different LQ method would lead to smaller or larger RIOCs. The direction of change depends on the J-value of the demanding sector, relative to S, λ* and Z* (whereby J is equal to the output of demanding sector j on the regional level divided by the output of demanding sector j on the national level). The only combination between demanding and supplying sectors for which this ranking in size does not apply and for which a change between LQ methods leads to the same RIOC is when LQs generated by two LQ methods are larger than one (conditions presented in Table 4.4) and/or when the corresponding national IO-coefficient is zero.

Based on a RIOT we can derive total output multipliers. These total output multipliers play an important role in IO analysis, because they show the output that is required (in all sectors of the economy) to produce one unit of final demand of sector j. Our analysis has shown that the ranking in size of total output multipliers of LQ methods is not necessarily the same as the ranking in size of RIOCs. The exception is the comparison between FLQ and any other LQ method. When all demanding sectors have J-values higher than $S \cdot \lambda^*$ the FLQ method, which was developed to avoid overestimation by making appropriate corrections for cross-hauling, leads to the lowest RIOCs and the lowest total output multipliers, for all combinations between demanding and supplying sectors. For all other comparisons between LQ methods, or when there are demanding sectors that have a J-value lower than $S \cdot \lambda^*$, it depends on the empirical data and (for comparisons including FLQ) the choice of the weighting parameter δ whether or not the ranking in size of RIOCs also applies for total output multipliers. In an hypothetical and empirical case study we found that the same ranking in size applies for many, but not all, demanding sectors.

Based on the above findings, we conclude that the choice for FLQ may be justified by the desire to avoid or limit overestimation of regional economic impacts. Although such a desire can be praiseworthy from an academic point of view, it can be questioned to what degree a stakeholder who commissions an IO analysis will have the same perception. IO analyses are often part of a political process and are meant to provide arguments to convince other stakeholders (e.g. the government) of a certain position (Crompton et al. 2001; Crompton 1995, 2006). In this context questions can be raised regarding the desirability to choose a LQ method that leads to the lowest impacts, especially when competitors make different choices. This is a relevant consideration for tourism, as the industry (and it constituents) is increasingly in a situation where there is severe competition for scarce government subsidies and favorable policy decisions.

The added value of this chapter is that it provides a complete explanation for the direction of change of a RIOC, when choosing an alternative LQ method. It is however important to emphasize that we do not recommend choosing between LQ

methods based solely on this ranking in size. It needs to be combined with a solid understanding of the equations and underlying assumptions of the LQ methods, as discussed in the second section. Furthermore, one needs to be aware that other methods to generate RIOTs (survey, hybrid) can be preferable to LQ methods, when time, money, data, and knowledge allow for their application. There is a continuous debate regarding the appropriateness of LQ methods (Kronenberg 2009) and some scholars criticise these methods for not being able to capture the complex forces that determine actual RIOCs, e.g. spatial market orientations and differences between regional and national technologies (Richardson 1985; Brand 1997; McCann and Dewhurst 1998). The relevance of this chapter is based on extensive usage of the LQ methods in the past and the likely continued usage in the future (Jensen 1990), but this makes it even more important to be aware of their inherent limitations.

## Appendix A: Values of Z* for Different Values of δ and S

| | δ | | |
|---|---|---|---|
| S | 0.2 | 0.25 | 0.3 |
| 0.1 | –[a] | – | – |
| 0.2 | 0.043 | – | – |
| 0.3 | 0.119 | 0.080 | 0.049 |
| 0.4 | 0.211 | 0.171 | 0.140 |
| 0.6 | 0.448 | 0.391 | 0.386 |
| 0.8 | 0.739 | 0.668 | 0.666 |

[a]The symbol "–" indicates that a solution cannot be found using Microsoft Excel's target seek function

## References

Barajas A, Lago-Peñas S, Sanchez P (2014) On the regional economic effects of the Pope's journeys: evidence from the visit to Santiago de Compostela in 2010. Tour Econ 20:279–299. doi:10.5367/te.2013.0270

Belgostat (2012) Tabel nationale en regionale werkgelegenheid

Bonfiglio A, Chelli F (2008) Assessing the behaviour of non-survey methods for constructing regional input–output tables through a Monte Carlo simulation. Econ Syst Res 20:243–258. doi:10.1080/09535310802344315

Bonn M, Harrington J (2008) A comparison of three economic impact models for applied hospitality and tourism research. Tour Econ 14:769–789

Brand S (1997) On the appropriate use of location quotients in generating regional input-output tables: a comment. Reg Stud 31:791–795. doi:10.1080/713693391

Buyst E, Bilsen V (2000) Uitgebreide regionale rekeningen volgens ESR95 en een regionale input-outputtabel voor Vlaanderen. Katholieke Universiteit Leuven, Department of Economics, Leuven
Crompton JL (1995) Economic impact analysis of sports facilities and events: eleven sources of misapplication. J Sport Manage 9:14–35
Crompton JL (2006) Economic impact studies: instruments for political shenanigans? J Travel Res 45:67–82. doi:10.1177/0047287506288870
Crompton JL, Lee S, Shuster TJ (2001) A guide for undertaking economic impact studies: the Springfest example. J Travel Res 40:79–87. doi:10.1177/004728750104000110
Daniels MJ (2004) Beyond input-output analysis: using occupation-based modeling to estimate wages generated by a sport tourism event. J Travel Res 43:75–82. doi:10.1177/0047287504265515
Eurostat (2012) Belgian National IO table
Flegg A, Tohmo T (2011) Regional input–output tables and the FLQ formula: a case study of Finland. Reg Stud 47:703–721. doi:10.1080/00343404.2011.592138
Flegg A, Tohmo T (2013) Estimating regional input coefficients and multipliers: the use of the FLQ is not a gamble. Bristol
Flegg A, Webber C (1997) On the appropriate use of location quotients in generating regional input-output tables: reply. Reg Stud 31:795–805. doi:10.1080/713693401
Flegg A, Webber C, Elliott M (1995) On the appropriate use of location quotients in generating regional input–output tables. Reg Stud 29:547–561. doi:10.1080/00343409512331349173
Harrigan FJ, McGilvray JW, McNicoll IH (1980) Simulating the structure of a regional economy. Environ Plan A 12:927–936
Harris RID, Liu A (1998) Input-output modelling of the urban and regional economy: the importance of external trade. Reg Stud 32:851–862. doi:10.1080/00343409850118004
Isard W (1953) Regional commodity balances and interregional commodity flows. Am Econ Rev 43:167–180
Jensen RC (1990) Construction and use of regional input-output models: progress and prospects. Int Reg Sci Rev 13:9–25. doi:10.1177/016001769001300102
Johns P, Leat P (1987) The application of modified GRIT input-output procedures to rural development analysis in Grampian Region. J Agric Econ 38:242–256
Klijs J, Heijman WJM, Korteweg Maris D, Bryon J (2012) Criteria for comparing economic impact models of tourism. Tour Econ 18:1175–1202. doi:10.5367/te.2012.0172
Kowalewski J (2012) Regionalization of national input-output tables: empirical evidence on the use of the FLQ formula. Hamburg
Kronenberg T (2007) How can regionalization methods deal with cross-hauling? Julich
Kronenberg T (2009) Construction of regional input-output tables using nonsurvey methods: the role of cross-hauling. Int Reg Sci Rev 32:40–64. doi:10.1177/0160017608322555
McCann P, Dewhurst J (1998) Regional size, industrial location and input-output expenditure coefficients. Reg Stud 32:435–444. doi:10.1080/00343409850116835
Miller RE, Blair PD (2009) Input-output analysis: foundations and extensions. Cambridge University Press, New York
Morrison W, Smith P (1974) Nonsurvey input-output techniques at the small area level: an evaluation. J Reg Sci 14:1–14. doi:10.1111/j.1467-9787.1974.tb00425.x/full
Murillo J, Vayà E, Romaní J, Suriñach J (2013) How important to a city are tourists and day-trippers? the economic impact of tourism on the city of Barcelona. Tour Econ 19:897–917. doi:10.5367/te.2013.0225
Polo C, Ramos V, Rey-Maquieira J et al (2008) The potential effects of a change in the distribution of tourism expenditure on employment. Tour Econ 14:709–725
Richardson HW (1985) Input-output and economic base multipliers: looking backward and forward. J Reg Sci 25:607–661. doi:10.1111/j.1467-9787.1985.tb00325.x/abstract
Romero I, Tejada P (2011) A multi-level approach to the study of production chains in the tourism sector. Tour Manage 32:297–306. doi:10.1016/j.tourman.2010.02.006

Round JI (1978) An interregional input-output approach to the evaluation of nonsurvey methods. J Reg Sci 18:179–194. doi:10.1111/j.1467-9787.1978.tb00540.x

Round JI (1983) Nonsurvey techniques: a critical review of the theory and the evidence. Int Reg Sci Rev 8:189–212. doi:10.1177/016001768300800302

Schaffer WA (1999) Regional impact models. Regional Research Institute, West Virginia University

Schaffer WA, Chu K (1969) Nonsurvey techniques for constructing regional interindustry models. Pap Reg Sci 23:83–104. doi:10.1111/j.1435-5597.1969.tb01403.x

Stevens BH, Treyz GI, Lahr ML (1989) On the comparative accuracy of RPC estimating techniques. In: Miller RE, Polenske K, Rose AZ (eds) Frontiers of input-output analysis. Oxford University Press, New York, pp 245–257

Stoeckl N (2010) Comparing multipliers from survey and non-survey based IO models: an empirical investigation from Northern Australia. Int Reg Sci Rev 35:367–388. doi:10.1177/0160017610385452

Sun Y, Wong K-F (2014) Stability of input–output coefficients by capacity utilization for short-term tourism demand fluctuation. Tour Econ 20:509–526. doi:10.5367/te.2013.0294

Viu JM, Fernández JR, Caralt JS (2008) The impact of heritage tourism on an urban economy: the case of Granada and the Alhambra. Tour Econ 14:361–376

# Chapter 5
# The Impact of Motivation Factors on Spending at a Public Sector Festivals Programme

**Denise Hawkes, James Kennell, Paul Booth, and Emma Abson**

## 5.1 Introduction

This paper is based on data collected as part of a study of the economic impact of a London local authority's programme of cultural events, which were programmed together as part of a Summer-long festival. The events were attended by more than 115,000 visitors, with 62 % of these coming from outside of the local authority area. Data was collected from 1310 attendees over three months, at a sample of the programme's events. This data was combined with information from organisations involved in delivering the programme to arrive at an estimated total local economic impact, using a multiplier-based methodology. The total local economic impact of the programme was estimated at £1,605,765, which represented a return on local authority investment of 6.61:1.

This paper takes a closer look at the motivational and demographic data collected as part of the economic impact study and uses regression analysis to further analyse the findings drawn from the descriptive statistics that formed part of the initial impact study. It is interesting to note large variations in spending by different groups of attendees, which appeared to be most marked when considered in light of their motivations for attending the events.

This analysis has value in light of the changing context of public sector support for tourism and events in the United Kingdom, and the emerging new role for local authorities as entrepreneurial bodies within a local economic development context. Pugh and Wood (2009) identified local government as beginning to take on a more

D. Hawkes (✉)
Centre for Doctoral Education and Department of Quantitative Social Science, UCL Institute of Education, University College London, London, UK
e-mail: denise.hawkes@ucl.ac.uk

J. Kennell • P. Booth • E. Abson
Business School, University of Greenwich, London, UK



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_5

strategic marketing orientation in the period before the recent economic crisis. It is likely that the current crisis has accelerated these tendencies within the public sector, which has been developing a more neoliberal, market-oriented approach since the 1980s (Harvey 2010). In this context, it is unsurprising that local authorities have become increasingly concerned with justifying their support for events by demonstrating their economic impacts and mobilising these justifications to gain and maintain public support.

The public sector uses events to promote destinations to visitors and, increasingly, to meet other public policy objectives such as social inclusion, education and health (Felsenstein and Fleischer 2003; Richards and Palmer 2010). These events range from small-scale events such as public consultations (Hiller 2000) to the hosting of mega-events such as the Olympic Games (Atkinson et al. 2008). However, the power of public sector events to create meaningful impacts on economic and public policy goals, especially in the areas of development and social impacts, has long been questioned in the literature (Snowball 2004; Maenning and du Plessis 2009). The questions surrounding the impacts of these events have become increasingly pressing for policymakers, as stakeholders begin to question the value of public investment in events programming. As well as increasing pressure from various stakeholders, Wood (2009) describes how a significant distinction between public sector events and those in the private sector is that of accountability. The public sector is accountable to citizens through political processes and this accountability provides the mechanism through which the success or failure of public sector events is judged.

Whilst local authorities have traditionally had a significant role in supporting local tourism and cultural events projects, we argue that they will be increasingly required to develop a more robust justification of their spending in this field and a better appreciation of the appropriate commercial activities, for example marketing and retail, needed to support their work in the face of changing state funding arrangements and volatile levels of public support for public expenditure in this field.

## 5.2 The Changing Context of Public Sector Support for Tourism and Cultural Events

The economic crisis, which began in 2008, continues to have significant effects on state spending across Europe and the USA; the coalition government that was formed in the UK in 2010 implemented a series of structural reforms of the public sector, alongside an austerity programme, that was aimed at reducing public spending by approximately 13 % on 2010 levels (Taylor-Gooby 2012). This austerity programme had significant implications for local authority support for tourism and events (Kennell and Chaperon 2013) as local authority spending in these areas was traditionally discretionary and did not form part of the mandatory public

spending commitments of local authorities in areas such as education, housing and transport. In less difficult economic times, public sector events were commonly evaluated against a range of indictors, including developmental, social/community, political and economic (Bladen et al. 2012). However, the increasing focus on reducing state spending and delivering value for money in local authority areas has led to many local authorities focusing more intently on the economic impacts of their activities and public sector events have not been immune to this change in emphasis.

The more recent events management literature on economic impacts has developed from the significant research activity in this area within the tourism field. Ritchie and Goeldner (1994) define economic impact as the net economic change in a host community that results from the spending of tourists or visitors in that area. Therefore, the purpose of measuring the economic impact of an event is to measure the economic benefit that a community receives from hosting it (Saayman and Rossouw 2011). Although Jago and Dwyer (2006) argue that evidence of social, community and other non-economic impacts are vital for the understanding of and support for publically funded events, the majority of published event impact studies appear to reflect an emphasis on making the economic-case for the funding of events (e.g. Dwyer et al. 2000; Gratton et al. 2000; Lee and Taylor 2005; Ramachandani and Coleman 2012). This study uses data that was collected for a research project of a similar nature; to establish the local economic impact of a series of events, with the aim of producing information that would be useful in terms of determining the appropriate level of public sector support for the programme. However, the focus in this paper is to explore the link that was found in the data between motivations to attend and spending. As Kim et al. (2008: 397) highlight 'little attention has been paid to investigating spending by event attendees in comparison to research on, for example, resident perception of events, or the economic impacts of events'. The following section gives a brief overview of the area of event attendance motivation.

## 5.3 Motivations for Attending Events

Motivation is defined as an "internal factor that arouses, directs, and integrates a person's behavior" (Iso-Ahola, 1980, cited in Crompton and McKay 1997: 425). Getz (2007: 240) suggests that events meet basic human needs, not just for socialization and celebration but to 'discover, learn and fulfill their aesthetic ambitions, and attending events provides these benefits...events of all kinds have been successful because they meet so many fundamental personal, social, cultural and economic needs.' Kim et al. (2008: 387) contend however, that the 'driving force behind people's growing desire for new experiences is probably the general improvement in living standards, as reflected in real disposable income'.

Early event motivation research built on the considerable body of work on travel motivations, which began to be developed by events scholars from the early 1990s

onwards. Getz (2005: 331) divides motivations to attend events into three categories: 'physical needs', the need for 'belonging, love and the esteem of others' and the 'need for understanding, aesthetic appreciation, growth and self-fulfilment', an approach which has clear conceptual links to the classic psychological model of human needs offered by Abram Maslow. Maslow's theory of motivation, also known as Maslow's Hierarchy of Needs Model which originally presented five needs: physiological needs, safety needs, love and needs of belonging, self-esteem needs and the need for self-actualisation.

Maslow's approach to understanding motivations based on psychological factors has been highly influential in the field of event motivations, with the majority of studies in this area linking psychological and demographic factors to understand attendee motivation, often in the context of attendee satisfaction (Uysal et al. 1991; Crompton and McKay 1997; Nicholson and Pearce 2001; Lee et al. 2004; Bowen and Daniels 2005; Thompson and Scholfield 2009; Kim et al. 2010).

The main significance that is usually attached to event motivation studies relates to marketing. For example, Chang and Yuan (2011) explored the motivations of attendees at a food festival in Texas, USA and used factor analysis to identify attendee motivations, before drawing out the implications of this for the future promotion of the festival. Thompson and Scholfield (2009) used factor analysis to identify motivations for attendees to the Naadam Festival in Ulanbaatar, Mongolia which allowed them to then develop a five category segmentation model for attendees that split potential audiences into 'multipurpose seekers', 'indifferent', 'culture and sport seekers' and 'socialization and local event seekers'; the authors suggest that each of these segments can be targeted by specific marketing techniques to grow the festival's audience.

There is a relative paucity of studies that link attendee motivations to expenditure during an event (Kim et al. 2008). Thrane (2002) carried out research at a Norwegian jazz festival and found that of those attendees who were motivated to attend because of their interest in jazz, increasing levels of jazz knowledge were positively correlated with significant increases in spending at the event. Kim et al. (2008, 2010) examined the relative merits of three statistical approaches to analysing determinants of expenditures by attendees to the annual Korean Traditional Drink and Rice Cake Festival in Gyeongju, Korea, but focused on demographic variables such as age and education, with the inclusion of some behavioural factors such as repeat visitation and whether attendees were staying overnight. Kruger et al. (2010) used regression analysis to identify the relationship between a range of demographic and behavioural factors and spending at the Aardklop National Arts Festival in South Africa, and concluded that income, occupation, age and patterns of festival attendance were significant determinants of expenditure, but did not investigate the salience of motivational factors.

This study made use of one of the most widely adapted models of motivation, Beard and Ragheb's (1983) 'Leisure Motivation Model', which splits the motivation for participating in a variety of leisure activities into four components:

- Intellectual component: motivations connected to mental activities such as learning, exploring and imagining
- Social component: motivations with a social meaning such as making friends or strengthening relationships
- Competence/mastery factors: developing proficiency in an area, mastering new skills or competing with others
- Stimulus/avoidance factors: motivations connected to escapism and relaxation

This approach to the categorisation of motivations according to their psychosocial foundations is typical of other approaches within the field of tourism and events. For example, McIntosh et al. (1995) categorisation of tourism motivations also has four categories:

- Physical motivators: these refer to motivations connected to wellness, health and activity
- Cultural motivators: these are intellectual motivators connected to learning about and experiencing cultural forms and practices
- Interpersonal motivators: these are social motivations connected to spending time with friends and family and meeting new people
- Status and prestige motivators: these motivations are also social, and are connected with the desire to increase one's standing within a social setting

Beard and Ragheb's model was employed because, as Li and Petrick (2005: 423) explain, despite increasingly consistent methodological approaches being taken in the measurement of event motivations (usually quantitative studies combining measurements of psychological and demographic factors), 'a universal motivation scale is yet to emerge' that can be applied robustly across all kinds of events, with the majority of studies identifying motivations on a single-case study basis. Gelder and Robinson (2009) similarly identify the lack of motivational models in the events discipline, noting its reliance on models imported from the sociological study of tourism. Nicholson and Pearce's (2001) study attempted to investigate the possibility of common event motivations by interviewing attendees at a range of event types in New Zealand and by asking the same question: 'why did you come to this event?'. They concluded that the specific content of each event was the main determinant of attendance.

Beard and Ragheb's (1983) model, however, was developed from the more established field of leisure studies and has been repeatedly tested in a range of leisure contexts. For this study, it was necessary to use a simple categorization of motivations that could be employed in a face to face survey that could be completed in a maximum of 5 min and using Beard and Ragheb's established model allowed the researchers to categorize attendee motivations in the data in a simple way. Respondents were asked to identify their reason for attending in one of five ways, as set out in the following section.

**Table 5.1** Content of the Southborough festivals programme

| Event | Duration | Estimated total visitors |
|---|---|---|
| Theatre festival | 14 days | 4230 |
| Contemporary dance festival | 60 days | 9000 |
| International arts festival | 10 days | 81,000 |
| Community festival | 1 day | 2500 |
| Community events programme | 1st June–28th July 2013 | 800 |
| Music festival | 3 days | 8000 |
| | Total | 115,330 |

## 5.4 Background to the Research

The local authority within which this research was carried out is Southborough,[1] a borough of London, which has a significant recent tradition of hosting cultural events. These events vary in scale and ambition from local community-focused events involving local performers and traders to major arts festivals for the international market. Although they have supported these events in a piecemeal way for around a decade, they have recently begun to consider the strategic role that events can play in helping the Borough to achieve its policy aims—in particular in economic development and destination marketing. Recently, the Borough brought together the six cultural events, which it was regularly funding under the 'Southborough Festivals' brand (see Table 5.1).

The Southborough Festivals programme included the following events in 2013.

The model used to measure the economic impact of the festivals programme was a simple multiplier model (Bladen et al. 2012) that added together the effects on the economy of the spending of event attendees and the indirect impact on the local economy of spending by event organisations during the festivals period. It was not possible within the scope of the research to capture the full spectrum of indirect spending or the induced spending generated by further cycles of economic activity supported by the festival activity. To estimate the local economic impacts of this programme of events, two sets of relevant data were identified. The first set of data related to the spending of organisations involved in delivering these events. This was collected through a questionnaire that was distributed via email to the event organisations involved in the Southborough Festivals programme.

The second set of data was collected through a quantitative survey. This survey was collected the following information:

- Demographic data, including:
  - Residency
  - Age

[1] The London Borough of Southborough is an anonymised version of the metropolitan area in which this research was carried out.

  - Ethnicity
  - Education
  - Gender
  - Disability
- Attendee motivations, based on an adaptation of Beard and Ragheb's (1983) Leisure Motivational Scale:
  - To meet new people
  - To spend time with family
  - For Education
  - To see the performances
  - General entertainment
- The information sources used by attendees to find out about the events, including:
  - Chance
  - Word of mouth
  - Local press
  - Social media
  - Web search
  - Other advertising
  - Previous attendance

The appropriate sample size for this survey was calculated using a probability sampling technique (Bryman 2008). At the start of the project, total estimated audience size was around 100,000 attendees. With a confidence level of 95 % and a confidence interval of ±3 %, it was calculated that a representative sample would comprise 1056 individuals. This number was unchanged when the calculation was modified to take into account the total estimated actual attendance for the events, which was 115,300. In total, survey data was collected from 1310 individuals through 579 individual and group surveys. The survey was administered face-to-face using tablets and mobile phones to collect the survey data, which was later analysed using Stata software. The following sections of this paper present the results of the analysis of the attendee survey, with a focus on the relationship between motivations and spending.

## 5.5 Results

### *5.5.1 Descriptive Statistics*

Useable data for the regression analysis was collected from 465 people during the course of the survey. Table 5.2 presents the median spending per person by motivation to attend the event and type of expenditure. Looking across these

**Table 5.2** Median spending per person by type of expenditure and motivation to attend

| | To meet new people | To spend time with family | To learn more about boats/ performance arts | Because it as a local event | To see the ships/ acts | General entertainment | All |
|---|---|---|---|---|---|---|---|
| Total spending (£) | 5.00 | 2.50 | 6.00 | 2.50 | 5.00 | 2.50 | 5.00 |
| Travel (£) | 5.00 | 1.67 | 2.50 | 1.25 | 2.50 | 2.50 | 2.50 |
| Food (£) | 5.00 | 2.50 | 5.00 | 1.13 | 1.67 | 2.50 | 2.50 |
| Keepsakes (£) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Accommodation (£) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Table 5.3** Socio-economic characteristics by motivation to attend

| | To meet new people | To spend time with family | To learn more about boats/ performance arts | Because it as a local event | To see the ships/ acts | General entertainment |
|---|---|---|---|---|---|---|
| Graduate (%) | 83 | 63 | 82 | 64 | 67 | 67 |
| Age 45 or older (%) | 25 | 30 | 26 | 33 | 32 | 30 |
| Disabled (%) | 0 | 7 | 0 | 4 | 7 | 7 |
| Black and minority ethnic (%) | 58 | 38 | 54 | 44 | 43 | 44 |
| Female (%) | 42 | 62 | 60 | 57 | 54 | 56 |
| Local (%) | 42 | 47 | 26 | 69 | 44 | 41 |
| Repeat attendee (%) | 58 | 34 | 50 | 44 | 34 | 35 |

median spending levels we see that those attending to: 'meet new people', 'learn more about the subject of the event' and to 'see the shows' spend more, with those attending: 'to spend time with family', 'because it is a local event' and for 'general entertainment' spend less in total spending per person. Focusing on food expenditure we see that those attending 'to meet new people' and 'to learn more about the subject of the event' spend significantly more than other motivations to attend on food. Finally the median spending on keepsakes and accommodation was limited as most people were day visitors and there were very few opportunities to purchase keepsakes at these events. These results are suggestive that there is a link between the motivation to attend and the amount spent by event attendees.

Table 5.3 presents motivations to attend by the socio-economic characteristics of the attendee. It is clear that within the data there are two groups which are consistently higher spenders: those who attended 'to meet new people' and 'to learn more about the subject of the event', there is a larger proportion of graduates and also a larger proportion of repeat attendees than in the other groups. For the lowest spend group in all categories, attending 'as it is a local event', as expected, living in the same local authority as the event is held is highest. This therefore suggests that in any regression analysis it is worth including these additional socio-economic characteristics to see whether the effects still hold. That is to see whether

when controlling for the socio-economic characteristics there is still a difference by motivation to attend in terms of spending at these events.

### 5.5.2 *Regression Analysis*

To investigate the results seen in descriptive statistics, regression analysis was used to explore the relative importance of these motivations to attend on the amount spent at the event. This is set out in Table 5.4.

The first three columns explore a series of base line models. The first column of Table 5.4 looks just at the impact of motivation to attend on spending per person at the event. The largest coefficient is found for the group 'to meet new people', which finds that if one of the reported motivations to attend was 'to meet new people' this increases the spending per person by £20.71 more than the average per person spend.

These results also find that those who attend 'because it is a local event' spend on average £10.59 less per person and, for those attending 'to spend time with family', spend on average is £6.31 less per person. This is a multicoded question, therefore should for example, a local family be attending the event to spend time together they would spend £16.90 (£10.59 + £6.31) less than the average per person spend represented by the coefficient of £15.27 ceteris paribus. This confirms that the core population attending these events are local families who contribute the least towards the economic impacts of the programme.

The second column tests whether repeat attendees spend more than those attending for the first time. Table 5.3 suggested that repeat attendees were more likely to be in the high spending motivational groups and therefore it is important to test whether the key driver of this result is the repeat attendance rather than the motivation for attending the event. Considering the result in column two we can see that there is not a significant effect of repeat attendance on spending and therefore this is not the underlying driver of the motivation to attend results. This is interesting as it shows for that repeat attendance is not a predictor of increased future spending. This finding is contrary to the premise of much of the audience development and marketing work in the cultural events sector literature, which suggests that sustained and repeated attendance is better for spending (Kolb 2005; Kawashima 2006).

The third column test explores whether the relationship is merely one of locals spending less, as locals were clustered in the lowest spending motivation to attend group. This result confirms that those traveling from outside of London spend significantly more to attend the event than those living within London. Exploring this further, this is driven by a difference in travel expenses and slightly higher food expenditure, as no accommodation spending was reported by those within the regression sample. There were also were very few opportunities to purchase keepsakes at these events. It is likely that providing more opportunities to spend

**Table 5.4** Regression analysis to explore the determinants of spending at local authority events

| | Baseline models | | | Robustness checks | | |
|---|---|---|---|---|---|---|
| | Spending and motivate to attend | Spending and repeat attendee | Spending and distance travelled | Including socio-economic factors | Including local resident | Including all possible control variables |
| *Motivation to Attend (multiple options allowed)* | | | | | | |
| To meet new people | 20.711 (2.08)* | | | 20.938 (2.08)* | 20.929 (2.12)* | 21.418 (2.13)* |
| To spend time with family | −6.314 (2.06)* | | | −5.038 (1.59) | −5.215 (1.70) | −4.485 (1.41) |
| To learn more about boats/ performance arts | 8.601 (1.79) | | | 7.713 (1.58) | 7.690 (1.60) | 7.386 (1.51) |
| Because it was a local event | −10.594 (3.40)** | | | −10.150 (3.17)** | −6.472 (1.85) | −6.564 (1.80) |
| To see the ships/acts | 3.697 (1.25) | | | 3.418 (1.14) | 2.708 (0.92) | 2.677 (0.89) |
| General entertainment | −3.302 (1.14) | | | −2.828 (0.95) | −3.112 (1.08) | −2.847 (0.96) |
| Repeat attendee | | 2.838 (0.93) | | | | −1.164 (0.38) |
| *Distance Travelled (reference group: local resident)* | | | | | | |
| Other parts of London | | | 3.383 (1.13) | | | |
| Other parts of UK | | | 33.882 (7.33)** | | | |
| Kent | | | 22.351 (2.38)* | | | |
| Resident outside of the UK | | | 32.681 (6.20)** | | | |
| *Socio-economic factors* | | | | | | |
| Graduate | | | | 4.777 (1.46) | | 2.974 (0.89) |
| Age 45 or older | | | | 3.879 (1.19) | | 4.307 (1.32) |
| Disabled | | | | −9.336 (1.41) | | −7.398 (1.11) |
| Minority ethnic | | | | −0.055 (0.02) | | −0.453 (0.15) |
| Female | | | | −0.178 (0.06) | | 0.054 (0.02) |
| Local | | | | | −8.434 (2.52)* | −7.986 (2.21)* |
| Constant | 15.269 (5.27)** | 10.805 (5.82)** | 3.920 (1.83) | 11.001 (2.33)* | 17.432 (5.80)** | 14.719 (2.86)** |

(continued)

**Table 5.4** (continued)

| | Baseline models | | | Robustness checks | | |
|---|---|---|---|---|---|---|
| | Spending and motivate to attend | Spending and repeat attendee | Spending and distance travelled | Including socio-economic factors | Including local resident | Including all possible control variables |
| $R^2$ | 0.08 | 0.00 | 0.19 | 0.09 | 0.10 | 0.10 |
| Sample size | 379 | 379 | 379 | 374 | 379 | 374 |

$^{*}p < 0.05$; $^{**}p < 0.01$

on food and keepsakes could have generated more spending especially from those who have travel furthest for the event.

The next three columns undertake a series of robustness checks to confirm the results from the baseline models. In the fourth column are the results from adding the socioeconomic variables to the motivations for attending. This addition leads to marginal changes in the coefficients. The highest spend group of 'attending to meet new people' and the lowest spending group of 'because it is a local event' maintain their significance and, largely, their magnitude. The coefficient on the 'spending time with family' variable becomes insignificant once these socio-economics factors are included.

The fifth column adds to the baseline motives to attend model the local variable, which once again has a marginal impact on most of the motivations coefficients. As expected the inclusion of the local variable, defined as someone living in the host local authority, reduces the coefficient on 'because it is a local event' dramatically, as expected given the results in Table 5.3, making the result insignificant. Clearly, there is a strong correlation between being a local resident and attending because this is a local event, suggesting an element of multicollinearity between these two variables that explains change.

The final column adds to the baseline model motives to attend the local variable, repeat attendee and socio-economic factors. A larger effect is found in terms of the change in coefficients than for the other two robustness checks. The only variable which maintains its significance is the motivation to attend of 'to meet new people'. The link therefore between higher levels of spending and attending the events 'to meet new people' is a robust result. Net of the possible multicollinearity issues, the low levels of spending by local residents is also a robust result.

Overall these results suggest that spending levels per person at this public sector cultural event programme is explained by more than socioeconomic, residency and repeat attendee characteristics. An important role in spending patterns at these events is the motivation to attend, with those attending 'to meet new people' consistently spending more and those attending 'as it is a local event' often found to spend less.

## 5.6 Conclusions

The changing context of public sector support for tourism and events at the local level implies that it is becoming increasingly important for local authorities to deliver successful events, both in terms of their economic impacts and their contribution to the more broad aims of public policy. Whilst there are many social benefits to local authorities hosting cultural events programmes, such as community cohesiveness and identity, the impact of austerity has meant the need for evidence of more than social benefits in order to maintain future funding.

This paper has identified a significant relationship between event attendee motivation and event expenditure. The link between attendee motivation and expenditure suggests possible opportunities for the organisers of public sector events which can help developed and marketed them more efficiently in the future to optimise both the social benefits and the wider economic impact. In addition, the data shows that local audiences are the lowest spenders at these events and that there is no link between previous attendance and event expenditure. Whilst there are other social reasons for wanting this group to attend, targeted advertising to those with higher spending power could help make such events more sustainable economically.

The literature on event motivations focuses on the marketing of events and on attendee satisfaction with events. Such studies, as reviewed above, have made recommendations for event development, market segmentation and promotional activities. Linking motivations to expenditure, as we have attempted in this paper, suggests a range of new approaches to these areas of successful event management. For example at these events, segmentation by motivation has allowed for the identification of a high-value segment, those who are attending 'to meet new people'. Meeting the needs of this segment could be suggested as an area of event development such as the creation of opportunities for social interaction and the provision of enhanced food and drink retail opportunities at the events. Attracting this lucrative segment would require the promotion of the social aspects of the events and a significant change in approach from the current marketing approach, which concentrates on local media and emphasises the inclusive, family-friendly and low cost aspects of the programme.

Although the largest group of attendees by motivation at the Southborough Festival were those attending to 'spend time with family', these were the least profitable group to attract, with significantly lower spending than other motivational groups. It is worth noting that there are other reasons not to discourage their attendance at future events however. At present, the festival events are marketed as 'family-friendly' in many cases and promoted heavily through schools and other organisations that meet the needs of local families. Although this doubtless helps the local authority to build and demonstrate local stakeholder engagement, it does not enhance the financial success of the programme. As the pressures on local government to deliver both increased local economic impact and enhancements to local accountability increase, balancing competing priorities such as these in the

delivery of public sector events will become a key aspect of successful public sector events management.

## References

Atkinson G, Mourao S, Symanski S, Ozdemiroglu E (2008) Are we willing to pay enough to back the bid? Valuing the intangible impacts of London's bid to host the 2012 summer Olympic games. Urban Stud 45(2):419–444

Beard J, Ragheb M (1983) Measuring leisure motivation. J Leis Res 15:219–228

Bladen C, Kennell J, Abson E, Wilde N (2012) Events management – an introduction. Routledge, Abingdon

Bowen H, Daniels M (2005) Does the music matter? Motivations for attending a music festival. Event Manage 9:155–164

Bryman A (2008) Social research methods. Oxford University Press, Oxford

Chang W, Yuan J (2011) A taste of tourism: visitors' motivations to attend a food festival. Event Manage 15:13–23

Crompton JL, McKay SL (1997) Motives of visitors attending festival events. Ann Tour Res 24 (2):425–439

Dwyer L, Mellor R, Mistilis N, Mules T (2000) Forecasting the economic impacts of events and conventions. Event Manage 6:191–204

Felsenstein D, Fleischer A (2003) Local festivals and tourism promotion: the role of public assistance and visitor expenditure. J Travel Res 41(4):385–392

Gelder G, Robinson P (2009) A critical comparative study of visitor motivations for attending music festivals: a case study of Glastonbury and V festival. Event Manage 13:181–196

Getz D (2005) Event management and event tourism. Cognizant Communication, New York

Getz D (2007) Event studies: theory, research and policy for planned events. Butterworth-Heinemann, Oxford

Gratton C, Dobson N, Shibil S (2000) The economic importance of major sports events: a case study of six events. Manag Leis 5(1):17–28

Harvey D (2010) A brief history of neoliberalism. Polity, Oxford

Hiller H (2000) Mega-events, urban boosterism and growth strategies: an analysis of the objectives and legitimations of the Cape Town 2004 Olympic bid. Eur J Urban Reg Stud 24(2):266–287

Jago L, Dwyer L (2006) Economic evaluation of special events. Common Ground, Victoria

Kawashima N (2006) Audience development and social inclusion in Britain. Int J Cult Policy 12 (1):55–72

Kennell J, Chaperon S (2013) Analysis of the UK government's 2011 tourism policy. Cult Trends 22(3–4):278–284

Kim SS, Han H, Chon K (2008) Estimation of the determinants of expenditures by festival visitors. Tour Anal 13:387–400

Kim SS, Prideaux B, Chon K (2010) A comparison of results of three statistical methods to understand the determinants of festival participants' expenditures. Int J Hosp Manage 29:297–307

Kolb B (2005) Marketing for cultural organisations, 2nd edn. Thompson, London

Kruger M, Saayman M, Ellis SM (2010) Determinants of visitor expenditure at the Aardklop national arts festival. Event Manage 14:137–148

Lee C, Taylor T (2005) Critical reflections on the economic impact assessment of a mega-event: the case of the 2002 FIFA World Cup. Tour Manage 29:1084–1098

Lee C, Lee Y, Wicks BE (2004) Segmentation of festival motivation by nationality and satisfaction. Tour Manage 25(1):61–70

Maenning W, du Plessis S (2009) Sport Stadia, sporting events and urban development: international experience and the ambitions of Durban. Urban Forum 20(1):61–76
McIntosh R, Goeldner C, Ritchie C (1995) Tourism principles, practices and philosophies. Wiley, New York
Nicholson R, Pearce DG (2001) Why do people attend events: a comparative analysis of visitor motivations at four south island events. J Travel Res 39:449–460
Pugh C, Wood E (2009) The strategic use of events within local government: a study of London Borough councils. Event Manage 9:61–71
Ramachandani G, Coleman R (2012) Testing the accuracy of event economic impact forecasts. Int J Event Festival Manage 3(2):188–200
Richards G, Palmer R (2010) Eventful cities. Routledge, Abingdon
Ritchie J, Goeldner C (1994) Travel, tourism and hospitality research. Wiley, New York
Saayman M, Rossouw R (2011) The significance of festivals to regional economies: measuring the economic value of the Grahamstown national arts festival in South Africa. Tour Econ 17 (3):603–624
Snowball JD (2004) Interpreting economic impact study results: spending patterns, visitor numbers and festival aims. S Afr J Econ 72(5):1076–1084
Taylor-Gooby P (2012) Root and branch restructuring restructuring to achieve major cuts: the social policy programme of the 2010 UK coalition government. Soc Policy Adm 46(1):61–82
Thompson K, Scholfield P (2009) Segmenting and profiling visitors to the Ulanbaatar Naadam festival by motivation. Event Manage 13:1–15
Thrane C (2002) Jazz festival visitors and their expenditures: linking spending patterns to music interest. J Travel Res 40:281–286
Uysal M, Backman K, Backman S, Potts T (1991) An examination of event tourism motivations and activities. In: Bratton RD, Go FM, Richie JRB (eds) New horizons in tourism and hospitality education, training, and research: 203–218. University of Calgary, Calgary
Wood E (2009) An impact evaluation framework: local government community festivals. Event Manage 12:171–185

# Chapter 6
# Economic Impacts of Tourism in Rural Nova Scotia

**Nancy Chesworth**

## 6.1 Introduction

This chapter discusses the economic impact of rural tourism in the province of Nova Scotia, located in eastern Canada. Consisting of 55, 283 $km^2$, with no point more than 67 km from the Atlantic Ocean, Nova Scotia is Canada's second smallest province in land area, fourth smallest in population but, due to its size, is the most densely populated. It is among the poorer provinces in Canada, with the second highest tax rates (Statistics Canada 2013a, b).

Nova Scotia depended on its traditional resource industries; fishing, farming and forestry, until the 1980s when the fishery failed. The rapid decline of forestry and paper manufacturing followed as a direct result of the spread of computer usage. Farming, continues but faces increasing challenges as agriculture becomes more complex and young people gravitate to urban areas in search of easier, more rewarding employment. Consequently, tourism has become an increasingly valuable economic sector.

Douglas et al. (2001) defined rural tourism as: "Tourism activity that takes place outside urban centers, in areas of low population density where land use is devoted to traditional occupations such as forestry, farming, as well as activities common to natural areas". Further, rural tourism is characterized by: small scale facilities and small businesses, in small towns and villages, mostly owned and operated by families and dominated by traditional, conservative family styles, cultures and societies.

Rural tourism is known to have considerable economic impacts on rural communities (Reeder and Brown 2005). Much of the economic benefit of rural tourism

N. Chesworth (✉)
Department of Business and Tourism and Hospitality Management, Mount Saint Vincent University, Halifax, NS, Canada
e-mail: Nancy.Chesworth@msvu.ca



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_6

is found in direct payments to service providers, thus limiting leakage and adding to the economic multiplier effect in rural communities. These benefits can result in higher levels of rural employment, survival or revival of local crafts and traditions, maintenance of population levels, the fostering of new business initiatives and growth of the tax base.

The economic impact of tourism drives both related development and promotion. In less developed areas, economic benefits are particularly sought after. In the developed nations, economic benefits are just as important, especially in less affluent and often rural parts of those countries (Oxford Economics 2012).

## 6.2 Case Approach

This paper is structured as a case study. It originated as a positioning paper written in 2013 at the request of the Tourism Industry Association of Nova Scotia (TIANS) and was subsequently presented to a government Commission of the Province of Nova Scotia charged with investigating the current economic state of the province. The commission was also tasked with developing a focus and options for future economic development. It should be pointed out that the writer is not an economist, thus an in-depth analysis typical of research strictly focused on economics is not the aim of this paper.

The case study approach is used here because it can be useful in tourism research (Beeton 2005). This particular case can be useful in illustrating the difficulties concomitant with rural areas with aging and declining populations, limited resources, and a high proportion of tourists whose purpose is to visit friends and relatives.

Primary data collection consisted of qualitative research involving telephone interviews with 12 members of the TIANS Board of Directors and additional interviews using a snowball approach with those identified as tourism leaders in the province. These conversations were semi-structured and notes were taken with permission of the interviewees. The comments of many interviewees were not deemed useful in the current context and thus are not included here.

Secondary sources include academic articles, books and quantitative data reported by national and provincial tourism governments and a study of the relevant statistics produced by the statistical branch of the Department of Economic Development and Tourism of Nova Scotia. Data and information available from the Canadian Tourism Commission (CTC) and UNWTO was also considered where appropriate.

As a case in point of the economic impact of tourism in rural areas, the analysis and conclusions should be relevant to other rural locales, especially in peripherally located and economically depressed areas.

## 6.3 Literature Review

There are many issues that contribute to better understanding of economic impacts in rural areas. Economic issues involving tourism in rural and isolated parts of the world have been investigated by many writers and from many perspectives. Literature included here includes those directly relevant to the case study, including those related to tourism in rural areas, culture, heritage, and activities such as wine and agritourism.

In Nova Scotia, rural tourism takes place outside of the main city, Halifax, which is a destination in itself. Two smaller urban areas, Truro and Sydney are for some visitors the primary destination, however, statistics clearly reveal Halifax as the primary destination in the province. Almost half of all tourism to Nova Scotia is tourism to rural areas (Tourism Research Services 2013).

Tourism in rural areas depends on both natural and cultural (arts, culture and heritage) resources, as well as the hospitality of local people. MacDonald and Jolliffe (2003) studied cultural rural tourism in the Evangeline Region of Prince Edward Island, Canada, noting the importance of the role of both culture and community based partnerships.

They found that networking and the development of cooperative partnerships enabled the success of a grassroots effort to utilize tourism to both improve the local economy and to contribute to the preservation of the culture of the area.

Kauser and Kishikawa (2010) in examining the impact of heritage tourism in rural parts of Indonesia found that positive economic and attitudinal benefits accrued to those employed in the tourism industry. However, they also discussed the problems of co-ordination among organizations involved in management of the tourism system and the lack of links between tourism and the rural economy. The role of government was also cited as an issue needing attention, echoing Fleischer and Felsenstein (2000) who noted the tendency of governments to provide little assistance to rural areas where tourism is mostly a small-scale family operation, raising numerous questions regarding policy and support.

An interesting application by Kneafsey (2001) of Ray's (1998) framework of modes of development was applied to the small rural area of Commana in central Fenesterè, Britanny. Using Ray's Modes I through IV, Kneafsey's case study examined the steps of development of a culture economy. Issues common to many rural locations emerged, such as the tension between local and extra local connections, individuals and organizations, processes and changes in social relations. Like Chuang (2010) found more positive attitudes among rural residents whose livelihood was derived from tourism. Kneafsey also noted the need for communications and cooperation between those involved and for a 'holistic and qualitative approach to examining local level processes of commodification'.

Rural tourism lends itself to alternative tourism as opposed to mass market, motorcoach, resort or cruise ship tourism. The economic impact of rural tourism has been shown to be beneficial to some of the communities where it exists. For example, Slee and Farr (1997) found that although the per-person spend was higher

in enclave tourism, rural economies benefitted more in terms of local income and employment multipliers. Considering that Nova Scotia has seven small-scale resorts, or enclaves, as a destination it is more attractive and arguably more appropriate for independent travelers.

In Nova Scotia, culinary, wine and agritourism are relatively recent developments. The desire of tourists for newer and different experiences, and the development of new products and ways to experience them (Vieira-Rodriguez et al. 2014) fits with the growth of these forms of niche tourism, especially wine tourism. Of the three, wine tourism appears to hold the most promise for development and economic benefits in Nova Scotia.

The link between tourism and culinary interests was examined by Montanan and Staniscia (2009), who found tourism linked to agriculture output to have value economically and in preservation of fragile environments, leading to a conclusion that this form of tourism can contribute to sustainability. Agritourism has received considerable attention from researchers for its potential to add to farm income, allowing farmers to stay on the land (Khanal et al. 2014), provide benefits to farmers (Tew and Barbieri 2012) and as an adjunct in preserving heritage (Lapan and Barbieri 2014).

Rural tourism in Nova Scotia includes aspects of each of these niche markets, but the role of tourism as an additional economic contributor is a relatively new development for most of those involved.

## 6.4 Case Study Background

### *6.4.1 Geography*

Over millions of years, Nova Scotia drifted from its original location in North Africa to bump into the North American plate, creating mountains; now reduced to hills and also creating the fertile Annapolis valley. Joined to the North American continent by the 23 km wide Isthmus of Chignecto, commonly referred to as the Tantramar Marshes, the province is almost entirely surrounded by water. This led to the promotion of Nova Scotia as a seaside destination. The slogan ‘Canada’s Ocean Playground’, developed by A. J. Campbell, has been used since 1923 when it was first put on provincial vehicle plates (Nova Scotia Archives 2014). The province has many beaches, however, the slogan is rather misleading since the average ocean temperature in summer ranges from 14 to 18 °C.

### 6.4.2 History

Historically, Nova Scotia is the birthplace of Canada with settlement starting in 1604. The region now referred to as the Maritime Provinces, was used as a bargaining chip by England and France, from the 1600s until 1756. Then known as Acadia, or Acadie by the French, the region passed between the two countries as spoils of war.

During that time, each side built fortifications. In 1756, this ended when the British at the end of the 7 Years War decisively claimed the entire region. Rural tourism in Nova Scotia today depends to a large extent on the existence, restoration, recreations or remnants of those historic military fortifications and early settlements.

In addition, the region's long-standing seafaring and farming traditions and bio-diversity and geography are a major component of its tourism product. UNESCO has recognized five sites in the province, the Southwest Nova Biosphere Reserve, Bras d'Or Lakes Biosphere Reserve, Joggins Fossil Cliffs, a World Natural Heritage Site and the World Heritage sites: Old Town Lunenburg and the Landscape of Grand Pre'(UNESCO 2015).

### 6.4.3 Rural Tourism Supply

Components of the tourism supply here include a wide variety of heritage, cultural venues, nature based activities, retail related to culture, business and wellness venues, and sightseeing (Table 6.1). Examples include:

The most popular activities of the above cited by one-fifth to one-third of tourists in the Visitor Exit Survey of 2010 were independent beach exploration, whale watching, hiking and sightseeing in coastal areas (Tourism Research Services 2013).

## 6.5 Impact Analysis

Direct, primary impact is taken to mean new money injected by tourists into the economy of a specific geographic region. The greatest impact obviously accrues to those businesses that experience the least leakage. Individually owned services, retail, accommodations, food and beverage outlets, attractions and activities are the most likely to benefit from direct impact. The multiplier effect can also be seen as beginning as a direct impact, carrying over into secondary and tertiary impacts.

Goeldner and Ritchie (2012) provide a useful list of recipients of tourism spending showing the various levels at which benefits are realized. Some local attractions, such as not-for-profit events, local museums and community events depend on the benefit of additional spending by tourists to remain viable. The contribution of tourists is looked for not only as a means to continue operating the venue, but also for funding special projects, necessary maintenance, and to retain valued community facilities, heritage and sense of place.

**Table 6.1** Examples of aspects of the supply-side in Nova Scotia

| *Heritage* | *Retail related to culture* |
|---|---|
| UNESCO World Heritage sites<br>UNESCO Biosphere Reserve<br>National Historic Sites<br>Provincial Historic Sites<br>Provincial Museums<br>Privately owned/Community Museums<br>Lighthouses<br>Archaeological sites<br>Historic gardens<br>Interpretive Centers | Farm product stands and shops<br>Fine art, folk art and craft shops and galleries<br>Specialty and horticultural shops offering local products, e.g. maple syrup, honey, cheese, apples, coffee<br>Winery cellar door wine sales<br>Highly recommended restaurants |
| *Cultural venues and events* | *Business and wellness venues* |
| Theatres and performances in various venues<br>Annual harvest events and traditional fairs<br>Farm competitions such as ox pulls<br>Events and church suppers focused on local home cooking, lobster and other seafood<br>Ghost walks<br>Maple sugaring events<br>Farm stays and visits<br>Winery tours<br>Re-enactment events<br>Anniversary celebrations based on culture or heritage<br>Sail races, other annual water-based events<br>Lobster dinners | Conference and meeting centers<br>Spas and retreat centers<br>University facilities |
| *Nature based activities* | *Sightseeing* |
| Fee paid<br>Wildlife farms and zoos<br>Soft adventure walking tours guided tours<br>Bicycle tours<br>Zip-line, paint ball<br>Sea Kayaking<br>Deep sea fishing<br>Guided wilderness fishing and hunting<br>Golf<br>Whale, and Seal Watching<br>SCUBA diving<br>Free[a]<br>Photography<br>Hiking coastal and inland trails<br>Painting en plein air<br>Surfing<br>Beach combing, beach walks | Aside from those items listed above<br>Motor touring by auto or recreational vehicle, e.g., The Cabot Trail<br>Motorcycle touring<br>Independent cycling<br>Downtown Halifax, especially the view from the Halifax Citadel National Historic Site<br>Peggy's Cove and the Peggy's Point Lighthouse<br>The towns of Lunenburg (UNESCO W. H. site)<br>Mahone Bay, Chester, Annapolis Royal and Baddeck<br>Scenic Highways and rural roads |

[a]In the sense that the participant does not pay a fee directly to a tourism operator, these activities can be considered free of charge. This applies to most passive sightseeing as well

Governments, whether federal, provincial, or rural municipalities are also impacted by tourist spending in terms of taxes. Sales, occupancy, promotional or marketing, transportation and other taxes levied specifically on tourism operators provide governments with additional funds in Nova Scotia. These monies may be used in many ways. For example, in support of on-going government programs, infrastructure projects and a variety of community uses.

Ordinarily, service providers such as real estate agencies are not included in consideration of tourism impact. In Nova Scotia, real estate sales to residents of the United States is well established with some vacation properties owned by the same family for over a 100 years. In more recent years, sales to Europeans have increased and decreased with the global economy. Direct benefit comes from property sales and from summer residents contributing to the fabric of rural communities while in residence. However, this is also a negative impact since the long-term benefit of year round economic contributions does not exist in these cases.

In economic terms, secondary impact, sometimes called indirect impact is the effect of money spent and re-spent over and over in a community or region. Tourism literature refers to this effect as the multiplier effect. In Nova Scotia, secondary impacts have consequences in terms of employment, development and community economic wellness.

Economic benefits derive from money spent by those choosing to participate either actively or passively in rural attractions, events and activities. Beneficiaries include all levels of government as well as local operators and not-for-profit organizations.

Examples of the works on economic impacts envisioned as having a high or low multiplier or leakage effect and are illustrated in Table 6.2. Government is

**Table 6.2** Examples of various impacts

| Direct impact | Primary beneficiary | Secondary beneficiary | Tertiary beneficiary | Multiplier or leakage factor |
|---|---|---|---|---|
| Bed and breakfast | Owner Government | Employee (if any) Suppliers e.g., utilities | Community | Low |
| Locally owned art or gift shop | Owner Government | Artists and/or crafters | Community Suppliers | Low |
| Winery, cellar door sales | Owner | Employees Suppliers | Community | Low |
| Federally owned historic sites and parks | Government | Employees | Community | High |
| Gas station | Owner, Lessee and Government | Employees | Community | High |
| Cruise lines | Owner | Employees of the cruise lines | Independent tour operators Retail: restaurants, souvenirs | High |

considered a primary beneficiary because taxes are collected on every good or service rendered in Nova Scotia, with the exception of basic foodstuffs and children's clothing etc.

## 6.6 Rural Tourism Demand

Tourism began to develop in Nova Scotia in the middle of the 1800s fueled by affluent city-dwellers fleeing hot summers in such places as Boston, Philadelphia, New York, Toronto, Montreal and the New England states in general. The economic impact of tourism was noted in the early 1900s when various entities began to promote the province as a summer destination.

Demand is reflected in the number of visitors reported per year (Fig. 6.1). In 2013, visitation to Nova Scotia declined to 1.8 million compared to 2 million in 2012 (Canadian Press, via CBC 2014). In recent years, tourism has stagnated, growing at less than 5 % per year. Most importantly, first time visitation to the province has been declining since the 1990s. This lack of growth highlights the issues of supply and demand and in particular, travel distance from prime markets, increasing prices, inconsistent service provision and marketing efforts that have been described as 'unfocused' (Sullivan 2013). In addition, the province's tourism product in general has been described as tired and worn (ibid).

### *6.6.1 Primary Market Segments*

Target markets include Toronto, Montreal, western Canada, and nearer cities in the United States such as Boston and New York. These generating areas have the potential to deliver tourists with a combination of high disposable income and sufficient time to make a holiday in the province. In addition, those living in the

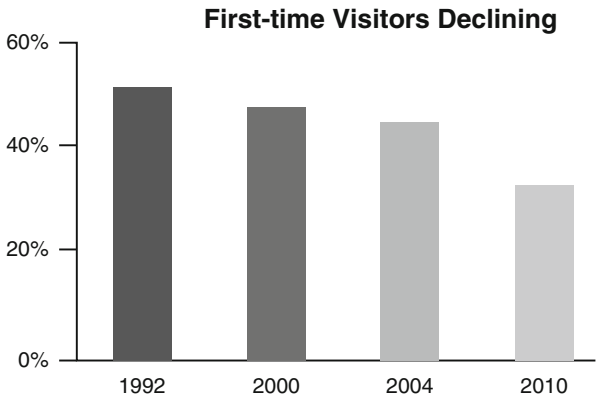


**Fig. 6.1** First time visitors (*Source*: Nova Scotia Tourism Agency 2013)

U.S. generating areas can benefit from a lower Canadian dollar. Unfortunately, this advantage is easily offset by high taxes in the province, particularly sales taxes of 15 %, federal and provincial fuel taxes and hotel occupancy taxes. The impact of distance from prime markets, coupled with increasing prices and inconsistent service provision leads to tourist's consideration of issues such as willingness to pay, cost-value and the value of the tourists' time.

The types of economic variables that impact demand in Nova Scotia include travel distance, nearby destinations offering similar product and destination costs. The decision to travel is followed by choice of location. In the case of Nova Scotia, competition from other Atlantic provinces and the State of Maine in the United States is a major factor in the choice of destination. Aware that potential visitors see little difference between them, each of the competitors in the Atlantic region uses marketing campaigns that attempt to invoke differentiation from others. Emphasis is placed on tourism icons, opportunities for activities unavailable in land-locked generating centers and the relaxed ambiance of the Atlantic region.

Nova Scotia differentiates itself by promoting its traditional tourism icons: The Cabot Trail, Peggy's Cove, the adjacent Peggy's Point lighthouse, some heritage and cultural sites and the contrasting urban life style of the capital, Halifax. Heritage attractions are the basis of culture in rural places. These along with cultural activities and attractions are found mostly in rural parts of the province. Nature-based activities are predominately available in rural areas offering a wide variety of experiences to tourists.

### *6.6.2 Rural Tourism Revenues*

Statistics Canada reported the Gross Domestic Product for of Nova Scotia in 2012 at $38,397 (Canadian dollars), with an average per capita income of $36,108, below the national average of $41,129. The median income in Halifax, the main city in the province was reported by Statistics Canada to be $78,690 in 2013. Median income in rural areas of the province including most towns and villages is considerably less, ranging from the low 30,000 to around 50,000 (Statistics Canada 2013a, b). For the approximately 60 % of Nova Scotians living in rural areas, tourism is a critical source of economic benefit.

In 2010, the Department of Economic and Rural Development and Tourism, classified approximately 46 % of tourism to the province as rural tourism, directly contributing $935 million (CDN) to the province's economy in 2010. The beneficiaries consist of tourism operators providing services, attractions and ancillary tourism oriented businesses such as gasoline (petrol) stations. While this situation looks positive, tourism stagnated from 1999 to 2014, with the number of visitors declining from 2,210,000 to 1,800,000 in 2014 (Statistical Services 2014).

The population of the province has eroded significantly in recent years with the loss of jobs in the traditional sectors of fishing, farming and forestry. Many younger workers have relocated to western Canada in search of work. In addition, the

population is ageing rapidly. The baby boom generation, born between 1946 and 1962, is projected to represent the majority of the population within 30 years. The retirement of this generation has implications for the future of tourism and tourism services in particular as few younger people see tourism as a career.

In addition, the combined impact of out-migration coupled with increasing numbers of retirees, whether long-tern residents or those returning to the province after living most of their working lives outside Nova Scotia, has led to a sharp decline in revenues in most rural communities. In 2015, 22 rural communities filed for dissolution of their status as towns or villages as they no longer had the means to provide services to residents.

The positive aspect of out-migration is the increased rate of visitors returning to visit their friends and relatives especially during the high season. While the rate of VFR travel has always been comparatively high it increased from 41 % in 2002 to 49 % in 2010.

## 6.7 Analysis and Discussion

As a destination, Nova Scotia faces many economic and operational challenges. There are opportunities for re-positioning re-development and generation of new markets. Economically, as one of the poorest provinces in Canada, the lack of funding to support rapid, effective change is another challenge. It is clear that rural areas of the province generate considerable economic impact, it is also clear that the tourism industry has faltered in recent years. The decline in numbers of visitors began in 1999. Other destinations found a sharp decline following the 2001 terrorist attacks in the United States. Since then, tourism has fluctuated between slight gains and losses. It appears that the largest loss is in the motor coach market, which itself declined as the generation that engaged in coach travel either aged to the point where travel was not desirable, or possible, or chose other forms of travel such as the cruise industry.

Leakage is a factor in almost all tourism operations. The amount of leakage for any one component of any single sector is hard to measure. In Nova Scotia, small tourism business operators are reluctant to permit examination of accounts with the result that a ‘best guess’ is indeed the best that can stand as an estimate.

Secondary impacts vary depending on the nature of the primary direct beneficiary of tourism spending. These multiplied funds have the potential to create far greater consequences, both positive and negative, for small communities. One the most pressing needs in rural Nova Scotia is for employment for young members of the community. A result of the decline in rural population means opportunities for employment are scarce, encouraging young workers to seek jobs in other parts of Canada.

The collapse of the price of oil led to job losses in the oil fields where many out-migrants went to find work. It remains to be seen if significant numbers will return to the province and whether VFR tourism will decline as a result. In the

interim, several municipalities have applied for dissolution, as they can no longer afford to supply municipal services and to operate as an incorporated entity, be it town or village. Thus, the future of small communities is in doubt.

As noted above, real estate sales to Europeans and more recently to Asians has in some instances led to the buyers relocating to the communities which they originally purchased as vacation retreats. A positive side effect is that the new immigrants frequently start businesses which contribute to the community. The advantage of new comers is that they often identify opportunities that locals eschew or fail to recognize. Enthusiasm and a positive attitude has had the effect of leading to success and in turn a different appreciation of the community and its assets in several communities.

There are numerous opportunities for new tourism operations, venues and attractions. A few examples are:

- Pioneer walking and hiking trails
- Learning workshops; learn to can fruit and vegetables, quilting, rappelling
- Learn to find and cook wild foods
- Night sky discovery events
- Agritourism, be a homesteader vacations complete with period dress
- New day-trip routes, with combinations of stops such as artists' studios, wineries, historic sites and so forth
- Collaborative gourmet food and wine routes
- Interpreted beach walks
- Campfire nights for families
- Open garden events (Chesworth 2013)

Opportunities are only limited by imagination and the willingness to develop a business. As pointed out in the "One Nova Scotia" report (2014) [commonly referred to as the Ivany report, after the chair, Dr. R. Ivany], Nova Scotia's economic situation is dire. The report focuses mainly on the need to develop new industries, foster new entrepreneurs and support new ideas. In the tourism sector, the report states that one goal is to double tourism receipts to $4 billion by 2022. This goal has appeared many times in the past and is yet to be fulfilled. For many decades, tourism was for the most part taken for granted in Nova Scotia. The stagnation of tourism together with the analysis of tourism in the Ivany report highlighted the need for change. The Nova Scotia Tourism Agency was established in 2012 to replace the Department of Economic and Rural Development and Tourism, formerly the Department of Tourism, Culture and Heritage. Greeted with mixed reactions, the new agency has begun to effect change in marketing and in relations with tourism operators.

## 6.8 Conclusion

There are numerous challenges facing the province as a whole. As the Ivany Report stated there is much work to be accomplished: attitudes need to change, cooperation between communities is needed instead of competition, and leaders need to be found. The economic impact of tourism is one part of the potential solution. However, unless communities in rural areas are financially healthy, tourism will not contribute as it could.

The challenges specifically facing tourism are as mentioned above, a tired and worn product, particularly in regard to restaurants, and accommodations. Tourism education is needed for both the public and the many tourism operators who do not understand tourism beyond their own operations. In addition there seems to be confusion on the part of service providers who appear not to understand the difference between friendliness and the provision of good service.

The economic impact of tourism to Nova Scotia can increase. Much work is yet to be to ensure the success of rural tourism in the province. The root causes of economic decline also impact tourism's economic impact. Substantive change is called for. The Ivany Report sounded an alarm, which has had the intended effect. Petty jealousies between communities noted in that report called for a new attitude and cooperation among rural areas. Several communities, for example, the St. Margaret's Bay area, have heeded the call and begun community led efforts to envision and enact change to revitalize their communities. Stable communities, with more to offer tourists in terms of services, can increase benefits for all. It is hoped that the future will reflect the recognition of the need for change and the need to view tourism as a viable economic contributor to rural life.

## References

Beeton S (2005) The case study in tourism research: a multi-method case study approach. In: Ritchie P, Palmer C (eds) Tourism research methods. CAB International, Wallingford, pp 37–48

Chesworth N (2013) The impact of tourism on rural economies of Nova Scotia. Tourism Industry Association of Nova Scotia (unpublished: 22)

Chuang S-T (2010) Rural tourism: perspectives from social exchange theory. Soc Behav Personal Int J 38(10):1313–1323

Tourism Research Services (2013) 2010 visitor exit survey. Department Economics and Rural Development and Tour, Halifax

Douglas N, Douglas N, Derret R (2001) Special interest tourism. Wiley, Brisbane

Fleischer A, Felsenstein D (2000) Support for rural tourism: does it make a difference? Ann Tour Res 27(4):1007–1024

Goeldner CR, Ritchie JRB (2012) Tourism: principles, practices, philosophies, 10th edn. Wiley, New York, p 391

Ivany R et al (2013) Now or never: a call to action. Nova Scotia. https://drive.google.com/file/d/0B48TTKtbWS0kOC1vVWJMYTB3aUk/edit?pli=1. Accessed 20 Nov 2014, p 65

Kauser DV, Kishikawa Y (2010) Heritage tourism in rural area: challenges for improving socioeconomic impacts. Asia Pac J Tour Res 15(2):195–213
Kneafsey M (2001) Rural cultural economy; tourism and social relations. Ann Tour Res 28 (3):762–783
Khanal A, Mishra A, Krishna A (2014) Participation in agritourism and off farm work: do small farms benefit? Presented at Southern Agricultural Economics Assoc annual meeting 1–4, 2, 2014. http://ageconsearch.umn.edu/bitstream/162453/2/ageconsearch_uploaded_version.pdf. Accessed 3 July 2015
Lapan C, Barbieri C (2014) The role of agritourism in heritage preservation. Curr Issues Tour 17(8):666–67
MacDonald R, Jolliffe L (2003) Cultural rural tourism: evidence from Canada. Ann Tour Res 30 (2):316–321
Montanan A, Staniscia B (2009) Culinary tourism as a tool for regional re-equilibrium. Eur Urban Reg Stud 17(10):1463
Nova Scotia Archives (2014) http://novascotia.ca/archives/virtual/tourism/government.asp
Oxford Economics (2012) The comparative economic impact of travel and tourism. WTTC. http://www.wttc.org/-/media/files/reports/benchmark%20reports/the_comparative_economic_impact_of_travel__tourism.pdf
Ray C (1998) Culture, intellectual property and territorial rural development. Sociol Rural 38 (3):3–19
Reeder RJ, Brown DM (2005) Recreation, tourism and rural well-being. Economic Research Report, USDA. http://www.ers.usda.gov/media/302182/err7_1_.pdf, p 24
Slee B, Farr H (1997) The economic impact of alternative types of rural tourism. J Agric Econ 48 (1–3):179–192
Statistical Services Nova Scotia (2014) 2014 tourism season numbers released. http://novascotia.ca/news/release/?id=20150129001. Accessed 30 Sept 2015
Statistics Canada (2013a) http://www.cbc.ca/news/canada/nova-scotia/tourism-figures-dip-in-n-s-but-u-k-and-german-visitors-up-1.2572753. Accessed 27 Feb 2013
Statistics Canada (2013b) http://www.cbc.ca/news/canada/nova-scotia/dfo-scientist-amazed-by-extreme-ocean-temperatures-1.1398723. Accessed 27 Feb 2013
Sullivan P (2013) Long term strategy for tourism. Speech presented at the annual conference of Tourism Nova Scotia, Nov 2013. http://tourismns.ca/sites/default/files/page_documents/final_pat_presentation.pdf. Accessed 26 Nov 2014
Tew C, Barbieri C (2012) The perceived benefits of agritourism: the provider's perspective. Tour Manag 33(1):215–224
UNESCO (2015) World heritage list. http://whc.unesco.org/en/list/
Vieira-Rodriguez A, Lopez-Guzman T et al (2014) Analysis of the tourist profile on the sherry wine route, Spain. J Tour Chall Trends 7(2):9. Accessed 3 Jul 2015

# Part II
# Innovation and Competitiveness in Tourism

The second part of the book is focused on immaterial aspects of tourism development, in particular those related to the role of innovation and human resources, often seen as crucial elements to increase the competitiveness of a tourism destination and to maximize the benefits of tourism at the local level. This part starts with a discussion of the relation between the ability to innovate and tourism competitiveness (comparing the performance of different countries), followed by the analysis of questions related to social capital, human capital, type of leadership and labour competences, analysed at local or regional level. Finally, this part concludes with a discussion of the importance of strategic tourism management for innovation and human resources management at company level. Based on modern and rigorous methodologies, all articles offer and discuss managerial implications of their findings.

# Chapter 7
# Are the Most Competitive Countries the Most Innovative Ones?

**Elisabeth T. Pereira**

## 7.1 Introduction

Tourism is an important economic activity in world economy. According to the World Travel and Tourism Council (WTTC 2013), in 2012, the total contribution of tourism and travel comprised 9 % of global GDP, representing around 6.6 trillion US Dollars, and generated over 250 million jobs, making it one of the eleven economic activities of the world's total jobs. In general economy, in 2012, this industry outperformed the faster growth of other industries, such as manufacturing, financial services and retail. Therefore, travel and tourism is a "*key sector for many emerging and developed economies, and understanding at a political level*" (WEF 2013a: 7) which is relevant for the development and economic growth. From a global perspective, the UNWTO (2014) reinforce the importance of the tourism industry since it has a growing potential for expansion and future development.

In modern economies, innovation is an essential factor for competitiveness of firms. As tourism is one of the most promising industries in the world, it is relevant to understand the contribution of innovation to the competitiveness in this industry.

With this principal concern, the present study aims to address two general questions: Are the most competitive touristic countries the more innovative ones? What category of innovations most contributes to the competitiveness of countries in the tourism industry? For this propose, a comparative analysis of a set of touristic countries from the Travel and Tourism Competitiveness Index (TTCI) (WEF 2013b) will be conducted, based on the ranking of the countries according to their competitiveness and OECD variables of innovation.

E.T. Pereira (✉)
Department of Economics, Management, Industrial Engineering and Tourism and Research Unit GOVCOPP, University of Aveiro, Aveiro, Portugal
e-mail: melisa@ua.pt



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_7

Despite the increasingly strong evidence about the importance of innovation as a competitive force to tourism industry, the empirical studies in the tourism field focusing on competitiveness and innovation are scarce. In great part, it is due to several reasons mentioned in the literature: the difference between tourism industry from the other industries in the economy, and specific methodological problems of models and limitations of the public sources based on secondary databases (Camisón and Monfort-Mir 2012; López-Fernández et al. 2009). In this sense, one hopes this study contributes to a better understanding of the relationship between competitiveness and innovation applied to the tourism industry.

The present chapter is structured in four parts. After this introduction, that introduces the relevance, pertinence and description of the theme under study, Sect. 7.2 presents the main concepts of competitiveness and innovation as they are applied in the literature, and their application to the tourism industry. It also reviews several applications of the contribution of innovation to competitiveness and looks at how these can be applied to the tourism industry. Section 7.3 presents the data and methods to investigate the contribution of several types of innovations to competiveness of tourist destinies, along with the discussion of the empirical results for the analysed countries. Finally, Sect. 7.4 concludes.

## 7.2 Tourism Competitiveness and Innovation

### *7.2.1 Basic Concepts of Competitiveness and Innovation*

Competitiveness can be seen in two perspectives. First, the microeconomic perspective, at the level of defined as the capacity of one company or one sector, which develops a successful relationship with its ecosystem in a sustainable way. At this level, the notion of competitiveness is based on the capacity of firms to compete, to grow, and to be profitable sustainably. Second, the macroeconomic perspective, at the level of nations or regions, is strongly related to productivity, and it can be defined, according to the Report of the President's Commission on Competitiveness (1984), as

> the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. Competitiveness at the national level is based on superior productivity performance and the economy's ability to shift output to high productivity activities which in turn can generate high levels of real wages. Competitiveness is associated with rising living standards, expanding employment opportunities, and the ability of a nation to maintain its international obligations.

As general definitions of competitiveness, Fagerberg (1988) defines competitiveness as the ability of a country to increase the standard of living of its citizens through a sustained growth in income and employment, without a sacrifice of the balance of payment. The OECD Programme on Technology and Economy (OECD 1992: 237) defines competitiveness as "*the degree to which, under open market*

*conditions, a country can produce goods and services that meet the test of foreign competition while simultaneously maintaining and expanding domestic real income*".

The competitiveness is a relative, comparative and dynamic concept, involving static and dynamic components, which finds its sense when inserted in an environment context and when related within a given time period (Pereira et al. 2007, 2010). While the productivity of a country determines its ability to sustain a high level of income, competitiveness is one of the key factors to explain an economy's growth potential (Sala-i-Martin et al. 2007).

The determinants of competitiveness are many and complex. For competitiveness ranking of countries, the Global Competitiveness Report introduces the Global Competitiveness Index (GCI), which is conducted by the World Economic Forum (WEF). The GCI captures this open-ended dimension by providing a weighted average of many different components, each of which reflects one aspect of the complex reality that together constitutes the concept we call competitiveness. The GCI's authors group all these components into 12 pillars of economic competitiveness (WEF, The Global Competitiveness Report 2011–2012: 9).

Innovation is an important key factor for competitiveness. According to Denton (1999), innovation is a centrepiece for competitiveness and essential for both companies and nations.

With this aim, the European Union is continuously trying to enhance its international competitiveness through the use of intangible assets such as innovation, science and entrepreneurship (Pereira et al. 2013; Priede and Pereira 2013). The development of the European Union as a competitive and dynamic knowledge-based economy highlights knowledge and innovation as central topics, because these are key drivers of economic development, and along with other components, they can become a strong competitive advantage of any nation or group of countries.

According to the Oslo Manual (OECD 2005: 46) innovation "*is the implementation of a new idea or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations*".

The basic categories of innovations applied to tourism research have been done in line with the Schumpeter approach (Hjalager 2010; Mei et al. 2012; Camisón and Monfort-Mir 2012). Hjalager (2010) presents a study which deepens the concept of innovation research in tourism. For the OECD (2005), the different types of innovation can be defined as:

- Product innovation: introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics.
- Process innovation: implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.

- Marketing innovation: implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.
- Organisational innovation: implementation of a new organisational method in the firm's business practices, workplace organisation or external relations.

Following Schumpeter's approach (Schumpeter 1934), different classifications of innovations result from the divers types of innovations: (i) product innovations and process innovations; (ii) incremental innovations and radical innovations; (iii) competence destroying and competence enhancing innovations; and (iv) modular innovations and architectural innovations.

To Hall and Williams (2008), innovation can also be characterised through its forms, which indicate the type of innovation and its range, as well as its effects at different levels: world, national, regional or industrial.

The competitive pressures drive innovation, which is applied to tourism businesses in order to seek and create competitive advantage (Mei et al. 2012; Williams and Shaw 2011), increasing the productivity and the introduction of new products and services, as well as improving the quality of services provided by tourism companies (Carlisle et al. 2013; OECD 2012; Weiermair 2006). On the other hand, internationalisation is a form of innovation (Williams and Shaw 2011) and international competitiveness of tourism businesses also depends on innovation.

### *7.2.2 Application to the Tourism Sector*

Innovation plays an increasing role in services (Aldebert et al. 2011; Miles 2005) and is particularly important for the tourism industry (Hjalager 2002; Aldebert et al. 2011). The evolution of tourism throughout history, and particularly since the mid-1980s, highlights innovation as a crucial factor for the international competitive position of tourism companies (Camisón and Monfort-Mir 2012; Hjalager 2002, 2010; Ritchie and Crouch 2000).

Some authors (e.g. Camisón and Monfort-Mir 2012; Miles 2005) argue that innovation in service industry, due to its characteristics, do not follow the same patterns as innovation in manufacturing industry. According to the taxonomy of innovation in services of Miozzo and Soete (2001),[1] the tourism sectors of Hotels and Restaurants are users of technological innovation developed by suppliers ("supplier-dominated"), and Transport and Travel Services are users of scale-intensive physical networks. However, in the perspective of Pavitt (1984) and Laursen and Foss (2003), they consider all the tourism sectors as "supplier-dominated". Aldebert et al. (2011) in this mindset, refer to tourism as one of the main

[1] The Miozzo and Soete (2001) taxonomy was a pioneering study on the sectorial pattern of innovation in services. These authors considered the technological regime and types of Schumpeterian innovations proposed by Pavitt (1984).

drivers of Internet in the economy as user and diffuser of technological innovation developed by suppliers and by e-commerce to inter-firm relations.

Although innovation has traditionally been regarded by governmental institutions as not important in non-knowledge intensive service industries such as tourism industry (Kotilainen 2005; Mei et al. 2012), Mei et al. (2012), based on the studies of Bieger (2005), Hall and Williams (2008), Hjalager (2010), Nordin and Svensson (2005), Pechlaner et al. (2005a, b) and Volo (2005a, b), mention the existence of an increasing focus on innovation to achieve competitive advantage in the tourism industry.

Alzua-Sorzabal (2006) suggests that tourism industries progress over three different stages of evolution towards better economic development and higher competitive positions. The tourism development stages, according to this approach, evolve from a first stage of tourism activity based on factors to a second stage with a tourism activity based on investment and finally to the third and desired stage of tourism activity competing based on innovation.

On the other hand, as competitiveness can be achieved by innovation, it becomes essential and central in the development of countries (Hall and Williams 2008; Mei et al. 2012; Schumpeter 1934). This relation is important to national and international levels, based on innovation as "*the driving force of economic growth, jobs and collective wealth creation and prosperity*" (Mei et al. 2012: 92, based in Cohen and Levin 1989; Scherer 1999).

To Hjalager (2010), the most important categories of innovation to the tourism industry are product or service innovations, process innovations, managerial innovations, management innovations, and institutional innovations. Camisón and Monfort-Mir (2012) in their study of the innovations trend in Spanish companies (with Spain being one of the four most competitive tourist countries in world) conclude that for the Tourism and Hospitality sectors, the percentage of companies with process based on innovation activities, and on organizational innovations stand out.

## 7.3 Descriptive Data Analysis

### *7.3.1 Travel and Tourism Competitiveness Index (TTCI)*

To analyse the most competitive touristic countries, the Travel and Tourism Competitiveness Index (TTCI) (WEF 2013b, 2015a) is used. The TTCI measures "*the set of factors and policies that enable the sustainable development of the Travel and Tourism (T&T) sector, which in turn, contributes to the development and competitiveness of a country*" (WEF 2015a:vii), and highlights the contribution of travel and tourism activity, through several macroeconomic indicators, of 140 countries in 2013 and 141 countries in 2015 respectively.

In 2013 (WEF 2013a: 8), the TTCI was based on three broad categories of variables that facilitate or drive travel and tourism competitiveness, being reformulated in 2015 (WEF 2015b: 4) and becoming comprised by four categories. These four categories are summarised in the four sub-indexes:

- Enabling Environment
- T&T Policy and Enabling Conditions
- Infrastructure
- Natural and Cultural Resources

Each one of these four sub-indexes is composed of a number of pillars of T&T competitiveness in a total of 14 pillars:

1. Business Environment
2. Safety and Security
3. Health and Hygiene
4. Human Resources and Labour Market
5. ICT Readiness
6. Prioritization of Travel and Tourism
7. International Openness
8. Price Competitiveness
9. Environmental Sustainability
10. Air Transport Infrastructure
11. Ground and Port Infrastructure
12. Tourism Service Infrastructure

The structure of the TTCI in the 2015 framework included four sub-indexes and the respective allocation of the 14 component pillars within each sub-index. Each one of the pillars is composed of individual variables, in a total of 90 individual indicators. The TTCI helps to explain the drivers for the performance of the 141 considered countries on tourism development.[2] The countries which achieve a higher TTCI score are more likely to attract tourists and improve their balance of payment.

The analyses of the TTCI by regions, for the years 2008, 2009, 2011 and 2013 (http://www.weforum.org/issues/travel-and-tourism-competitiveness/ttci-platform) show that the competitiveness of the regions of Europe, Asia and Africa increased, while in America it decreased in the last year under analysis, and Middle East and North Africa have decreased since 2009. On the other hand, the analyses of the TTCI by countries reveal that the most competitive touristic countries are advanced economies located in Europe, North America (United States and Canada) and Oceania. Thus, the competitiveness of the tourism industry is associated to advanced economies.

[2] The TTCI 2011 and 2013 in http://www3.weforum.org/docs/TTCR/2013/TTCR_OverallRankings_2013.pdf

### 7.3.2 The Relationship Between Tourism Competitiveness and Innovation

For the analysis on the relationship between the countries' tourism competitiveness and innovation, data by the United Nations International Standard Industrial Classification of all Economic Activities (ISIC Rev.4) was used as an average of data between 2002 and 2012, in terms of Gross Domestic Expenditure in R&D (GERD) as percentage of GDP and the three types of innovations in the service sector. One way of looking at the relationship between competitiveness and innovation is through an exploratory approach, by a comparative and graphic analysis. Thus, it is important to bear in mind that the number of results derived from this kind of approach are limited considering the bulk of theoretical and empirical literature reviewed in the previous section. The tourism competitiveness data were taken from the TTCI Report and the innovation data were taken from the OECD Structural Analysis STAN Databases (Table 7.1).

Some of the countries belonging to the TTCI were removed with the purpose of having a correspondence between the countries in the TTCI and the countries in the OECD Structural Analysis STAN Databases.

With the aim of responding to the research questions, some graphics to analyse the trend between tourism competitiveness and innovation were drawn up.

Figure 7.1 represents the relationship between the score rank of competitiveness given by the ITTC and the innovation of the country given by the GERD in percentage of Gross Domestic Product (GDP) average of the growth. The innovation is analysed as an average between 2002 and 2012, which could be interpreted as a continuous contribution to the present level of competitiveness.

Figure 7.2 represents the relationship between the score rank of competitiveness given by the ITTC and the country's innovation given by the GERD compound annual growth rate average of the growth.

Figure 7.1 shows that the most competitive countries (with a lower score) have higher levels of innovation in percentage of GDP, implying a positive trend between the two variables. In this case, a higher score for the competitiveness rank means that the country is less competitive and the Spearman correlation between these two variables is −0.430, at the significant level of 0.01. However, from the graphic of Fig. 7.2 it is possible to infer that the growth rate of expenditures in innovation has increased in some of the less competitive countries (the countries with a higher score), reflecting efforts of these countries to improve conditions in order to be able to increase their own competitiveness.

Based on the data presented in Table 7.2, the following graphs (Figs. 7.3, 7.4 and 7.5) analyse the relation between the position of the countries in the ITTC rank and the three types of innovation considered in the OECD STAN: the product or process innovation only, the product or process innovation and marketing or organizational innovation, and the marketing or organizational innovation only (Table 7.2). The three types of innovation for the services industry were used as a proxy for the tourism sector due to the lack of available data. It is possible to observe, in the

**Table 7.1** Tourism competitiveness and innovation trends

| TTCI Rank | Country | Region | TTCI Score (2013) | GERD1 average[a] | GERD2 average[b] |
|---|---|---|---|---|---|
| 1 | Switzerland | Advanced economies | 5.66 | 3.06 | 2.72 |
| 2 | Germany | Advanced economies | 5.39 | 2.82 | 2.63 |
| 3 | Austria | Advanced economies | 5.39 | 5.01 | 2.44 |
| 4 | Spain | Advanced economies | 5.38 | 5.06 | 1.18 |
| 5 | United Kingdom | Advanced economies | 5.38 | 1.36 | 1.75 |
| 6 | United States | Advanced economies | 5.32 | 2.68 | 2.65 |
| 7 | France | Advanced economies | 5.31 | 1.64 | 2.18 |
| 8 | Canada | Advanced economies | 5.28 | 1.96 | 1.95 |
| 9 | Sweden | Advanced economies | 5.24 | 1.51 | 3.61 |
| 11 | Australia | Advanced economies | 5.17 | 6.85 | 1.89 |
| 12 | New Zealand | Advanced economies | 5.17 | 3.71 | 1.19 |
| 13 | Netherlands | Advanced economies | 5.14 | 1.34 | 1.91 |
| 14 | Japan | Advanced economies | 5.13 | 2.05 | 3.27 |
| 16 | Iceland | Advanced economies | 5.1 | 6.48 | 2.80 |
| 17 | Finland | Advanced economies | 5.1 | 2.86 | 3.56 |
| 18 | Belgium | Advanced economies | 5.04 | 2.68 | 1.99 |
| 19 | Ireland | Advanced economies | 5.01 | 5.97 | 1.36 |
| 20 | Portugal | Advanced economies | 5.01 | 5.47 | 1.11 |
| 21 | Denmark | Advanced economies | 4.98 | 2.54 | 2.70 |
| 22 | Norway | Advanced economies | 4.95 | 3.43 | 1.62 |
| 23 | Luxembourg | Advanced economies | 4.93 | 1.52 | 1.63 |
| 25 | Korea, Rep. | Advanced economies | 4.91 | 9.92 | 3.11 |
| 26 | Italy | Advanced economies | 4.9 | 2.15 | 1.16 |
| 30 | Estonia | Advanced economies | 4.82 | 15.40 | 1.20 |
| 31 | Czech Republic | Advanced economies | 4.78 | 7.48 | 1.33 |
| 32 | Greece | Advanced economies | 4.75 | 3.40 | 0.61 |
| 36 | Slovenia | Advanced economies | 4.58 | 6.57 | 1.72 |
| 39 | Hungary | Central and Eastern Europe | 4.51 | 7.99 | 1.03 |
| 42 | Poland | Central and Eastern Europe | 4.47 | 6.24 | 0.64 |
| 44 | Mexico | Latin America and the Caribbean | 4.46 | 1.00 | 0.37 |
| 45 | China | Developing Asia | 4.45 | 16.88 | 1.40 |
| 46 | Turkey | Central and Eastern Europe | 4.44 | 10.31 | 0.59 |
| 53 | Israel | Advanced economies | 4.34 | 3.51 | 4.35 |
| 54 | Slovak Republic | Advanced economies | 4.32 | 6.56 | 0.58 |
| 56 | Chile | Latin America and the Caribbean | 4.29 | 16.24 | 0.38 |

(continued)

**Table 7.1** (continued)

| TTCI Rank | Country | Region | TTCI Score (2013) | GERD1 average[a] | GERD2 average[b] |
|---|---|---|---|---|---|
| 61 | Argentina | Latin America and the Caribbean | 4.17 | 8.02 | 0.46 |

[a]GERD compound annual growth rate (constant prices) average (2002–2012)
[b]GERD as percentage of GDP average (2002–2012)

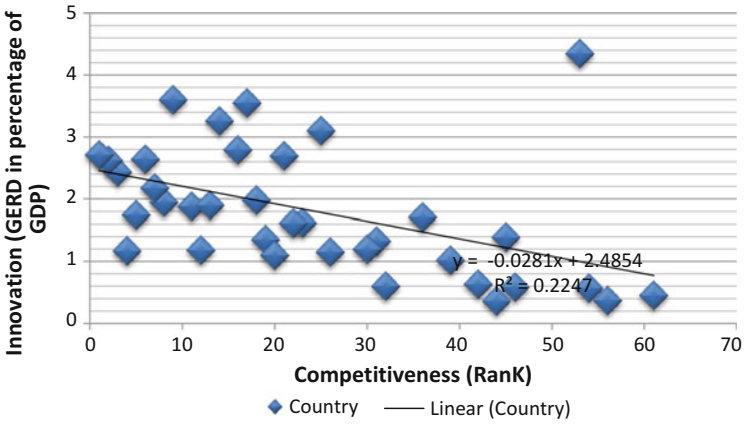


**Fig. 7.1** Competitive touristic countries versus level of innovation (GERD as a percentage of GDP)

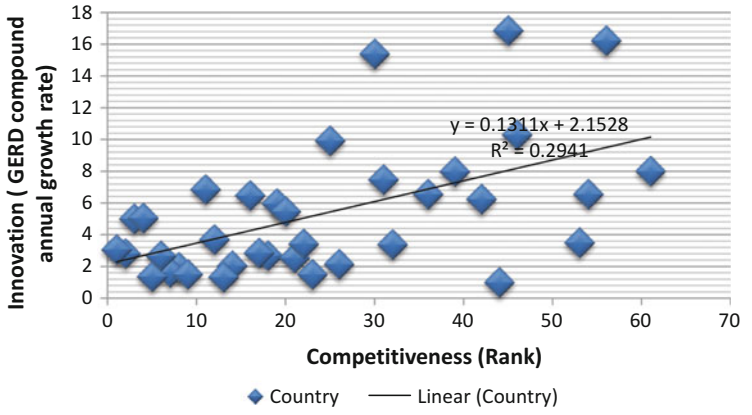


**Fig. 7.2** Competitive touristic countries versus level of innovation (GERD compound annual growth rate)

following graphs, that low levels of touristic competitiveness, shown by a high rank number, are negatively related to high levels of innovation. So, the most competitive countries are related with high levels of the three types of innovations

**Table 7.2** Tourism competitiveness versus categories of innovation

| TTCI Rank | Country | Region | Product or process innovation only | Product or process and marketing or organisational innovation | Marketing or organisational innovation only |
|---|---|---|---|---|---|
| 2 | Germany | Advanced economies | 15.5 | 42.5 | 18.7 |
| 3 | Austria | Advanced economies | 9.7 | 29.2 | 14.5 |
| 4 | Spain | Advanced economies | 10.1 | 14.5 | 14.3 |
| 5 | United Kingdom | Advanced economies | 6.6 | 21.9 | 12.6 |
| 7 | France | Advanced economies | 6.5 | 22.5 | 22.5 |
| 8 | Canada | Advanced economies | 11.0 | 39.5 | 22.0 |
| 9 | Sweden | Advanced economies | 14.5 | 32.3 | 12.3 |
| 11 | Australia | Advanced economies | 11.6 | 46.3 | 7.3 |
| 12 | New Zealand | Advanced economies | 15.6 | 18.5 | 13.8 |
| 13 | Netherlands | Advanced economies | 16.6 | 27.0 | 11.1 |
| 14 | Japan | Advanced economies | 9.5 | 14.6 | 23.5 |
| 16 | Iceland | Advanced economies | 17.6 | 49.2 | 8.2 |
| 17 | Finland | Advanced economies | 12.6 | 28.7 | 12.2 |
| 18 | Belgium | Advanced economies | 14.8 | 31.9 | 9.3 |
| 19 | Ireland | Advanced economies | 10.2 | 31.0 | 14.7 |
| 20 | Portugal | Advanced economies | 10.7 | 39.6 | 16.5 |
| 21 | Denmark | Advanced economies | 8.1 | 31.0 | 12.8 |
| 22 | Norway | Advanced economies | 12.8 | 18.5 | 10.9 |
| 23 | Luxembourg | Advanced economies | 7.0 | 42.2 | 19.5 |
| 26 | Italy | Advanced economies | 8.2 | 22.6 | 21.0 |
| 30 | Estonia | Advanced economies | 16.1 | 24.4 | 12.9 |

(continued)

**Table 7.2** (continued)

| TTCI Rank | Country | Region | Product or process innovation only | Product or process and marketing or organisational innovation | Marketing or organisational innovation only |
|---|---|---|---|---|---|
| 31 | Czech Republic | Advanced economies | 6.8 | 22.7 | 19.9 |
| 36 | Slovenia | Advanced economies | 5.8 | 21.6 | 18.7 |
| 39 | Hungary | Central and Eastern Europe | 6.9 | 10.6 | 14.0 |
| 42 | Poland | Central and Eastern Europe | 5.0 | 8.5 | 14.5 |
| 51 | Brazil | Latin America and the Caribbean | 7.8 | 38.7 | 34.0 |
| 54 | Slovak Republic | Advanced economies | 4.0 | 21.4 | 9.9 |
| 56 | Chile | Latin America and the Caribbean | 5.2 | 9.7 | 5.4 |
| 63 | Russian Federation | Commonwealth of Independent States | 2.8 | 4.4 | 2.0 |
| 64 | South Africa | Sub-Saharan Africa | 17.7 | 43.6 | 8.2 |

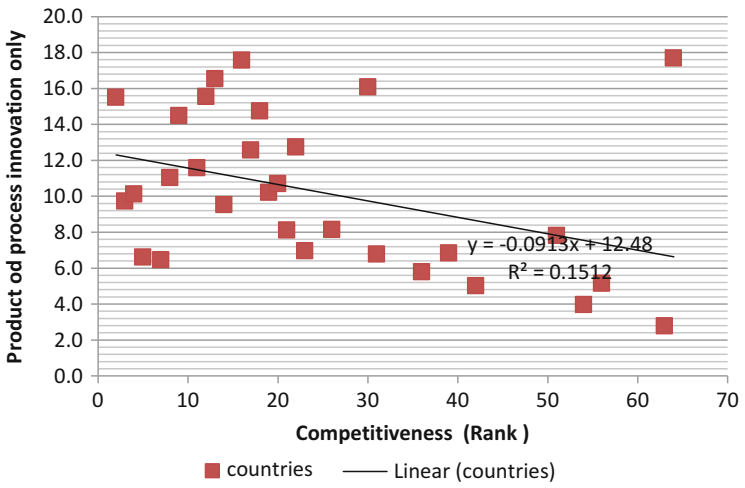


**Fig. 7.3** Competitive touristic countries versus product or process innovation only

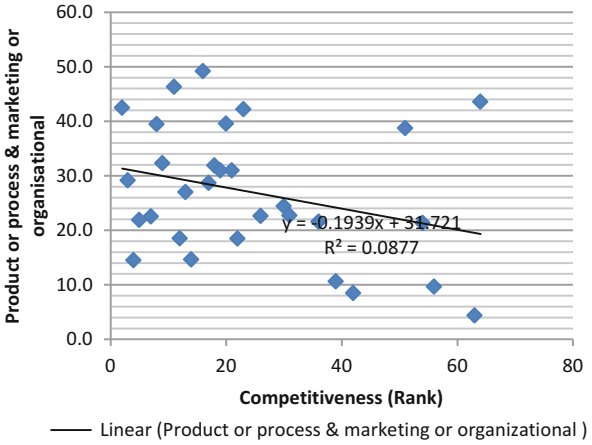


**Fig. 7.4** Competitive touristic countries versus product or process and marketing or organisational innovation

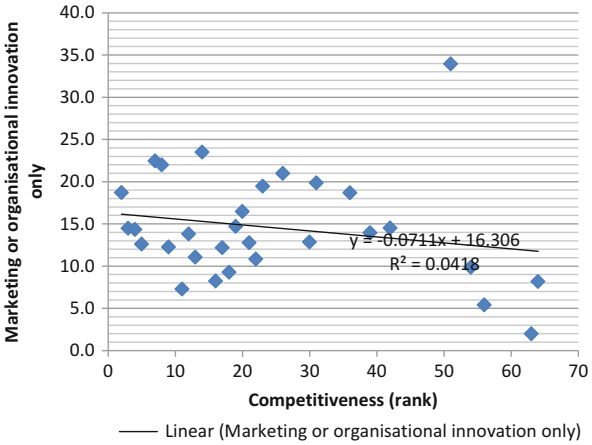


**Fig. 7.5** Competitive touristic countries and marketing or organisational innovation only

considered, although the *product or process innovation only* appears to be more significant to the touristic competitive countries, with a higher coefficient of determination.

## 7.4 Conclusions

This paper investigates the relation between tourism competitiveness and innovation with the aim of answering the proposed research question, if the most competitive tourist countries, based on the TTCI rank, are the more innovative ones. The empirical investigation applied an exploratory approach, by a comparative and graphic analysis.

In a brief analysis of the TTCI, it is possible to infer that in the last years the competitiveness of regions had increased more in the continents of Asia, Africa and Europe, and that the more competitive countries are advanced economies. From the comparative graphic analysis, the results indicate that countries with a high level of innovation are correlated with the countries with a high score in the TTCI, except in the case considered for the GERD compound growth rate. This indicates that in the last years the countries with a lower competitive level observed an increase in their innovations, this in line with the relation between a low level of competition and an increasing incentive to innovate. However, most of the advanced countries generally have lower GDP growth rates and therefore they could also have lower growth rates of innovation expenditure. In the case of the less advanced economies, the increasing incentive to innovate in the tourism sector can create significant competitive advantages at a business level as well as at national level, contributing significantly to a country, in these conditions, increasing the development and economic growth. This explains the importance of investing in the tourism economic activity in modern economies as well as the positive spillovers that it can generate.

The analysis of the relation between the level of tourism competitiveness and the type of innovations indicated a high concentration of the three considered types of innovations in the countries with a high level of competitiveness (a negative relation between a low level of competitiveness and the level of type innovation). These results are in line with the study of Mei et al. (2012), who argue that "*competitiveness can be achieved by innovation*" (p. 92), and these could signal an orientation to the decision makers for public policies and as well as to decisions of private companies about the importance of giving priority to some types of innovations over others.

When comparing these results with the preview literature review, one must carefully consider that most of the "*academic research typically consists of cross-section studies and small-size examples*" (Camisón and Monfort-Mir 2012: 787).

Furthermore, this empirical study has several limitations regarding secondary database of the innovation variables, as well as the heterogeneity macro data and the used methodology. The present paper is pertinent as a contribution to scientific knowledge and a better understanding of this specific field, since there is a lack of studies on tourism concerning the relationship between competitiveness and innovation. The main contribution of this study is to look into tourism competitiveness and try to explain this through innovation, however, it would be particularly fruitful for future research to apply an econometric methodology of analysis for a better explanation.

## References

Aldebert B, Dang R, Longhi C (2011) Innovation in the tourism industry: the case of tourism@. Tour Manage 32:1204–1213

Alzua-Sorzabal A (2006) Innovación en el sector turístico vasco. Lurralde: investigación y espacio 29:193–213

Bieger T (2005) Competitive advantage of industries and destinations. In: Keller P, Bieger T (eds) Innovation in tourism: creating the customer value. AIEST, St. Gallen, pp 229–244
Camisón C, Monfort-Mir VM (2012) Measuring innovation in tourism from the Schumpeterian and the dynamic-capabilities perspectives. Tour Manage 33:776–789
Carlisle S, Kunc M, Jones E, Tiffin S (2013) Supporting innovation for tourism development through multi-stakeholder approaches: experiences from Africa. Tour Manage 35:59–69
Denton D (1999) Gaining competitiveness through innovation. Eur J Innov Manage 2(2):82–85
Fagerberg J (1988) International competitiveness. Econ J 98(2):355–374
Hall CM, Williams AM (2008) Tourism and innovation. Routledge, London
Hjalager A (2002) Repairing innovation defectiveness in tourism. Tour Manage 23(5):465–474
Hjalager A (2010) A review of innovation research in tourism. Tour Manage 31:1–12
Kotilainen H (2005) Best practices in innovation tourism. Technol Rev 177
Laursen K, Foss NJ (2003) New HRM practices and complementarities: the impact on innovation performance. Camb J Econ 27(2):243–263
López-Fernández MC, Serrano-Bedia AM, Gómez-López R (2009) La decisión de innovar de las empresas turísticas: un análisis empírico de la industria hostelera. Invest Eur Dirección Econ Empresa 15(3):173–186
Mei XY, Arcodia C, Ruhanen L (2012) Towards tourism innovation: a critical review of public policies at the national level. Tour Manage Perspect 4:92–105
Miles I (2005) Innovation in services. In: Fagerberg J, Mowery D, Nelson R (eds) The Oxford handbook of innovation. Oxford University Press, New York, pp 433–458
Miozzo M, Soete L (2001) Internationalization of services: a technological perspective. Technol Forecast Soc Change 67(4):159–185
Nordin S, Svensson B (2005) The significance of governance in innovative tourism destinations. In: Keller P, Bieger T (eds) Innovation in tourism: creating the customer value. AIEST, St. Gallen, pp 159–170
OECD (1992) Technology and the economy: the key relationships. OECD, Paris
OECD (2005) The measurement of scientific and technological activities: guidelines for collecting and interpreting innovation data: Oslo manual, 3rd edn. OECD, Paris
OECD (2012) Tourism trends and policies 2012. OECD, Paris
Pavitt K (1984) Sectoral patterns of technical change: towards a taxonomy and a theory. Res Policy 13:343–373
Pechlaner H, Fischer E, Hammann E (2005a) Leadership and innovation processes—development of products and services based on core competencies. In: Peters M, Pikkemaat B (eds) Innovation in hospitality and tourism. The Haworth Hospitality Press, New York, pp 31–57
Pechlaner H, Fischer E, Hammann E (2005b) Creating the valuable basis of competitive advantages of destinations. In: Keller P, Bieger T (eds) Innovation in tourism: creating customer value. AIEST, St. Gallen, pp 103–114
Pereira ET, Bento JPC, Priede J (2013) The contribution of technological change on EU exports. Proc Soc Behav Sci 99:658–664
Pereira ET, Fernandes AJ, Diz HMM (2007) Does evolution guide competitiveness? In: Proceedings of the international conference of international association for scientific knowledge. IASK Global Management 2007, University of Algarve, Faro, pp 23–34
Pereira ET, Fernandes AJ, Diz HMM (2010) Competitiveness and industrial evolution: the case of ceramics industry. Evol Inst Econ Rev 7(2):333–354
Priede J, Pereira ET (2013) Innovation as a key factor in the international competitiveness of the European Union. Eur Integr Stud 7, ISSN: 1822-8402
Ritchie JR, Crouch G (2000) The competitive destination: a sustainability perspective. Tour Manage 21(1):1–7
Sala-i-Martin XJ, Blanke M, Drzeniek H, Geiger I, Paua F (2007) The global competitiveness index: prioritizing the economic policy agenda. The Global Competitiveness Report 2008–2009. Palgrave Macmillan, Hampshire

Schumpeter JA (1934) The theory of economic development (originally published in German). Reprinted by Transaction Publishers, New Jersey (1997)
Volo S (2005a) A consumer-based measurement of tourism innovation. In: Peters M, Pikkemaat B (eds) Innovation in hospitality and tourism. Haworth Hospitality Press, New York, pp 73–87
Volo S (2005b) Tourism destination innovativeness. In: Keller P, Bieger T (eds) Innovation in tourism: creating the customer value. AIEST, St. Gallen, pp 199–211
WEF (World Economic Forum) (2013a) The global competitiveness index. The global competitiveness report 2013. Palgrave Macmillan, Hampshire
WEF (World Economic Forum) (2013b) Travel and tourism competitiveness index (TTCI) (2013) Travel and tourism competitiveness report, Geneva
WEF (World Economic Forum) (2015a) Travel & tourism competitiveness report (2015) Geneva. Access via http://www3.weforum.org/docs/TT15/WEF_Global_Travel&Tourism_Report_2015.pdf
WEF (World Economic Forum) (2015b) The global competitiveness index. The global competitiveness report 2015 – growth through shocks. Palgrave Macmillan, Hampshire
Weiermair K (2006) Product improvement or innovation: what is the key to success in tourism? Innovation and growth in tourism. OECD, Paris, pp 53–69
Williams AM, Shaw G (2011) Internationalization and innovation in tourism. Ann Tour Res 38 (1):27–51
World Tourism Organization (UNWTO) (2014) AM Reports. Global benchmarking for city tourism measurement, vol 10. UNWTO, Madrid. Spain. Available via https://s3-eu-west-1.amazonaws.com/staticunwto/Affiliate-members/Global_Benchmarking_HR.pdf
World Travel and Tourism Council (WTTC) (2013) World Economic Impact Report. Access via http://www.wttc.org/site_media/uploads/downloads/world2013.pdf

# Chapter 8
# Human Capital and Firm Performance: An Analysis of the Hotel Sector in Majorca

**Dolores García and María Tugores**

## 8.1 Introduction and Literature Review

Increasing competitiveness in tourism destinations, especially mature ones, requires hotels to find the means to outperform local competitors. Identification of the key elements of successful performance arises as an important step for appropriately designing policies both as regards firms and public agencies. Among the category of determining factors of competitiveness, the features and potential of the labor force appear as one of the categories of productive factors to put the focus on (Almeida and Carneiro 2008), more so in a context where global aspects are spreading and where competition is locally fierce. The importance of considering labor characteristics and management might be even more decisive in labor-intensive sectors such as the hospitality one.

Based on the work of Becker (1962), several other contributions show the importance of human capital investment and, in particular, the importance of education and on-the-job training investments as a competitive strategy to generate sustainable growth and wealth (Mincer 1974; Bishop 1994). From an empirical point of view, outside the tourism industry, numerous studies have undertaken the empirical analysis of the relationship between training and education and firm performance. For instance, Molina and Ortega (2003) found that, overall, higher training is associated with significant benefits that increase firm value. They used a survey of senior executives in human capital management of a sample of North-American firms. More recently, Sun and Pan (2011) found that stronger employee commitment enhances positive associations between high-performance human

D. García
Departament d'Economia, Universitat Rovira i Virgili, Reus, Spain

M. Tugores (✉)
Departament d'Economia Aplicada, Universitat de les Illes Balears, Palma de Mallorca, Spain
e-mail: mtugores@uib.es



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_8

resource practices and firm performance, for a set of 81 service firms in an eastern China province. In another recent paper, Sheehan (2014) examined the causality relationship between Human Resource Management (HRM) practices and subjective measures of performance (profitability, innovation and labor turnover), obtained from a sample of 336 UK surveyed SMEs. Human resource practices such as based compensation measures, training and development schemes or strategic people management programs, are found to positively enhance firm results, even when adjusting for past performance.

In the context of tourism literature, there is a great deal of studies addressing the impact that education and training have on relevant variables in the tourism industry. Many of these studies belong to the human capital theory category, with a focus on the returns from education and training. Thus, several studies analyze the relationship between education and earnings, such as Pestana Barros and Santos (2009), Thrane (2010), García-Pozo et al. (2011, 2014) and Lillo-Bañuls and Casado-Díaz (2010, 2012).

A second body of literature includes numerous studies focusing on the different approaches to HRM and how it has penetrated the tourism industry. Cho et al.'s study (2006) analyses the impact of human resource practices on the hospitality sector (including lodging and restaurants), but does not find clear evidence of significant effects on tourist establishments' productivity. However, as Christensen Hughes (2002) points out, more work is needed to better understand the impacts of particular HRM practices on the performance of firms in the sector.

Some studies have dealt with how HR and human capital variables affect quantitative indicators of a firm's performance. Rey et al. (2006) indicate that only indirect evidence connects human capital investment and improved performance in the tourism sector. With respect to the evaluation of education, Pizam (1999) shows that most Latin American countries lack the qualified and motivated human resources to effectively compete with other tourism areas. In Ramos et al. (2004), the training requirements of alternative tourism development strategies differentiated by the quality of service offered are compared. Other studies find that training programs positively impact manager and customer satisfaction, without using direct measures of productivity (Davies et al. 2001; Hocutt and Stone 1998; Jameson 2000).

In a number of papers studying the determining factors of productivity for firms in the hospitality industry, evidence has been found of human capital related variables having an impact on hotel productivity. For instance, Such Devesa and Mendieta Peñalver (2013), who developed a DEA study for a sample of representative Spanish hotels, found that chain owned hotels are more efficient, partly because training in new technologies is more widespread in such hotels. In Marchante and Ortega (2011) a linked employer-employee sample of 70 Spanish hotels is used to estimate a production function. A mismatch between the requirements of the job (in terms of required education) and the employees' education level turns out to be relevant in explaining hotels' and workers' productivity. Likewise, they find that having tenure of more than 10 years in the job position enhances productivity. In Georgiadis and Pitelis (2012) small and medium-sized enterprises in the UK Tourism Hospitality and Leisure sector are analyzed to test the impact of HR on

price minus cost margin. Among their findings, they discover that more experienced entrepreneurs and a highly skilled workforce, alongside generous compensation and attention to employee development, result in more profitable firms.

Within the context of this empirical literature addressing the role of human capital on hotel performance is where the current paper should be contextualized. This paper focuses on an analysis of the direct impact of different types of human capital investments and HR management on an array of measures that capture varying aspects of hotel performance and are traditionally used in tourism review literature. The paper builds on the premise that the orientation of the HR policy at the hotel might be dependent on the particular performance criterion used and the objectives sought by hotel managers; for this reason, different human capital variables are separately considered and their respective impact on different performance variables is analyzed. The analysis is undertaken by means of an econometric analysis.

The remainder of the paper is arranged as follows. Following this introductory section, the next one highlights the main features of the survey developed to collect data on hotels, and provides some brief descriptive statistics of hotel performance variables, on the one hand; and human capital, training and HR practices, on the other. Subsequently, an econometric exercise is developed to test the role of HC variables on the reported performance of hotels. The main findings and resulting policy recommendations appear in a concluding section.

## 8.2 Methodology, Data and Descriptive Analysis

In the Balearic Islands, where Majorca is located, tourism constitutes the main driver of the economy, with over 41 % of the Balearic Gross Value Added in the islands (Polo and Valle 2008, 2011). According to the Balearic Council of Tourism, in 2008 over 47,000 people were employed in the islands' hotel industry, representing over 10 % of the active population. In this paper an empirical exercise is developed to analyze the importance of labor characteristics and human resource practices in explaining the performance of firms in the tourism industry in Majorca. The objects of study in this paper are hotels. Therefore, this analysis does not include other establishments, such as hostels, boarding houses, etc., or other closely related sectors that make up what is known as the complementary offer.

The sample data were representative of hotels in Majorca. Data were collected during summer and early autumn 2008, coinciding with the high season at the destination. A sample of 200 hotels was drawn out of a population of 743 hotels (Conselleria de Turisme i Esports 2008), with a confidence interval of 95 % and under the least favorable condition $p = q = 0.5$, with a sampling error slightly under 5 %. The sampling technique was the stratified random procedure, stratified in terms of hotel category and geographical areas in the island of Majorca. Data were collected by means of personal interviews with hotel managers. The

questionnaire requested information on the characteristics of hotels, their management strategies, employees, customers, and also on different performance indicators and the nature of the investments made in recent years, including training and innovation decisions. The next subsection highlights some important aspects arising from the data.

The questionnaire included questions on different performance indicators, out of which four representative ones were selected to be used in the current analysis; namely occupancy rate, GOP per room, price per room and customers' satisfaction. This selection gathered information on different aspects of hotels, namely their competitive strategies. Thus, variables such as price or customers' satisfaction might be associated with a high quality of the service; while high occupancy rates can be seen as better representative of hotels competing in prices. The GOP variable, on the other hand, is a good proxy of profitability. The rate of response for performance variables is slightly smaller for GOP and price per room. Table 8.1 summarizes average and variance measure of hotel performance.

The occupancy rate is, on average, close to 80 %. In a value range of 1–6, the GOP per room attains a mean value of 4.23, while the mean price per room is 67.04 €. The measure of customers' satisfaction is relatively high, reaching a mean of 5.79, obtained from values ranging from 1 to 7.

Focusing now on human capital and HR management related variables, the following results are obtained. The average number of workers in hotels is slightly above 50. The number of workers per room could be calculated, and turns out to be around 0.43. The average share of temporary employees is within the 30 % range, with a turnover rate from one year to the other of 17.85 %. Employees with a university degree represent circa 6 %. Our database contains data on training expenses made in a given year, on the share of workers that have undertaken training courses in a given year and on the subjective appraisal of the hotel manager regarding the succeeding impact of training. The average share of employees participating in any training courses is slightly above 60 % (61.17 % in particular), with around 50 € per year expenditure on training per worker, although there is a high variability between hotels. The reported level of satisfaction of such training is

**Table 8.1** Descriptive statistics of HC and HRM and performance variables

| Variable | Units | Observ. | Mean | S.D. | Min. | Max. |
|---|---|---|---|---|---|---|
| Occupancy rate | Percentage | 180 | 79.24 | 9.35 | 50 | 100 |
| GOP per room | Categorical | 148 | 4.23 | 1.65 | 1 | 6 |
| Price per room | Quantitative | 166 | 67.04 | 55.59 | 18 | 400 |
| Customers' satisfaction | 1/7 | 179 | 5.79 | 0.64 | 4 | 7 |
| Employees per room | Quotient | 200 | 0.43 | 0.33 | 0.08 | 1.93 |
| University employees | Percentage | 189 | 6.03 | 9.84 | 0 | 60 |
| Turnover | Percentage | 193 | 17.85 | 14.05 | 0 | 100 |
| Training expenditure | Quantitative | 154 | 50.28 | 106.13 | 0 | 900 |
| Training satisfaction | 1/7 | 185 | 5.95 | 1.30 | 1 | 7 |
| HC related to recruitment | 1/7 | 190 | 5.51 | 1.14 | 2 | 7 |

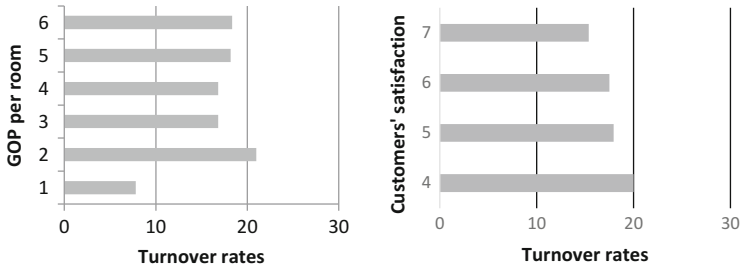


**Fig. 8.1** Turnover rates and hotel performance

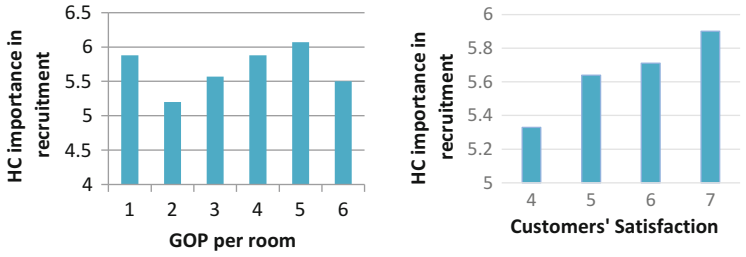


**Fig. 8.2** HC importance in recruitment and hotel performance

high, attaining almost a 6 on a scale from 1 to 7. Finally, with a mean of 5.5 over 7, a variable capturing the relative importance that managers attach to education and training in the recruitment process was also taken into account. Again, a summary of the results concerning human capital related variables can be found in Table 8.1.

An initial graphical approach to analyze the associations between human capital and performance variables reveals varying relationships depending on the specific measures chosen, and highlights the importance of considering different indicators of human capital and performance. For instance, while the turnover rate is an indicator, which seems to positively relate to high or medium GOPs, it negatively impacts the customers' satisfaction level (see Fig. 8.1).

When looking at the consideration of human capital in recruitment decisions in relation to performance indicators, similar associations arise, from the descriptive point of view. As shown in Fig. 8.2, while there is no clear pattern with respect to GOP, customer satisfaction does increase when human capital is accounted for when hiring new personnel.

A more general way to look at the descriptive relationships between human capital and performance is by means of correlation analysis. As Tugores (2012) initially explored, performance measures and HC related variables show positive correlations in many instances. Table 8.2 summarizes some of the main findings. The degree of significance of the correlation appears next to the sign of the correlation. In the case of non-significance, no sign has been noted.

**Table 8.2** Performance and human capital correlations

| | Occupancy rate | GOP per room | Price per room | Customers' satisfaction |
|---|---|---|---|---|
| Workers per room | −*** | | +** | |
| University studies | −*** | +*** | +*** | |
| Turnover rate | | | | |
| Training per employee | | | +** | |
| Training satisfaction | | +*** | +** | |
| HC importance in recruitment | +** | | | −* |

Note: ***Significant to 1 %, **Significant to 5 %, *Significant to 10 %

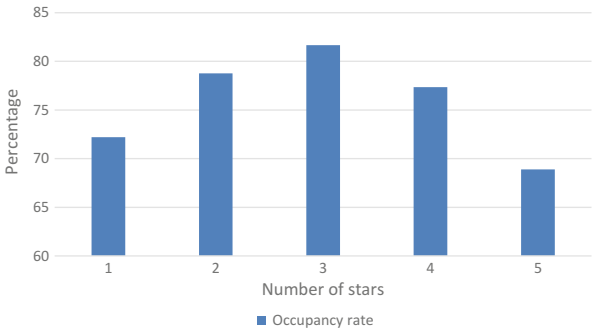


**Fig. 8.3** Occupancy rates and category

Individually considered, the variable capturing the share of employees with university studies shows the most correlations with performance indicators, positively affecting GOP per room and Price per room. However, it negatively correlates with the occupancy rate. The level of satisfaction of training investments, in turn, positively correlates with two of the performance measures, namely GOP per room and Price per room. Considering education aspects in recruitment policies positively correlates to the occupancy rate and negatively to customers' satisfaction. From the perspective of the performance indicators, the Price per room is the one that appears to be correlated to the highest number of HC variables.

A simple correlation analysis, however, does not consider other variables involved, and it may be capturing indirect effects. Take the case of category, for example. The fact that category levels appear to be related to particular human capital variables and to some performance indicators should not come as a surprise. Indeed, while hotels with more stars report higher GOP per room, the highest occupancy rates are found for intermediate category levels (see Fig. 8.3). Similar relationships can be observed with other variables, such as size or the location of the hotel, among others.

These interrelations suggest that the relationship between human capital and performance should be further analyzed while taking into account these other variables as controls. Moreover, the distinct incidence of human capital on different

performance indicators suggests that interpretations of the role of particular human capital aspects might not be general, but rather specific to some of the performance indicators. Analyzing different aspects of performance is important not only because each sheds light on specific aspects of the functioning of hotels, but also to guide policy recommendations, since some of the objectives might not be simultaneously compatible (Anderson et al. 1997).

In the following section, several models are econometrically estimated to further investigate as to how the same determinants differently affect varying measures of hotel performance, with the focus on the role played by human capital and HR management variables. The set of human capital variables considered corresponds to the ones in Table 8.2; other variables were looked at in previous analysis, but did not appear correlated with performance indicators and were excluded from further analysis. An exception to this was the turnover variable, which has previously constituted the object of attention in the analysis of performance (Elias 1994; Stevens 1994).

## 8.3 Econometric Analysis

One of the goals of the econometric analysis is to test whether the correlations between human capital and hotel performance indicators discussed above remain robust, or new relationships appear, once other variables are accounted for. Likewise, some traditional control variables are expected not only to play a role in explaining hotel performance, but also to show a different qualitative impact depending on the particular performance indicator at stake.

Table 8.3 shows a summary of the estimations carried out. The statistical analysis was carried out separately for each of the four performance indicators, and the same body of explanatory variables was included. This includes the set of human capital related variables reviewed in the previous section, which constitutes the focus of the analysis. Moreover, a number of general variables are incorporated: hotel category, measured in number of stars; size (number of rooms); whether the hotel is located in the main urban area; whether the hotel belongs to a chain; and, finally, two variables capturing whether hotels also engage in environmental or non-environmental oriented innovation investments (at least three environmental innovations in the last 3 years and some non-environmental innovation in last 3 years, respectively).

A quick glance at the results above confirms the importance of human capital and HR management variables when explaining the performance of hotels, even when important aspects such as size, category, location and complementary investments are included. The number of significant HC variables is two (for the customer satisfaction variable), three (for GOP per room and Occupancy rate) and a maximum of four (for Price per room). By comparing the results with those suggested a priori from the correlations, it can be seen that while many relationships end up being significant, some of them do not, and new ones appear. This reinforces the

**Table 8.3** Human capital determining factors of performance in the hotel sector

| | Occupancy rate | GOP per room | Price per room | Customers' satisfaction |
|---|---|---|---|---|
| Workers per room | −2.2880 | 3.2409*** | 60.4341*** | 0.9621* |
| University studies | −0.3154*** | −0.0144 | 1.5322*** | 0.0168 |
| Turnover rate | 0.0120 | 0.0333** | 0.1318 | −0.0075 |
| Training per employee | 0.0067** | 0.0019 | 0.0374* | 0.0031*** |
| Training satisfaction | −0.3425 | 0.3109* | −0.3870 | 0.0960 |
| HC importance in recruitment | 1.8408*** | 0.0615 | 5.2728** | −0.1300 |
| Hotel category | −1.4271 | 0.9191*** | 19.3247*** | 0.3320* |
| Main city | −6.8103*** | −0.0177 | 6.0832 | 0.0994 |
| Chain | 3.1306** | 0.2174 | 0.9544 | −0.3412 |
| Size | 0.0081 | 0.0028*** | −0.0034 | 0.0002 |
| NE-innovations | −1.3628 | 0.7052*** | 0.1571 | 0.1254 |
| E-innovations | −0.5863 | 0.2159 | −1.8481 | 0.4709** |
| R2 or Pseudo R2 | 0.2737 | 0.3111 | 0.5918 | 0.1543 |
| Number of observations | 126 | 117 | 116 | 121 |

Note: ***Significant to 1 %, **Significant to 5 %, *Significant to 10 %

idea that the econometric analysis is needed in order to fully understand the nature of the relationships at stake, and to prevent some significant relationships from remaining unnoticed.

Most of the HC variables considered have an impact on at least two different performance indicators, and all are significant for at least one. Sometimes, the sign of the impact on performance is independent of the performance variable used. Thus, the number of workers per room positively impacts GOP per room, Price per room and Customer satisfaction. Expenditure on training per employee results in a positive impact on Occupancy rate, Price per room and Customer satisfaction, while considering the training satisfactory improves the GOP per room. Finally, considering HC variables when recruiting staff, improves the performance of hotels, when measured through Occupancy rate and Price per room.

In other instances, an identical variable impacts performance in opposite ways. For example, having a greater share of workers with a university degree positively affects the Price per room, whereas it negatively affects the Occupancy rate. This in turn reinforces the idea that since each different performance measure conveys distinct information, it is natural to expect different roles from an array of common explanatory variables.

By looking at the respective roles of education and training in broad terms, the results suggest that training plays a larger role from the perspective of managers, if it is assumed that they put profitability ahead of other goals. Formal higher education is positively perceived in terms of service quality, measured through price. However, for hotel policies more aimed at increasing the Occupancy rate, more highly educated personnel is even counter-productive. Training expenditure or satisfaction arising from on-the-job training, on the other hand, are significant regardless of the performance variable used.

Other factors with potential to explain hotel performance include category, location, belonging to a chain and the role of innovation (Marchante and Ortega 2011). Their roles are very much dependent on the particular performance measure used. In short, category improves performance when measured by GOP per room, Price per room and Customer satisfaction. In a way, category helps explain performance variables that more adequately capture quality. However, it is not significant when explaining Occupancy rate. This result is not surprising bearing in mind that high occupancy rates occur for intermediate category hotels.

The location of the hotel in the main urban area negatively affects Occupancy rates (comparatively higher in beachside locations), with no significant influence on other performance indicators. Belonging to a chain increases the odds of high Occupancy rates, too. And size only has a positive effect on GOP per room.

Finally, as for the role of innovation on performance, non-environmental investments are significant in explaining the GOP per room, but do not impact other performance measures, while environmental investments positively contribute to the level of customer satisfaction.

All in all, the econometric analysis confirms the importance of human capital variables such as education level or training intensity, but also human resource management variables, such as the managers' satisfaction with the training process or the importance they concede to human capital when recruiting personnel. Moreover, the convenience of differentiating the analysis for the different performance variables is highlighted, if hotel managers are to adequately orient their human resource policy in the pursuit of their goals. Occupancy, profits, prices or customer satisfaction indicators capture different aspects of the hotel, and should therefore be specifically addressed.

## 8.4 Conclusions

This paper focuses on the analysis of the relationships between human capital related aspects and the performance of hotels. The task is developed by working with varying measures of human capital itself (covering aspects such as the number of workers or education) and of human capital management (such as on-the-job training and recruitment decisions). Likewise, in this paper, an array of performance indicators is used, namely Occupancy rate, GOP, Price per room, and a measure of Customer satisfaction.

To develop the analysis, a database consisting of 200 hotels in the island of Majorca, one of the main tourist destinations in Spain and the Mediterranean countries, was used. The work begins with a descriptive analysis of the correlations between the different groups of variables, and subsequently it further explores the importance of human capital by means of a specific econometric analysis for each of the variables of hotel performance.

The results support the convenience of individually treating each performance variable as well as the need to go beyond the initial descriptive analysis. Thus, the

econometric analysis confirms some of the relationships already suggested in the correlation analysis, but once other control variables have been accounted for, some of the relationships between human capital and performance are not the ones that were initially established.

The outcomes of the econometric analysis confirm that quantifiable and also managers' subjective perceptions of human capital should be taken into consideration if the hotel is to outperform competitors offering a similar quality and sharing a location. This work points out the convenience of discriminating between human capital investments to better fulfil the strategic goal of hotels, and, in general, training outperforms education. Either greater training expenditure or more satisfactory training, contribute to all the performance indicators involved. Education is likewise relevant and complements training in explaining hotel prices, a good proxy for quality, but on the other hand deters Occupancy rates. Finally, the number of workers per room positively impacts GOP per room, Price per room and Customer satisfaction but has no impact on Occupancy rates.

In conclusion, occupancy, profits, prices or satisfaction measures of particular groups capture important specific aspects of the hotel, and the detailed analysis of the factors that are significant for each one should help in the guidance of human capital strategies, both at hotel level and when designing public policies. It is advisable to take into account the focus of this work in the hotel industry, and the fact that data was collected in the initial years of the economic crisis. From this perspective, future research should test the robustness of these findings in alternative tourism sectors, such as bars and restaurants, airline companies or travel agencies, among others. Likewise, it is plausible that hotels have adjusted human capital strategies to better deal with adverse economic conditions. Testing the validity of our results in the resulting new economic context constitutes an interesting exercise that is left for further research.

## References

Almeida R, Carneiro P (2008) The returns to firm investment in human capital. Labour Econ 16:97–106

Anderson EW, Fornell C, Rust RT (1997) Customer satisfaction, productivity, and profitability: differences between goods and services. Market Sci 16(2):129–145

Becker GS (1962) Investment in human capital: a theoretical analysis. J Polit Econ 70:9–49

Bishop JH (1994) The impact of previous training on productivity and wages. In: Lynch LM (ed) Training and the private sector. International Comparisons: 161–199. Chicago University Press, Chicago

Cho S, Woods RH, Jang S, Erdem M (2006) Measuring the impact of human resource management practices on hospitality firms' performances. Hosp Manage 25:262–277

Christensen Hughes JM (2002) HRM and universalism: is there a one best way? Int J Contemp Hosp Manage 14(5):221–228

Conselleria de Turisme i Esports (2008) Anuari 2008. El turisme a les Illes Balears. Govern de les Illes Balears

Davies D, Taylor R, Savery L (2001) The role of appraisal, remuneration and training in improving staff relations in the Western Australia accommodation industry: a comparative study. J Eur Ind Train 25(7):366–373
Elias P (1994) Job related training, trade unión membership, and labour mobility: a longitudinal study. Oxf Econ Pap 46:563–578
García-Pozo A, Marchante Mera AJ, Sánchez Ollero J (2011) Occupational differences on the return on human capital in the Spanish travel agency and hospitality industries. Tour Econ 17 (6):1325–1345
García-Pozo A, Sánchez-Ollero J, Marchante-Mera A (2014) Educational mismatch and returns on human capital in the Spanish hospitality and travel agency sectors. Tour Econ 20(2):337–353
Georgiadis A, Pitelis CN (2012) Human resources and SME performance in services: empirical evidence from the UK. Int J Hum Resour Manage 23(4):808–825
Hocutt MA, Stone TH (1998) The impact of employee empowerment on the quality of a service recovery effort. J Qual Manage 3(1):117–132
Jameson SM (2000) Recruitment and training in small firms. J Eur Ind Train 24(1):43–49
Lillo-Bañuls A, Casado-Díaz JM (2010) Rewards to education in the tourism sector: one step ahead. Tour Econ 16(1):11–23
Lillo-Bañuls A, Casado-Díaz JM (2012) Individual returns to education in the Spanish tourism sector during the economic crisis. Tour Econ 18(6):1229–1249
Marchante AJ, Ortega B (2011) Human capital and labour productivity: a study for the hotel industry. Cornell Hosp Q 53(1):20–30
Mincer J (1974) Schooling, experience and earnings. Columbia University Press, New York
Molina JA, Ortega R (2003) Effects of employee training on the performance of North-American firms. Appl Econ Lett 10:549–552
Pestana Barros C, Santos CM (2009) Earnings of hotel managers: comparing the human and social capital approach. Tour Econ 15(1):87–103
Pizam A (1999) The state of travel and tourism human resources in Latin America. Tour Manage 20:575–586
Polo C, Valle E (2008) An assessment of the impact of tourism in the Balearic Islands. Tour Econ 14(3):615–630
Polo C, Valle E (2011) The weight of tourism in the Balearic Islands: 1983-1997-2004. Estud Econ Apl 29(3):737–754
Ramos V, Rey-Maquieira J, Tugores M (2004) The role of training in changing an economy specializing in tourism. Int J Manpower 25(1):55–72
Rey-Maquieira J, Tugores M, Ramos V (2006) Implications of the human capital analysis in the field of tourism. In: Dwyer L, Forsyth P (eds) International handbook of the economics of tourism: 379—398. Edward Elgar, Cheltenham
Sheehan M (2014) Human resource management and performance: evidence from small and medium-sized firms. Int Small Bus J 32(5):545–570
Stevens M (1994) A theoretical model of on-the-job training with imperfect competition. Oxf Econ Pap 46:537–562
Such Devesa MJ, Mendieta Peñalver LF (2013) Research note: size, efficiency and productivity in the Spanish hotel industry – independent properties versus chain affiliated hotels. Tour Econ 19 (4):801–809
Sun L, Pan W (2011) Differentiation strategy, high-performance human resource practices, and firm performance: moderation by employee commitment. Int J Hum Resour Manage 22 (15):3068–3079
Thrane C (2010) Education and earnings in the tourism industry – the role of sheepskin effects. Tour Econ 16(3):549–563
Tugores M (2012) Human capital and innovation as determinant factors of competitiveness. In: Homlong N (ed) Tourism destinations and tourism businesses: issues of competition and cooperation: 111–124. Athens Institute for Education and Research, Athens

# Chapter 9
# Impacts of Emotional Intelligence and Leadership on Motivation in the German Hotel Industry

**Barbara Sensen**

## 9.1 Introduction

With increasing comparability of hotel services due to the availability of search engines filtering prices from various websites and the globalization of the competition within the sector, the need for hotels to distinguish themselves from their competitors is increasing. Friendly personnel, motivated to go the extra mile to meet the guests' needs are therefore one core asset for hotels in current days. Hotels must find ways to keep up the intrinsic motivation of their employees in order to successfully face increasing competition and better informed customers. This paper focuses on the role leaders can play in the motivation process of their employees. Leadership is crucial in the hotel industry, since leaders are not able to completely control the work environment of their employees due to the external factor 'guest' being part of the service process. Leadership could be the key to help employees develop skills to deal with different guests and find motivating incentives in their daily work situations. This way leadership could increase the motivation of employees, which is the main focus of this paper. As an underlying construct, the concept of emotional intelligence of the leaders and its influence on their leadership effectiveness is taken into account.

B. Sensen (✉)
University of Latvia, Riga, Latvia
e-mail: btsensen@web.de



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_9

## 9.2 Theoretical Background

### *9.2.1 Motivation*

According to Ciompi, who is arguing from the viewpoint of affect logic, motivation is a specific (mobilizing and dynamiting) aspect of integrated feeling, thinking- and acting programs. Motivation describes therefore dispositions or impulses for certain behavioral programs which are immanent in all functional feeling, thinking and acting programs (Ciompi 1997, p. 85). Following this definition, all human behavior is led by special programs which include feelings, thoughts and actions. If an impulse for a certain program is given, one can describe the following actions, thoughts, and feelings as motivated. Nerdinger specifies that motivation explains the direction, intensity and persistence of human behavior. Direction means the choice of a certain behavior; intensity means the energy involved and perseverance describes the persistence with which a goal is pursued even despite obstacles (Nerdinger 2003, p. 1). Other authors do not see every action as motivated but describe motivation as actively directing the momentary life style towards a goal state which is judged positively (Lenzner and Dickhäuser 2011, p. 12).

One can differentiate three basic forms of motivation: negative motivation, positive motivation and individual techniques to motivate oneself. Negative motivation is the motivation described by Herzberg which leads to movement but not to really motivated action. Positive motivation means to give people the feeling that they are working towards a precious and achievable goal, which is important to the community (Jost 2000, p. 24). Gardner describes motivated individuals as goal directed, expressing effort in attaining the goal: showing persistence, attending to the tasks necessary to achieve the goal with strong desire to achieve the goal and enjoying activities necessary to achieve it (Gardner 2010, p. 8). In general, motivation can be defined as the influence on thoughts, feelings and actions, which serves to reach a desired end state. The desired end state is described by motives, which in their sum form the motivation (see Fig. 9.1).

The research on motivation and its related theories may be put in line with the general management research. The Scientific Management was followed by the Human Relations Approach which had its origin in the Hawthorne Experiments conducted between 1924 and 1930. Those experiments lay the ground for a clear differentiation between machines and human work. With increasing research new fields of management where discovered, leading to the System View in the 1960s which tried to combine different perspectives and management disciplines into systems. After the paradigm shift in the 1980s, today's management theories and beliefs are laid out on relationships and work life balance and can be described as the Personality Approach.

On an organizational background, one needs to differentiate between intrinsic and extrinsic motivation. When a person is motivated to perform a certain kind of work for the sheer pleasure of it, then intrinsic motivation is taking place. In this source of motivation, the work itself acts as incentive as workers enjoy what they

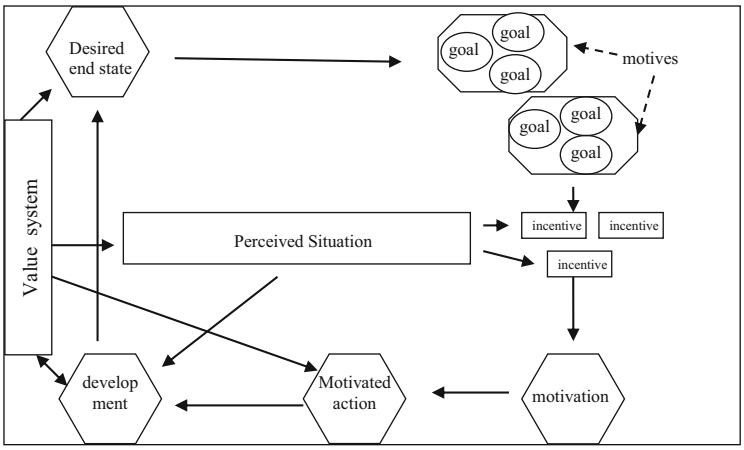


**Fig. 9.1** Motivational process

are doing (Barbuto and Scholl 1998, p. 1012). Intrinsic work values are whatever employees' desire and seek directly from their work activity primarily to satisfy their psychological needs. Extrinsic work values are whatever employees' desire and seek from their work organization and working context primarily to satisfy their social and physiological needs (Wang 1996, pp. 21–22). Extrinsic incentives are only effective for a short period of time. Long-term satisfaction is reached through motivators which focus on the intrinsic aspects of the work (Nerdinger 2003, p. 22). Intrinsic or self-directed motivation is linked mainly to the use of cognitive and metacognitive learning strategies and a positive emotional experience (Dresel et al. 2011, p. 2). There are four dimensions of extrinsic motivation: the convenience dimension (travel to work and work hours, freedom from conflicting demands, pleasant physical surroundings); the financial dimension (pay, benefits, job security); the social dimension (relationships with co-workers) and the dimension of career opportunities (promotion, recognition) (Wang 1996, p. 19).

### *9.2.2 Theoretical Background: Emotional Intelligence*

Research on emotions has been conducted from various perspectives which can be categorized into the historic and evolutionary approach (e.g. Ulich and Mayring 1992), action theory and cognitive approach (e.g. Schlegel 2003), attributional approach (e.g. McElryo 1982, p. 413) and the multiple perspectives approach (e.g. Oatley et al. 2006, p. 39). Due to the wide range of study fields related to emotions, it is no surprise that Kleinginna & Kleinginna found no less than 100 different definitions of emotions, which they tried to summarize in their own definition: "Emotion is a complex arrangement of interactions between subjective and objective factors which is transmitted by neuronal/hormonal systems which can

cause affective experiences like feelings of arousal or lust/unlust, which can evoke cognitive processes like emotionally relevant perception effects, evaluations or classifications; which can start extended psychological adaptations to the conditions activating the arousal and which can lead to behaviour that is often expressive, goal-oriented and adaptive" (Hauer 2003, p. 38). Emotions can be experienced consciously or unconsciously and may cause an observable physical change. The experience of emotions leads to actions, which might be adapted to the situation having caused the emotion. For the further discussion of emotions in this work, emotions are defined as conscious and unconscious neuronal reactions to the evaluation of experienced situations. These reactions do cause a physical change in the body of the actor, which is not always observable and may lead to according actions.

Beginning in the 1990s, the idea of emotional intelligence began attracting a good deal of attention, both among psychologists and in the popular press (Shiota and Kalat 2012, p. 301). Earlier, emotional intelligence was not discussed because emotions were seen as "undesired influences on the logical-analytical behaviour and were left outside in order not to scratch the ideal of the rational acting manager" (Schlegel 2003, p. 13). Gardner did not use the term of emotional intelligence but by proclaiming a new set of intelligences, including interpersonal and intrapersonal intelligences, he laid the foundation for the concept of emotional intelligence, which was mainly developed by Goleman. The core capacity of intrapersonal intelligence is access to one's own feeling life—one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behaviour. The other personal intelligence, interpersonal intelligence, turns outward, to other individuals. The core capacity here is to notice and make distinctions among other individuals and, in particular, among their moods, temperaments, motivations and intentions (Gardner 1993, pp. 239–240). Salovey subsumes the forms of personal intelligence proposed by Gardner under his basic definition for emotional intelligence, which structures these abilities in five sections: self-perception, suitability, goal-directed, empathy, and relationships (Salovey and Rothman 1991, pp. 280–282). In organizations, emotional intelligence is important because of it being a meta ability from which it depends how good we are able to use our other abilities, even the pure intellect (Goleman 1996, p. 56). In the interaction of two human beings the mood of the one who expresses his emotions in a stronger way will be consigns to the more passive one (Goleman 1996, p. 150). Emotions are the expression of the relationship between the person and the subject of the emotion. Not the objective characteristics of the subject will be felt or experienced but the form of this relationship (Ulich and Mayring 1992, p. 52). Somebody who is in a depressed mood, will find more convincing arguments and arguments of better quality than somebody in high spirits, because negative moods lead to a more thoroughly, more systematic proceeding. If someone is in high spirits, he or she will probably find more arguments and more creative, original ones (Caruso and Salovey 2005, p. 120).

### 9.2.3 *Leadership*

Leadership definitions can roughly be differentiated into goal-oriented, influence-oriented, vision-oriented and coordination-oriented. The goal-oriented definitions of leadership focus on company goals, which are the reason for the existence of leadership in the work environment. Most authors focus on the goals and the achievement thereof only, without taking into account the process of leadership and how the goals are reached. The influence-oriented leadership definitions take into account that individuals need to be influenced in order to work towards company goals and that those goals have to be seen as common objectives. Leadership is—according to this perspective—the influencing process necessary to have employees reach company goals. While taking a broader perspective than the goal-oriented perspective, those definitions do not clearly state the difference between individual and company goals and how leaders can reduce this difference. While clearly stating the importance of formulating visions, most vision-oriented definitions of leadership do focus on visions only and do not explain the process of translating goals into visions and the process of turning visions into reality. Coordination-oriented definitions of leadership show the complexity of leadership and its tasks but do leave out the process of leadership as well as the relationship between leaders and followers. As a working definition, leadership is defined as the process of translating company goals into visions, which are understandable and shareable by different stakeholder groups and influencing employees to share those visions and coordinately work towards them.

Over the decades, different theories have tried to answer the question what effective leadership is and how it can be achieved in a generally valid way. In the first decade of the twentieth century, trait theories of leadership were dominant, assuming that certain characteristics of a person influence the quality of leadership. But the impossibility to define a valid set of leadership traits, as well as other shortcomings (Gill 2011, p. 67) lead to the failure of the trait theories as general valid and useful theories of leadership. In the 1930s, behaviour theories were developed which assumed that the success of leadership depends on the behaviour of the leader. Despite its early promise, the considerable body of behavioral research found that a particular leadership style was not universally effective; a style that was effective in one setting was not always effective in a different setting. As well, behavioral theories tended to rely on abstracted concepts of behavioral types that were often difficult to identify (Glynn and DeJordy 2010, p. 123).

Subsequently, situational leadership theories were developed in the 1960s (Hungenberg and Wulf 2006, p. 331). In contrast to trait and behavioral theories, situational theories explicitly assume that leadership can vary across situations and that there may not be a universally effective way to lead; different contexts may call for different kinds of leadership. Those theories usefully contextualized leadership and modeled it as more supple, adaptive, and situational flexible than trait or behavioral theories (Glynn and DeJordy 2010, p. 123). The situational and contingency theories were developed further when a paradigm shift in leadership research

occurred during the 1980s, moving away from the idea that leadership is about 'engineering' outcomes, to a more relationship-based approach (Riggio 2011, p. 123). Generally, the newer models treat leadership as a change process and the leader as a primary catalyst of change (Glynn and DeJordy 2010, p. 125). The idea is that in today's organizations, with flatter, hierarchical structures and technologically-savvy and knowledgeable workers, leadership is a joint venture between those in positions of authority and those doing the work (Riggio 2011, p. 125).

### *9.2.4 Hotel Industry in Germany*

Hotel services are related to goods, such as cleaning of hotel rooms and service of meals as well as related to persons, for example when providing information or during spa treatments (Henschel 2001, p. 80). The main distinguishing characteristics of services are that the 'product' is immaterial, that services are highly bound to a specific place, services cannot be provided in advance, they are not storable and they are characterized by the simultaneous contact of consumer and supplier while the consumer usually is part of the service in question (Beinlich 2000, pp. 26–27). Additionally, services do have an increased risk at purchase and make a quantification difficult, services can hardly be standardized and are highly individual (Henselek 1999, pp. 5–6). Furthermore, service is an experience for the guest and a performance for the server. It is intangible and the guest and the server are both part of the transaction. This personal element makes service quality control difficult (Barrows et al. 2012, p. 515).

The hospitality industry in Germany can be separated into hotels with at least nine beds, other lodgings, drinks-focused restauration, food-focused restauration and external caterers and canteens (Dehoga Bundesverband 2013). In 2011 there were 3,620,576 companies in Germany, of which 46,820 were of the hospitality industry (Statistisches Bundesamt Deutschland 2013). From those hospitality industry companies, 16.3 % were hotels as defined above. The hospitality industry made a total of 23,793 million euros revenue, 30.9 % of which were generated in hotels. The hospitality industry had a total of 514,581 employees, 23.6 % of which were working in the hotel industry. In order to gain a clear focus for this paper only employees working in hotels in Germany will be considered, the relevant industry being referred to as hotel industry. What is remarkable about the hotel industry in Germany is its low income level combined with the long working hours. On average, an employee in the hotel industry earned 12.18 euros per hour in 2012 the average for Germany was 21.30 euros (Statistisches Bundesamt Deutschland 2013).

From many studies it can be argued that working in a hotel environment, where visibility, overwork and performance are standard values, produces distress, dissatisfaction and strain within the work and home domains (Tromp and Blomme 2014, p. 86). The trend of the hotel industry is a mixed one. The turnover in the

hotel industry in Germany grew nominal by 2.1 % in the first 6 months of 2014. This can be seen as a positive development after the growth of only 0.8 % in 2013 (Deutscher Hotel- und Gaststättenverband 2014, p. 1). The number of employees in the hotel industry has grown by 3.020 since the previous year, which represents a relative change of 1.2 % (Deutscher Hotel- und Gaststättenverband 2014, p. 5). The total number of hotels in Germany is on a decreasing trend since 2004 (39.208 hotels) to 2012 (36.608 hotels) (Deutscher Hotel- und Gaststättenverband 2014, p. 6).

## 9.3 Methodology and Model Development

Based on the literature reviewed, three hypotheses are formulated. H1: Employees in the hotel industry in Germany are mainly intrinsically motivated. H2: The motivation of employees is positively related to the effectiveness of leadership of their leader. H3: emotional intelligence leverages the effect of leadership on motivation. Transformational leadership is believed to be the most effective currently known leadership style. Therefore as well as for the sake of comparability in leadership research, it is decided to use the MLQ-5X which is based on this concept for the measurement of leadership. To measure emotional intelligence, the MSCEIT (Mayer, Salovey and Caruso Emotional Intelligence Test) is chosen, which is the most comprehensive measure of the ability model. To measure motivation an own questionnaire is developed, using enjoyable, interesting, challenging and matching the employees competencies as intrinsic factors and prestige, development, salary and recognition as extrinsic factors. Those factors have been identified by a meta-study across various studies of motivation (e.g. Lesser and Madabhushi 2001; Stuhlfaut 2010; Mundhra 2010; Ke et al. 2012; Herpen et al. 2005). With those measurement methods selected, a tentative model is drawn (Fig. 9.2).

Before testing the model with a quantitative study, it was presented to different experts from hotel theory and practice as well as scholars from the field of emotional intelligence. All experts basically supported the model. Data for this study were collected in two time periods to reduce common biases when same source data are used to assess both the predictors and the criteria (Hassan et al. 2013, p. 137). At the first step, the leadership/motivation questionnaire was posted on the facebook page of the ahgz (allgemeine hotel-und gaststättenzeitung), the general newspaper for the hospitality industry in Germany, it was posted within a hotel user group at the online business network xing, it was sent out twice as an advertisement within a daily newsletter for the hotel industry and sent out once within the online newsletter of a hotel journal. This way, all employees and leaders in the hotel industry in Germany did have the chance to get access to the link. Due to the distribution over the internet and the self-selection, it has to be assumed that only German participants filled out the questionnaire.

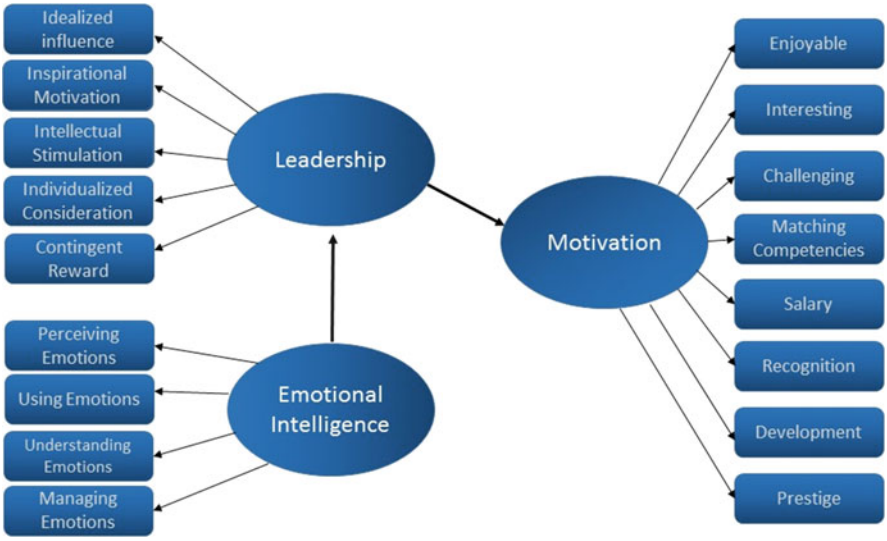


**Fig. 9.2** Tentative model

This first distribution of the questionnaires was done between September 24th, 2013 and October 15th, 2013. Concerning the MSCEIT a separate link had to be purchased which could not be embedded in the leadership/motivation questionnaire. Furthermore, this questionnaire was only supposed to be filled in by leaders. Therefore it was decided to send the link to a sample of German hotels, asking them that one of their leaders answers the questions. In order to draw a random sample, the price-comparing website trivago.de was chosen, which displays all hotels which are bookable online, so each hotel does have the possibility to be displayed on this webpage. The webpage divides Germany into 9 regions and 45 sub-regions. From each sub-region three hotels where chosen, namely number 2, 5 and 11 on the displayed list. The order of the display depends on the availability of the hotel, its price as well at its listing on other web pages.

The sample was drawn on September 21st, 2013 and the link to the online version of MSCEIT has been sent out the same day. The second data collection was done approximately 1 year after the first data collection. Since a complete list of all approx. 35,000 hotels in Germany is not existent, an independent website was chosen (www.hotelier.de), which lists 23,800 hotels in Germany. Every 23rd hotel from this list was selected so that a list of 1034 hotels in Germany was randomly chosen. This list was compared with the list of 130 hotels, which have been contacted within the first round of data collection and three hotels, which were on both lists were excluded. An e-mail was sent out to the human resource departments of the remaining 1031 hotels with both links to the questionnaires, asking them to distribute the link for the motivation/leadership questionnaire among all employees and the emotional intelligence questionnaire only to leaders with a team of at least four followers. This e-mail has been sent out to all hotels on October 20th, 2014. A

first reminder has been sent shortly after, on October 22nd. The second reminder was sent out 1 week after the first e-mail has been sent out, on October 27th. A total of 451 respondents filled in the motivational and the leadership questionnaire, the MSCEIT has been filled in by 181 managers.

Before the results are analyzed, the reliability of the results is tested by calculating Cronbach's alpha for the different questionnaires. For the newly designed questionnaire of motivation an alpha value of 0.896 is calculated, showing good to excellent reliability. For the leadership questionnaire MLQ-5X the handbook states the alpha value at 0.86, it is calculated at 0.851, which indicates a good reliability. For the emotional intelligence questionnaire MSCEIT a reliability of 0.91 is quoted in the handbook. The calculated value of Cronbach's alpha is 0.899, which is slightly below the indicated value but still represents an excellent reliability of the tool.

Since in the model motivation is measured with all eight factors and no differentiation between intrinsic and extrinsic motivation is made, the Statistical Package for Social Sciences (SPSS) is used to determine whether employees in the hotel industry are mainly intrinsically motivated. Intrinsic motivation was measured through the factors enjoyable, interesting, challenging, and matching competences, extrinsic motivation was measured through the factors salary, recognition, development and prestige. Each factor was measured through different questions and at the end the participants were asked to define their personal order for all of those factors. All answers were measured within a five point Likert scale, the values for the factors were calculated by summing up the responses to the respective questions and adding the value for the rank the factor has been put in, where rank one gave eight points, rank two gave seven points and so on. The sum for each factor was then divided by the number of questions, in order to have each factor scaled from 1 to 5. The values of intrinsic and extrinsic motivation have been calculated as the median of the factors. The median was chosen over the mean to make the result dependable from outliners.

Table 9.1 shows that the median of the intrinsic motivation is higher than the median for the extrinsic motivation, as well as almost all factors for intrinsic motivation have a higher median than the factors for extrinsic motivation. The lowest median was measured for salary which also has the lowest standard deviation, confirming the assumption that motivation of employees in the hotel industry in Germany is mainly non-monetary. The intrinsic motivation of employees in the hotel industry in Germany can be stated as higher than the extrinsic motivation. An ANOVA (Analysis of Variance) test was executed to test if the difference of both values is statistically significant. The null-hypothesis, that there is no difference between both values can be rejected, the calculated difference between intrinsic and extrinsic motivation is statistically significant ($F = 6.325$; $p = 0.012$).

Within the Structural Equation Modelling (SEM), the significance of the latent variables is tested with a critical ratio test, which shows satisfactory results. The full latent model with all the measurement models does not show an adequate model fit, with all values outside of the suggested range of adequate model fit. The modification indices suggest many covariances, of which only the onces within the

**Table 9.1** Descriptive analysis for employee motivation

| | N | Minimum | Maximum | Median | Standard deviation |
|---|---|---|---|---|---|
| Enjoyable | 451 | 0 | 5 | 4.00 | 1.410 |
| Interesting | 451 | 0 | 5 | 4.00 | 1.292 |
| Challenging | 451 | 0 | 5 | 3.00 | 1.445 |
| Competence | 451 | 0 | 5 | 3.00 | 1.267 |
| Salary | 426 | 0 | 4 | 2.00 | 1.131 |
| Recognition | 451 | 0 | 5 | 3.00 | 1.193 |
| Development | 451 | 0 | 5 | 3.00 | 1.387 |
| Prestige | 451 | 0 | 5 | 2.00 | 1.231 |
| **Intrinsic** | **451** | **0** | **5.0** | **3.5000** | **1.1595** |
| **Extrinsic** | **451** | **0** | **5.0** | **3.0000** | **1.0340** |

**Table 9.2** Model fit: full latent model

| | $\chi^2$ | df | $\chi^2$/df | CFI | RMSEA |
|---|---|---|---|---|---|
| Full latent model | 1377.427 | 101 | 13.638 | 0.676 | 0.168 |
| Full latent model—amended | 1146.778 | 94 | 12.200 | 0.733 | 0.158 |

measurement models are drawn. Those amendments lead to a better but still not adequate model fit (see Table 9.2). Before making further amendments to the model, the moderating role of emotional intelligence between leadership and motivation shall be explored further.

In order to test the moderating effect emotional intelligence has on the influence of leadership on motivation, a hierarchical regression analysis is conducted as suggested by Xiaqi et al. (2012, p. 263). The analysis consists of three steps. In the first step the control variables gender, age, and time in the hotel industry were entered. In the second step, the "main effects", leadership and emotional intelligence were entered. In the third step, the product of leadership and emotional intelligence was entered to test the moderating effect, as suggested by Xiaqi et al. Table 9.3 represents the results of the analysis according to the steps.

The control variables gender, age and time in the industry do not have an impact on the measured motivation, as they explain only 1.5 % of the variance. The results show that emotional intelligence moderates the relationship between motivation and leadership ($\beta = 0.300$, $p < 0.01$). Leadership and emotional intelligence taken together explain 21 % of the variance of motivation on a statistically significant level.

In order to test this moderating effect with structural equation modelling, the paths between the latent variables are changed. If only a path between leadership and motivation is drawn, a statistically significant relation ($\beta = 0.663$) between motivation and leadership is shown. In a next step, arrows are drawn from leadership to emotional intelligence and from emotional intelligence to motivation. If the relation between motivation and leadership is reducing when emotional intelligence is included in the model, the moderating effect of emotional intelligence can be

**Table 9.3** Hierarchical regression analysis

| | Dependent variable—motivation | | |
|---|---|---|---|
| Independent variables | Step 1 | Step 2 | Step 3 |
| *Step 1* | | | |
| Gender | .220 | .710 | .722 |
| Age | .016 | .027 | .032 |
| Time in industry | .050 | .020 | .024 |
| $R^2$ | .015 | | |
| *Step 2* | | | |
| Leadership (A) | | −.075 | −.993 |
| Emotional intelligence (B) | | .471 | −.411 |
| $R^2$ | | .145 | |
| $\Delta R^2$ | | .131 | |
| *Step 3* | | | |
| A × B | | | .300 |
| $R^2$ | | | .210 |
| $\Delta R^2$ | | | .064 |

seen as substantiated. When calculating the model with the new paths, the regression coefficient between leadership and motivation decreases to −.717 and does no longer show statistical significance ($p > 0.05$), while the relations between motivation and emotional intelligence ($\beta = .369$) and leadership and emotional intelligence ($\beta = .145$) are statistically significant.

Since the moderating effect of emotional intelligence on the relation between leadership and motivation has been substantiated, the latent model with all three latent variables will be further pursued (Fig. 9.3). In order to increase the model fit, other adjustments have to be made. Once all the suggested covariances have been drawn between the factors within the measurement models, the model fit is not adequate with a $\chi^2$/df ratio of 13.224, a CFI value of 0.733 and a RMSEA at 0.165. The factor of intellectual stimulation is shown as not statistically significant ($p > 0.05$) which is why this factor is removed from the model and the model recalculated, the model fit now reaching a satisfactory level at most indicators ($\chi^2$/df = 4.445; CFI = 0.934; RMSEA = 0.087). All estimates kept in the model are statistically significant ($p < 0.05$). The model will be analysed and interpreted in more detail below.

The first noticeable difference in this model compared to the tentative model is that in the latent model the arrow between leadership and motivation is missing. As explained at the analysis of the moderating effect of emotional intelligence, once the path from leadership to motivation has been drawn over emotional intelligence, the direct path between leadership and motivation became insignificant ($p < 0.05$). This is a proof for the moderating effect emotional intelligence has on the relation between leadership and motivation. The path between leadership and emotional intelligence shows a regression coefficient of $\beta = .145$ ($p < 0.05$) and the path

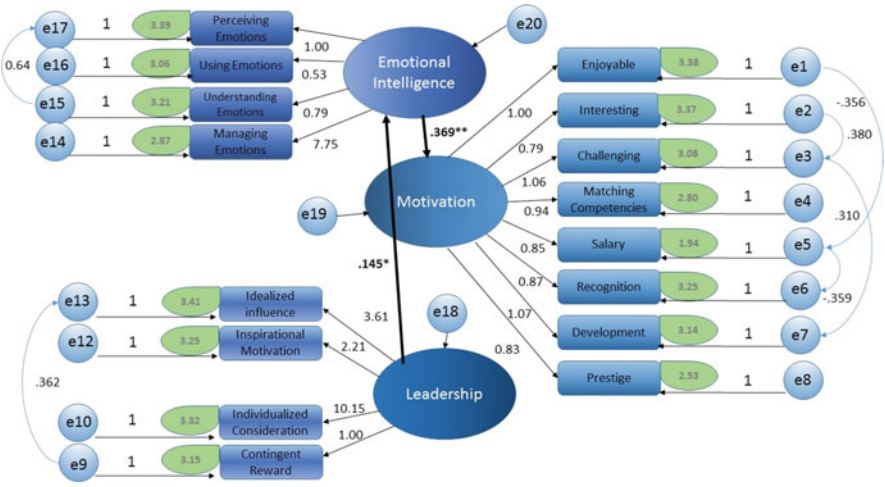


**Fig. 9.3** Full latent model

between emotional intelligence shows a regression coefficient of $\beta = .369$ ($p < 0.01$). This means that leadership and emotional intelligence are positive related, if one goes up the other will follow in the same direction. The same is true for the relation between emotional intelligence and motivation. This way, leadership does have a positive effect on motivation which is strengthened by emotional intelligence, as has been hypothesized before.

What has not been expected was the full mediating effect of emotional intelligence. Before emotional intelligence has been entered to the model, a direct and significant relation between leadership and motivation has been measured. After emotional intelligence has been entered into the model, the direct relation between leadership and motivation has dropped significantly and lost its significance ($p > 0.05$). This effect could not have been guessed before and enhances the importance emotional intelligence plays for leadership and especially for motivation of employees through leadership. In other words, the lack of emotional intelligence cannot compensated by leadership when it comes to motivation of employees, while a lack of leadership effectiveness can partially be compensated by emotional intelligence, since the path between motivation and emotional intelligence shows the greater covariance at a higher significance.

As can be seen in the emotional intelligence measurement model, there is still potential among the leaders in the hotel industry in Germany to improve their emotional intelligence skills especially when it comes to using and managing emotions. The need to improve those skills has been substantiated by the role they play in the relation between leadership and motivation. As seen in the hierarchical regression analysis, leadership and emotional intelligence explain 21 % of the variance of employee motivation in the hotel industry so there are likely to be other factors which does have a significant influence on employee motivation which have not been touched within this paper. Another aspect are the

tested gender differences. Men and women were found to have no statistically significant difference when it comes to leadership, but women were found to be stronger at emotional intelligence. Before entering emotional intelligence to the model, both genders were therefore likely to have the same leadership effect on motivation. Since emotional intelligence has a direct impact on employee motivation, female leaders are likely to have a higher positive impact on the motivation of their employees than male leaders do.

## 9.4 Discussion

Within the hotel industry, employee motivation is one of the key success factors, which allows hotels to differentiate themselves from others through attentive staff and personalized service. The research in this paper confirmed the hypothesis that employees in the hotel industry in Germany are mainly intrinsically motivated which stresses the importance to find non-monetary ways to feed this type of motivation. Motivation is created through incentives within the perceived situation for the employee and this situation is hardly controllable for the employer due to the guest as external factor influencing it. Those circumstances enhance the importance of effective leadership, which has to be strong enough to lead an employee even through situations where a leader is not personally present. It has become clear that modern leadership techniques focus on the employee as an individual and on the relationship between leader and employee. This is probably due to the increased importance of the employee as an individual over the past decades but also to Generation Y entering the workplace with their increased needs for feedback, individual attention, flexibility and work-life-balance.

Leadership has been proven to be positively related to motivation of employees, a relation that is moderated by emotional intelligence. Emotions are created unconsciously and can be stronger than rational thoughts and therefore overrule rational behavior intentions. If emotions are not recognized and managed properly, they may have a negative impact on the leadership situation. Emotional intelligence consists of recognizing emotions of oneself and others and managing those emotions and can therefore enhance the effects of transformational leadership. Leadership and emotional intelligence explain 21 % of the variance of motivation and therefore underline the needed focus of the hotel industry on the emotional intelligence of their leaders.

Managers in the hotel industry should take into account that Generation Y, which represents the young workforce currently between 15 and 35 years old, does have an increased need for feedback and recognition and act accordingly. They should furthermore try to be a role model for their followers and display behaviour, which they wish their followers to copy. This behaviour has the prerequisite that a manager is able to reflect and analyse his or her behaviour and changes it accordingly. Managers should focus on their emotional intelligence, either through official trainings or through internal reflection. They should always

consider that their emotions and how they are handled have an impact on the team, its motivation and their leadership. Furthermore leaders should be aware that employees, especially female employees, are mainly intrinsically motivated and should try to keep that motivation up and avoid the crowding out effect. Managers should keep in mind that about 20 % of the motivation of their employees is explained by their emotional intelligence and leadership and therefore continuously pay attention to their behaviour.

Summarizing, managers and leaders in the hotel industry should be aware of the potential lying in their behaviour on the motivation of employees and therefore analyse their behaviour and amend it where necessary to reach greater employee motivation which is crucial in the hotel industry. Further research is suggested focusing on the leveraging effect of beneficiary contact on leadership and motivation in the hotel industry. This might be one of the factors other than leadership and emotional intelligence influencing employee motivation. Those other factors should be researched further in order to allow a better understanding and therefore management of employee motivation. Furthermore, research should be conducted on leadership factors, which were left out at the model studied in this research, such as cultural differences existing in the hotel industry in Germany. In this context, differences between the culture of birth and the culture of education should be made.

The found effect could be studied in other countries to understand the general relation between leadership, emotional intelligence and motivation better. It should also be analysed if the mainly intrinsic motivation in the hotel industry in Germany is due to the fact that the industry does not offer many extrinsic incentives or due to the fact that females are per se more intrinsically motivated and overrepresented among the hotel employees. Other studies also suggest making a differentiation between transactional and transformational leadership, and studying the effects of both concepts, since surprising results might be found. It would also be advisable to substantiate or neglect the results of this study by repeating it with a larger, more representative sample.

## References

Barbuto J, Scholl R (1998) Motivation Sources Inventory: development and validation of new scales to measure an integrative taxonomy of motivation. Psychol Rep 82:1011–1022

Barrows C, Powers T, Reynolds D (2012) Introduction to the hospitality industry, 8th edn. Wiley, New Jersey

Beinlich M (2000) Qualitätsmanagement im Dienstleistungssektor. Eine empirische Untersuchung der Hotelbranche. IKS GmbH, Jena

Caruso DR, Salovey P (2005) Managen mit emotionaler Kompetenz. Die vier zentralen Skills für Ihren Führungsalltag. Campus-Verl, New York, NY

Ciompi L (1997) Die emotionalen Grundlagen des Denkens. Entwurf einer fraktalen Affektlogik. Vandenhoeck & Ruprecht, Göttingen

Dehoga Bundesverband (2013) Gastgewerbe im Überblick. Available via http://www.dehoga-bundesverband.de/daten-fakten-trends/gastgewerbe-im-ueberblick/

Dresel M, Backes C, Lämmle L (2011) Zur Bedeutung von Motivation und Selbstregulation für Leistungen im durchschnittlichen und exzellenten Bereich: eine Einführung. In: Dresel M (ed) Motivation, Selbstregulation und Leistungsexzellenz, 1st edn. LIT, Münster, pp 1–10

Gardner H (1993) Frames of mind. The theory of multiple intelligences, 2nd edn. Fontana Press, London

Gardner RC (2010) Motivation and second language acquisition. The socio-educational model. Peter Lang, New York, NY

Deutscher Hotel- und Gaststättenverband (2014) DEHOGA_Zahlenspiegel_2__Quartal_2014. Edited by Dehoga Bundesverband. Available via http://www.dehoga-bundesverband.de/fileadmin/Inhaltsbilder/Daten_Fakten_Trends/Zahlespiegel_und_Branchenberichte/Zahlenspiegel/DEHOGA_Zahlenspiegel_2__Quartal_2014.pdf

Gill R (2011) Theory and practice of leadership, 2nd edn. SAGE, London

Glynn MA, DeJordy R (2010) Leadership through an organization behaviour lens. A look at the last half-century of research. In: Khurana R, Nohria N (eds) Handbook of leadership theory and practice. Harvard Business Press, Boston, MA, pp 119–157

Goleman D (1996) Emotionale Intelligenz, 2nd edn. Hanser, München

Hassan S, Mahsud R, Yukl G, Prussia GE (2013) Ethical and empowering leadership and leader effectiveness. J Manag Psychol 28(2):133–146

Hauer P (2003) Die Emotion und konstruktivistische Erwachsenenbildung. In: Arnold R (ed) Emotionale Kompetenz. Theorien und Anwendungen, 200th edn. Foto-Repro-Druck der Universität Kaiserslautern, Kaiserslautern, pp 33–58

Henschel K (2001) Hotelmanagement. Oldenbourg Wissenschafts Verlag GmbH, München

Henselek H (1999) Hotelmanagement. Planung und Kontrolle. Oldenbourg Wissenschafts Verlag GmbH, München

Herpen M, Praag M, Cools K (2005) The effects of performance measurement and compensation on motivation: an empirical study. De Economist 153(3):303–329

Hungenberg H, Wulf T (2006) Grundlagen der Unternehmensführung. Springer, Berlin, Heidelberg

Jost P (2000) Organisation und Motivation. Eine ökonomisch-psychologische Einführung. Gabler, Wiesbaden

Ke W, Tan C, Sia C, Wei K (2012) Inducing intrinsic motivation to explore the enterprise system: the supremacy of organizational levers. J Manage Inf Syst 29(3):257–290

Lenzner A, Dickhäuser O (2011) Strategien der Motivationsregulation: theoretische Überlegungen und empirische Befunde. In: Dresel M (ed) Motivation, Selbstregulation und Leistungsexzellenz, 1st edn. LIT, Münster, pp 11–28

Lesser J, Madabhushi L (2001) Measurement of consumer intrinsic motivation – exploratory assessment of its two primary dimensions and theoretical bases. Market Manage J 11(2):81–96

McElryo JC (1982) A typology of attribution leadership research. Acad Manage Rev 3(7):413–417

Mundhra DD (2010) Intrinsic motivational canvass in the Indian service sector: an empirical study. Vision – J Bus Perspect 14(4):275–284

Nerdinger FW (2003) Motivation von Mitarbeitern. Hogrefe, Göttingen

Oatley K, Keltner D, Jenkins JM (2006) Understanding emotions, 2nd edn. Blackwell, Malden, MA

Riggio RE (2011) The management perspective: engineering effective leadership in organizations. In: Riggio RE, Harvey M (eds) Leadership studies – the dialogue of disciplines. Edward Elgar, Cheltenham, pp 119–128

Salovey P, Rothman A (1991) Envy and jealousy: self and society. In: Salovey P (ed) The psychology of jealousy and envy. Guilford Press, New York, NY, pp 271–286

Schlegel G (2003) Emotionale Intelligenz und Emotionspsychologie. In: Arnold R (ed) Emotionale Kompetenz. Theorien und Anwendungen, 200th edn. Foto-Repro-Druck der Universität Kaiserslautern, Kaiserslautern, pp 13–22

Shiota MN, Kalat JW (2012) Emotion, 2nd edn. Wadsworth, Belmont

Statistisches Bundesamt Deutschland (2013) Ausgewählte Berufe mit hohem Frauenanteil. Available via https://www.destatis.de/SiteGlobals/Forms/Suche/Servicesuche_Formular.html;jsessionid=B3FB610CFDA4C118493B748BAB388B43.cae1?nn=

Stuhlfaut MW (2010) Evaluating the work preference inventory and its measurement of motivation in creative advertising professionals. J Curr Issues Res Adv 32(1):81–93

Tromp MD, Blomme RJ (2014) Leadership style and negative work-home interference in the hospitality industry. Int J Contemp Hosp Manag 26(1):85–106

Ulich D, Mayring P (1992) Psychologie der Emotionen, vol 1, 1st edn. W. Kolhammer, Stuttgart

Wang GT (1996) A comparative study of extrinsic and intrinsic work values of employees in the United States and Japan. Edwin Mellen Press, Lewiston

Xiaqi D, Kun T, Chongsen Y, Sufang G (2012) Abusive supervision and LMX: leaders' emotional intelligence as antecedent variable and trust as consequence variable. Chin Manage Stud 6 (2):257–270

# Chapter 10
# Competency-Based Hiring as a Tool to Improve the Thai Meeting and Convention Industry: A Sales Executive Perspective

**Nuttapong Jotikasthira, Suebsanti Bhutibhunthu, and Ichayaporn Chuaychoo**

## 10.1 Introduction

Meeting and Convention represents the most important sector within the MICE (Meeting, Incentive Travel, Convention, and Exhibition) tourism industry in Thailand. In 2012, the Tourism and Travel Economy represented 16 % of Thai Gross Domestic Product (GDP) and employed 11.9 % of its working population (Blanke and Chiesa 2013).

Despite a relatively high competitiveness of the Travel and Tourism industry as a whole and specifically the Meeting and Convention sector, Thailand should not be complacent with its success. The Travel and Tourism Competitiveness Index from 2009 to 2013 ranked by the World Economic Forum has shown a consecutive decline in Thailand's rankings (from 39th place in 2009 to 41st in 2011, and 43rd in 2013) (Blanke and Chiesa 2009, 2011, 2013). As for the Meeting and Convention sector, Thailand was ranked 29th in the world in 2014 according to International Congress and Convention Association-ICCA (2014). However, the ICCA ranking did not take into account the revenue and number of participants to the conventions which should be more relevant to the success of the sector. Lower competitiveness of the country can be attributed to several factors including the deterioration of tourism resources, better performance of competitor destinations, internal political problems and productivity of human resources in the Travel and Tourism industries.

N. Jotikasthira (✉) • S. Bhutibhunthu • I. Chuaychoo
College of Tourism and Hospitality, Rangsit University, Pathum Thani, Thailand
e-mail: jotikasthira@gmail.com



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_10

**Table 10.1** Comparative per employee sales of Thailand and its neighboring countries in the Pacific Rim

| Country | Sales per employee | PPP ratio | PPP sales per employee | Thailand efficiency ratio | TTCI score on availability of qualified labor | TTCI rank on availability of qualified labor |
|---|---|---|---|---|---|---|
| Singapore | 340,631 | 1.377 | 469,048.89 | 18.08 | 6.0 | 3 |
| Australia | 135,533 | 0.851 | 115,338.58 | 4.45 | 5.1 | 62 |
| New Zealand | 114,590 | 0.973 | 111,496.07 | 4.30 | 5.5 | 17 |
| Japan | 108,873 | 0.819 | 89,166.99 | 3.44 | 5.1 | 69 |
| South Korea | 20,549 | 1.634 | 33,577.07 | 1.29 | 5.1 | 57 |
| Malaysia | 15,191 | 1.966 | 29,865.51 | 1.15 | 5.4 | 24 |
| Thailand | 12,551 | 2.067 | 25,942.92 | 1.00 | 5.2 | 47 |
| China | 12,698 | 1.81 | 22,983.38 | 0.89 | 5.3 | 26 |
| Indonesia | 8084 | 1.769 | 14,300.60 | 0.55 | 5.0 | 77 |
| India | 4026 | 2.816 | 11,337.22 | 0.44 | 4.6 | 109 |
| Philippines | 4601 | 2.006 | 9229.61 | 0.36 | 4.6 | 108 |

Depicted from Barnes Report (2010), Blanke and Chiesa (2013)

Table 10.1 depicts the per-employee sales of Thailand and other countries in ASEAN plus Six region and converted them into a comparable basis using Purchasing Power Parity-PPP.

Using Thailand as the base, it is evident that convention and exhibition employees in Singapore, Australia, New Zealand, and Japan are much more productive than those in Thailand, Malaysia, and China. The two right columns of the table reports the score of availability of Qualified Labor in Tourism and Travel fields in the selected countries and their respective ranks (Blanke and Chiesa 2013). It can be concluded that the main reason for Thailand's inferior productivity in the convention and exhibition industries compared to top destinations like Singapore and New Zealand is human resources.

Quality and availability issues of Thailand's human resources need to be seriously addressed if the country aims to be the hub of tourism and MICE in the ASEAN region. The situation will become more complicated by the end of 2015 when the ASEAN Economic Community takes full effect including a free flow of production factors and free markets (Economic Intelligence Center: Siam Commercial Bank 2011). The Thai MICE industry needs to improve the quality and productivity of its MICE personnel especially in key positions such as sales executives.

As a result of an increasingly fast pace along with unpredictable changes in the modern global socio-economic environment, Thai MICE companies need to shift its paradigm from performance-based human resource management that looks into what people can do in the present environment to instead adopt a competency based approach that looks into the underlying qualities behind good performance.

This study aims 1) to identify competency sets necessary for Thai meeting and convention firms to stay competitive and 2) to suggest human resource practices

that help them select, retain, and develop their talents from a sales executive perspective. To come up with the findings that satisfy the research objectives, theoretical frameworks related to meeting and convention industry, competency, and competency-based human resource management should be discussed.

## 10.2 Theoretical Framework

The meeting and convention industry serves as the context of this study and its parent disciplines are competency and competency-based human resource management. The three concepts will now be discussed.

### *10.2.1 Meeting and Convention*

An important part of the hospitality industry in most destinations, meeting and convention can be defined as public and private gatherings with the purposes of idea exchange, entertainment, and networking (Gartrell 1991; Leask and Hood 2001; U.S. Bureau of Labor Statistics 2012). The meeting and convention sector of the hospitality industry yields several benefits to the destinations. It helps lessen the effects of demand fluctuation and price sensitivity of conventional leisure tourism, especially during off-peak seasons (Leask and Hood 2001; Var et al. 1985). It also helps secure foreign income and employment thanks to high multiplying effects of the revenue generated from convention participants (Blanchard 2005; Firoiu et al. 2011). Besides, meeting and convention vastly benefits real economy sectors that are concerned with the themes of the events. Having mentioned their benefits, it is unsurprising that most destinations strive to bid for international conventions by setting up promotional funds, professional associations, and convention bureaus.

Meeting and convention can be categorized into three categories namely corporate, association, and government meetings and conventions (U.S. Bureau of Labor Statistics 2012). Corporate meetings are usually smaller in size with fixed locations (U.S. Bureau of Labor Statistics 2012). With globalization dominated by multinational corporations with multiple locations and subsidiaries, corporate meetings are larger in size and locations can vary depending on the countries or cities where the corporate has a presence. However, this trend is quickly changing due to the fast advancement of communication technologies. In such conditions, corporate meetings will be smaller but higher value as they would be reserved only for high ranking executives travelling to make important decisions (Roland Berger Strategy Consultants GMBH 2011). Meeting and convention businesses should anticipate this trend and embrace the use of technology in meeting organization or business diversification.

Association and government conventions are larger in space, size and number of attendees. The difference between the two lies in the nature of participation. While

participation to government meetings tends to be obligatory according to work duties and the expenses of attending as well as transportation tend to be the responsibility of employers. Participants to association conventions tend to make their own decisions whether they attend the conventions and are responsible for all expenses (Leask and Hood 2001; Oppermann and Chon 1997). Therefore, association convention participants tend to be more price sensitive and pay more attention to the convention program and other destination factors such as attractiveness and geographical accessibility (Oppermann and Chon 1997). Association conventions interlink to other hospitality services including food and beverage, accommodation, pre and post-convention tours, destination bureaus and meeting and convention businesses to focus their marketing efforts in drawing these types of meetings and conventions to the destination.

### *10.2.2 The Meeting and Convention Market*

Five actors in meeting and convention markets can be identified including host organizations, convention planners, convention participants, venues and convention bureaus (Var et al. 1985). While the former four types of actors interact with each other through vender-buyer relationships, the latter plays supporting roles for both host organizations and convention planners in pitching the event.

Among these actors, convention participants determine the success of the event (Oppermann and Chon 1997). Like most business travelers, participants have multiple motivations combining professional and personal benefits in their decision making (Florek et al. 2008; Hawkins and Mothersbaugh 2010; Mansfeld 1992). Their decision to participate depends on four major factors: personal and business factors, location factors, conference factors, and other intervening opportunities (Crotts 2000; Oppermann and Chon 1997).

Convention planners are service providers that host organizations and are in turn also the customers to the convention venues. When choosing venues, planners tend to base their decisions on helpfulness of the venue staff, facilities and the equipment of the venue, responsiveness of floor staff, food and beverage services, and billing and payment process (Hinkin and Tracey 2003b; Shaw and Lewis 1991). Convention participants' satisfaction factors are different from those of convention planners. Factors that affect participants' satisfaction with venues are: security of the venue, quality of the staff, atmosphere of the meeting room, quality of food and beverage services, meeting room physical factors, accessibility of the venue, quality of public and recreational areas (Hinkin and Tracey 2003a, b). This implies that convention venue business must strive to satisfy both convention planners and participants at the same time while convention planners must make sure that they have considered the venue features that are important to their clients—the participants.

In recent days, unconventional or not-built-for-purpose venues have become more popular for smaller conventions and meetings with combined social functions

(Leask and Hood 2001). These venues include castles, museums, historical sites and city halls. Yet, they still have problems with structures that are not so conducive for arranging these types of conventions including logistical issues.

Convention bureaus help market the destination to the host organization and planners in the source markets while assisting bidding process and marketing of the events to prospective attendees (Gartrell 1991). It can be seen that each actors in the market must move hands in hands for the success of an event. For a successful convention, all stakeholders need to cooperate and work seamlessly together.

A meeting or convention is considered successful when it can draw the targeted amount of participants as expected by the host organization along with managing revenues and budgets set by the host organization. Therefore, relationships with suppliers and customers need to be established, maintained, and enhanced. The critical success factors for the convention business are:

1) Drawing power of participants to the event
2) Budget control of the event and negotiation powers with key contracted service providers
3) Long-term positive relationships with key suppliers, convention bureaus, and customers
4) Service quality provided to clients and delegates derived from thorough insights about their needs, behaviors and preferences

From the four success factors mentioned above, sales executives play crucial roles in designing the meeting and convention that help draw participants to the event, while ensuring that the event organization is within the budgetary constraints of customers whilst yielding satisfactory profit margins for the company. Sales executives act as the center and facilitator between all stakeholders. They coordinate between the operations teams and suppliers. They also play a key role in maintaining and enhancing long-term professional relationships with customers who, if treated well, have a greater propensity to repeat and refer to other potential customers and suppliers (Lee and Hiemstra 2001).

### *10.2.3 The Meeting and Convention Labor Market*

Similar to labor markets in the hospitality industry, the meeting and convention labor population is characterized as a weak labor population with unspecific hiring standard, multiple points of entry, no specific qualifications required, low skill specificity, weak workplace customs, and flexible roles and responsibilities (Baum 2008; U.S. Bureau of Labor Statistics 2012; Weber et al. 2009). Therefore, it is more difficult for meeting and convention firms to recruit and retain good talent as well as controlling good quality and consistency.

Having employees from different backgrounds of educational and professional experience, it is harder for meeting and convention firms to control the performance

levels of their employees, and hence the quality services rendered to their clients (K. Weber and Ladkin 2008).

Sales executives in meeting and convention industries need to be adaptable to change due to the volatility of external environments and changing industry structures (Jain and Haley 2009). New age customers are harder to please. They are more informative, price sensitive and tougher to deal with making it harder to complete making transactions (Egol et al. 2010; Friedrich et al. 2011; Kotler and Lane 2009). Consequently, sales dialogues need to be changed from normal informative ones to be more consultative in nature. Having discussed meeting and convention labor markets, it is evident that the performance based human resource management that is conventionally used across industries should be replaced with competency-based human resource management (Langdon and Marrelli 2002).

### *10.2.4 Competency*

Variedly defined, the concept of competency refers to one's deep and enduring ability to perform tasks required by an industry or an organization at the adequate or superior level within work environmental contexts (Bhatawdekar and Bhatawdekar 2012; Chapman and Lovell 2006; Holton et al. 2008; Purdue et al. 2002; Rainsbury et al. 2001). As competency deals with deep and enduring ability, it usually allows individuals with particular competencies to complete assigned tasks despite changing working methods or workflows. It is also accepted in modern managerial mindsets that an organization's competitiveness is derived very much from its employees' competencies. Hence, it is also critical for firms to acquire the needed talents and competency and retain them in the most efficient fashion (Simonet and Tett 2013).

A competency comprises three parts that work coherently to enable an individual to perform certain tasks that pertain to the job descriptions. These three parts are knowledge, skills, and attributes (M. R. Weber et al. 2009). While knowledge can be easily observed, measured, and developed, skills and attributes tend to be inherent or take a long time to develop (Jauhari 2006; Melaia et al. 2008). They are also harder assess and measure through the normal recruitment process (Duad et al. 2010). Employees with technical knowledge but lacking supporting skills and attributes might be easily outperformed by those with the required skills and attributes but no technical knowledge after a short period of being brought up to speed in a human resources development program. A new way of staff recruitment must, therefore, be adopted.

Depending on the objectives, the concept of competency can be approached from different angles. Certain scholars crudely categorized competencies into two types: namely hard and soft competencies (M. R. Weber et al. 2009). While hard competencies concern technical skills and knowledge, they are easier to attain within a short period. Soft competencies are skills and personal attributes that allow individuals to better master their technical skills. They are either ascribed

or time consuming for development. Within the realm of a service industry like meeting and convention business, soft competencies tend to greatly underlie the service quality due to intangibility, inseparability, and variety natures of the product (Lovelock et al. 2001; Testa and Sipe 2012).

Not mentioning technical knowledge, Testa and Sipe (2012) identified the competencies for quality services in hospitality managers and found that a competent manager needs three interdependent parts of competencies: business savvy, people savvy, and self-savvy competencies (Testa and Sipe 2012). Defillipi and Arthur (1994), on the contrary, grouped three different types of competencies including: know-why, know-whom, and know-why competencies. Know-how competencies are practically equivalent to technical skills and knowledge while know-why competencies are concerned with personal motivation, career goal, self-discipline, and other basic transferable skills. Know-whom competencies refer to interpersonal skills and establishing a network that helps with task completion (Cappellen and Janssens 2008; Defillipi and Arthur 1994). It can be argued that know-how competencies can be equated to hard competencies and know-why, and know-whom competencies are comparable to soft-competencies.

Modern management paradigms accept the importance of skills and attributes over technical knowledge as the former two are either inherent or harder to develop. Besides, the quality of application of technical knowledge tends to depend on skills and attributes. This fact reiterates the importance of competency-based human resource management.

### *10.2.5 Competency Identification*

Competency models help identify qualities needed in a job position. The problem with most competency models is that they tend to overstate the technical know-how and understate the underlying skills and attributes (Chapman and Lovell 2006). Besides, most models tend to be developed from information given by a few groups of stakeholders making the competencies identified incomprehensive and do not yield expected results (Langdon and Marrelli 2002).

Good competency models must identify everything necessary for completion of all tasks included in a job description allowing concerned parties to make informed human resource related decisions (Baum 2008; Priyadarshini and Dave 2012). Moreover, they should also align with competitive strategies as competitiveness as each employee constitutes the whole organizations' competitive advantages (Hamimi Abdul Razak et al. 2012).

This study partially adopted the competency model called "Language of Work-LOW" developed by Langdon and Marrelli (2002). However, organizational specific factors such as work flow and organizational cultures were excluded from the research design. Figure 10.1 demonstrates the adapted competency model, which is the study model of this study.

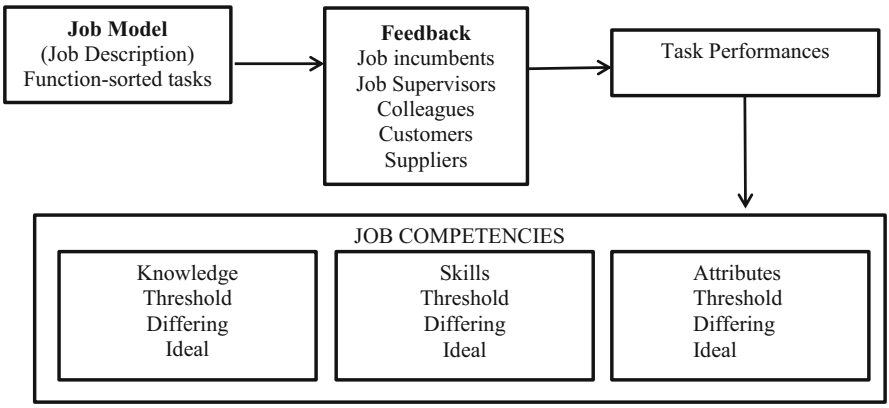


**Fig. 10.1** Adapted language of work competency model. Adapted from Langdon and Marrelli (2002)

In the model presented in Fig. 10.1, competencies would be identified based on the data collected from all stakeholder groups with direct contact to the interested position, sales executives in convention and businesses in Thailand. Three levels of performance standards included in job descriptions serve as the basis of competency identification, which are reported in the forms of knowledge, skills, and attributes. In the work of Duad et al. (2010), two levels of competency were identified: threshold and differing competencies. In this study, one additional level of competency, ideal competency, was added to identify knowledge, skills, and attributes that support best practices.

### *10.2.6 Competency-Based Human Resource Management*

Human resource management is highly important as it concerns the acquisition, retention, and development of employees towards an organization's competitiveness (Bourdreau and Ziskin 2011). Competency-based management is needed in environments that are less predictable and controllable. To adopt such an approach, companies should start reviewing their job descriptions to incorporate task standards expected by the organization (Huff-Eibl et al. 2011). Such standards should be well stated in other hiring related materials including job vacancies advertisements as well as desirable attitudes and behaviors.

Selection process should focus on soft competencies, which are either inherent or time consuming for development (Bhatawdekar and Bhatawdekar 2012; Huff-Eibl et al. 2011; Martin and Pope 2008; Testa and Sipe 2012). As skills and attributes are difficult to observe, selection processes should be flexible and include various methods so that interviewers can confidently select candidates with the required soft competencies (Martin and Pope 2008). Methods range from aptitude

tests, case studies, job interviews to name a few. Instead of recruiting candidates using fields of formal training and direct work experience, employers should focus more on competencies, especially soft ones, despite inexperience in the field.

## 10.3 Research Methods

A qualitative approach methodology was adopted in this study due to a limited number of prospective participants and very limited number of previous studies in the field (Hennink et al. 2011; Neuman 2006). The study is designed into two phases: exploratory in-depth interviews with key stakeholders and confirmatory group interviews with industry expert panels.

### *10.3.1 Phase One: In-Depth Interview with Stakeholders*

As there is no publicly available study about competency identification for sales executives in the field of meeting and convention, exploratory qualitative research is, therefore, necessary. Feedback providers or in-depth research participants included in this study were the job incumbents, job supervisors, colleagues, suppliers and customers. They were interviewed using standard interview frameworks developed from job descriptions from companies selected from Thailand Incentive and Convention Association-TICA. Task items were gathered, sorted into functional groups, and combined. The sample size was 25 people comprising 5 prospective participants from each group of stakeholders judgmentally selected by TICA. Following the task standard statement, participants reported their knowledge, skills and attributes for each task. Table 10.2 reported the job description of meeting and convention sales executives, which served as interview question framework.

### *10.3.2 Phase Two: Group Interview with Industry Experts*

After getting the competency items from the Knowledge, Skills and Attributes (KSA) through in-depth interview sessions, competency items were sorted and grouped. These items were used for group interviews with industry experts in order to verify its validity. Panelists were 8–10 industry experts who were either board members of TICA or representatives from its member organizations. Panelists were asked if the competency items were appropriate for the positions at three different levels of performance standards. They were free to suggest adding, modifying, or eliminating items from the competency set. Group consensus was used as the decision criteria of the company set modification.

**Table 10.2** Job description of sales executives in meeting and convention business in Thailand

| Functional area | Tasks |
|---|---|
| Sales and marketing | Help plan, acquire insights, provide input and help team members in planning and implementing tasks |
| | Make sales calls with current and prospective customers to develop business opportunities |
| | Always seek for new potential business opportunities from all possible sources |
| | Follow up with unclosed sales and negotiate the best deal |
| | Cross-sell/up-sell where possible and appropriate |
| | Prepare bidding proposal |
| | After confirmation from clients, conduct service level agreement with all concerned |
| | Assist the site inspection and suggest/recommend |
| | Help clients promote convention to target audiences |
| | Search, acquire information and specification about services needed by customers from third party suppliers |
| Operation | Coordinate on-site arrangement for all meetings and events |
| | Coordinate with venues about electrical structure of the venue and HAVC for venue arrangement |
| | Co-develop the action plan and timeline of the function throughout the process |
| | Verify the project readiness before the show days |
| | Check and verify for adjustment for future event |
| | Act according to and verify the team operation's performance with ethical and professionalism standard |
| | Check and verify the price list from outside suppliers |
| Finance and budget | Verify bills and approve payment |
| | Follow up payment from clients according to the contracts and policies |
| | Prepare and coordinate all job relevant documents |
| Administrative | Rank and riles |

### *10.3.3 Data Analysis*

As discussed earlier, soft competencies tend to underlie the mastery of hard competencies (Chapman and Lovell 2006). Besides, they also tend to be harder, if possible, to develop or attain through human resource development (Bhatawdekar and Bhatawdekar 2012). Soft competencies which include skills and competencies would be sorted as competencies unit required for human resource management. Hard competencies which normally refer to knowledge should be used for human resource development.

Among the soft competencies of different levels, the threshold level soft competencies will be used for hiring and selection decisions as they are required for individuals to perform tasks at the minimum acceptable level. Important project assignment decisions should be made based on soft competencies at differing

levels. This is because these skills and competencies support performances of high performers. Ideal competencies should be used to support promotion decisions. Competencies unit concluded from the group interview with expert panel would be coded accordingly.

## 10.4 Research Findings

For the in-depth interview with the position's stakeholders, 18 in-depth interviews were conducted with 5 job incumbents, 5 job supervisors, 5 colleagues, 2 suppliers, and 1 customer. Although the actual sample is smaller than the sampling design of 25 participants, repetitive information from informants indicated data saturation and sample sufficiency (Hennink et al. 2011; Neuman 2011). The findings from in-depth interview were confirmed by nine industry experts in the group interview. They were asked to confirm the appropriateness of the task performance standard and their supported competency units. Certain competency units were confirmed, added, modified, deleted, and changed the level of performance. Table 10.3 listed the competency units required at the threshold level of performance of a Thai meeting and convention sales executives.

From Table 10.3, it is clear that out of 28 competency items, 6 knowledge competencies were reported while 11 skills and attribute competencies were listed. The finding confirmed that soft competencies are more important than technical knowledge not only because they are greater in number but also because they also allow skill upgrades and adaptation to internal and external changes (Baum 2008; Chapman and Lovell 2006). Thinking and communication skills together with acumen, for example, allow sales executive to use product, market and customer knowledge in a more efficient manner. Therefore, focus must be put on transferable skills and key attributes that are inherent or harder to develop. The challenge is how to assess a candidate's soft competencies that are less observable and harder to measure.

Table 10.4 shows the competency units identified to be supportive of differing performance standards. They reflect qualities that make distinct the performance of high performing sales executives in Thai meeting and convention business from that of average ones.

Individuals with these qualities should be assigned with important meeting and convention projects that require higher efforts and capabilities.

It should be noted that no hard competency or technical knowledge was identified to support high performance of sales executives in Thai meeting and convention business. The findings also confirmed the same notion that soft competencies tend to support high performance. It is not a matter of how much one knows but it is how one applies the knowledge. Being assigned with important projects requires a sales executive to acquire important information while being a good negotiator and a conflict mediator. They also need other personal attributes that allow them to perform exceptionally under high pressure.

**Table 10.3** Competency units for threshold level of performance of a Thai meeting and convention sales executive

| Competency element | Competency items |
|---|---|
| Knowledge | Product knowledge: characteristics, costs, availability |
| | Customer knowledge: their objectives, needs, business goal, key success factors, and decision process |
| | Market intelligence: market trends, competitive intelligence |
| | Knowledge about current affairs: domestic and international |
| | Market knowledge: domestic and international |
| | Knowledge about meeting and convention industry: market trends and competition |
| Skills | Thinking skills: logical, understanding, application, analytical, critical |
| | Communication skills: concise/precise/logical |
| | Teamwork and team planning |
| | Presentation skills: clear and logical |
| | Basic cost and revenue |
| | Task coordination |
| | English proficiency |
| | Computer literacy |
| | Communication skills: audience appropriate (diverse backgrounds) |
| | Presentation: imagery |
| | Relationship management: consumers and suppliers |
| Attributes | Acumen |
| | Integrity |
| | Optimism towards problems and obstacles |
| | Observance and detail oriented |
| | Service minded |
| | Change adaptation |
| | Good personality: agreeable and friendly |
| | Business instinct and business mind |
| | Work experience in meeting and convention industry |
| | Empathy |
| | Well-preparedness |

Another set of competency units should be used to support promotion decision. They are ideal competencies as reported in Table 10.5. Upon closer inspection, for a sales executive in Thai meeting and convention business to perform impeccably well, they need to be an exceptional communicator and conflict mediator. Besides, they also must wisely utilize their professional and personal networks for the job.

**Table 10.4** Competency units for differing level of performance for Thai meeting and convention sales executives

| Competency element | Competency items |
|---|---|
| Skills | Strategic questioning |
| | Negotiation: systematic, fair, systematic, responsive |
| | Problem solving: unplanned situation |
| Attributes | Neatness and meticulosity |
| | Goal oriented attitude |
| | Patience to work under high pressure situation |
| | Service psychology and customer oriented mindset |

**Table 10.5** Competency units for ideal level of performance of Thai meeting and convention sales executives

| Competency element | Competency items |
|---|---|
| Skills | Communication: tactical with social acumen |
| | Conflict management: systematic, integrative |
| Attributes | Professional and personal network |

## 10.5 Concluding Remarks

Competency-based human resource management is believed to replace performance based human resource management due to unprecedented and predictable changes (Bhatawdekar and Bhatawdekar 2012; Langdon and Marrelli 2002). Therefore, human resource processes including candidate selection, project assignment, and promotion decision should focus on competencies which are usually identified in the form of Knowledge, Skills, and Attributes.

Like most hospitality industries, meeting and convention industry in Thailand suffers from a weak labor market where there are minimal standards for hiring candidates, no standardized compensation measure and low commitment. Such characteristics make human resource management in meeting and convention industry even more complicated than other industries. In order to ensure that competency units identified really support the increased competitiveness of the industry, key success factors were identified. Meeting and convention sales executives must help clients design the events that draw expected number of participants while being able to control the cost of organization and marketing. Their intermediary role makes it necessary for them to retain long-term positive relationships with key partners including convention bureaus and suppliers. They also need to make sure that the operation teams provide quality services to both clients and participants.

Both the in-depth and group interviews with industry experts confirmed that soft competencies especially skills and attributes are more important than knowledge items. To select new sales executives in meeting and convention business in Thailand, employers should focus on evaluating candidates' skills and attributes.

Adjustment of the candidate assessment process must be changed from the interview-based approach that focuses too much on technical knowledge and work experience. The time-intensive nature of job interviews do not allow for concrete assessment of skills and attributes that are hard to observe and measure. A hybrid approach should be adopted using aptitude tests together with well-written complex case studies as along with job interviews (Chapman and Lovell 2006). Case studies should, however, be written in a way that resemble most of the actual working environment where the potential sales executives would work.

Assessment of job incumbents and meeting and convention project assignment should focus on differing competencies. Interestingly, no knowledge items were reported confirming the proposition that skills and attributes underlie the mastery of knowledge (Baum 2008). Through observation, job incumbents should be observed to determine how they acquire information, how they negotiate with other parties and team members, their problem solving skills, their neatness and meticulosity, goal oriented attitudes, patience and ability to work under pressure, and their service psychological capabilities.

Sales executives with differing competencies tend to be able to handle more complex situations that concern various parties and volatile environments. Long service years in the industry do not guarantee that sales executives can perform better than those with the above mentioned competencies.

Promotion decisions should be supported by ideal competencies. To promote a sales executive to a supervisory level, job supervisors should carefully assess their communication skills which are tactical with social acumen. They should also be a good conflict mediator solving conflicts between concerned parties and team members in the most systematic way. Besides, they should have personal and professional networks that are beneficial for the career. These qualities allow a sales executive not only to perform best but also to manage multiple projects and solve complex problems at the same time. Therefore, sales executives with these qualities should be able to supervise teams and other sales executives.

Focusing on competencies identified in this study does allow firms that are serious in adopting this approach to increase their competitiveness. As this study is sponsored by Convention Promotion Fund, its finding is well publicized to all meeting and convention firms in Thailand. Should most firms adopt this approach and adapt the competency sets to their working environments, the country is expected to be more competitive.

To make sure that the competencies reported in this study is applicable to their respective working environment and corporate culture, another small scale studies within their own organization is suggested. Besides, the study's finding is expected to be only guidelines which need to be confirmed further through longitudinal studies.

## References

Barnes Report (2010) Worldwide convention and trade show organizers (NAICS 56192). Barnes and Co, New York, NY

Baum T (2008) Implications of hospitality and tourism labor markets for talent management strategies. Int J Contemporary Hospitality Manage 20(7):720–729

Bhatawdekar S, Bhatawdekar K (2012) Competency and competency matrix. Prodcons Group, Pune

Blanchard S (2005) Meeting and convention planners. Occupational Outlook Quart Fall:18–24

Blanke J, Chiesa T (2009) Travel and Tourism Index 2009: Managing in the time of turbulence. World Economic Forum, Davos

Blanke J, Chiesa T (2011) The Travel and Tourism Competitiveness Index 2011: Beyond the downturn. World Economic Forum, Davos

Blanke J, Chiesa T (2013) The Travel and Tourism Competitiveness Report 2013: Reducing barriers to economic growth and job creation. World Economic Forum, Davos

Bourdreau JW, Ziskin I (2011) The future of HR and effectiveness organizations. Organ Dyn 40:255–266

Cappellen T, Janssens M (2008) Global managers' career competencies. Career Dev Int 13(6):514–537

Chapman JA, Lovell G (2006) The competency model of hospitality service: why it doesn't deliver. Int J Comtemporary Hospitality Manage 18(1):78–88

Crotts JC (2000) Consumer decision making and pre-purchase information search. In: Pizam A, Mansfeld Y (eds) Consumer behaviour in Travel and Tourism, vol 1, 1st edn. The Howorth Hospitality Press, New York, NY, p 530

Defillipi RJ, Arthur MB (1994) The boundaryless career, a competency based perspective. J Organ Behav 15:307–324

Duad R, Ismail M, Omar Z (2010) Exploring competencies: Preliminary study of Malaysian SHandE professionals using Delphi Techniques. Profes Saf October:39–47

Economic Intelligence Center: Siam Commercial Bank (2011) How Thai Business will progress in the AEC Era? In: Bank SC (ed) Siam commercial bank, February edn. Siam Commercial Bank, Bangkok, p 30

Egol M, Clide A, Rangan K, Sanderson R (2010) The new consumer frugality. Strat Bus 31:1–12

Firoiu D, Dodu SP, Patrichi IC (2011) Meetings, incentives, conventions, and exhibitions (MICE) industry in the global context. Ovidus Univ Ann Econ Sci Ser 11(2):427–442

Florek M, Breitbarth T, Conejo F (2008) Mega event = Mega impact? Travelling fans' experience and perceptions of the 2006 FIFA World Cup host nation. J Sport Tourism 13(3):199–219

Friedrich R, Peterson M, Koster A (2011) The rise of generation C. Strat Bus Spring:54–64

Gartrell RB (1991) Strategic partnerships for convention planning: the role of convention and visitor bureaus in convention management. Int J Hospitality Manage 10(2):157–165

Hamimi Abdul Razak I, Kamaruddin S, Abdul AI (2012) Workforce competency model (WFCM): an empirical study in Malaysia of a model for maintenance workforce performance evaluation. Int J Productivity Performance Manage 61(1):24–45

Hawkins DL, Mothersbaugh DL (2010) Consumer behaviour, 11th edn. McGrawHill, Boston, MA

Hennink M, Hutter I, Bailey A (2011) Qualitative research methods. Sage Publications India, Singapore

Hinkin TR, Tracey JB (2003a) Continued relevance of "factors driving meeting effectiveness". Cornell Hotel Restaurant Adm Quart 44(27):27–30

Hinkin TR, Tracey JB (2003b) Service imperative: factors driving meeting effectiveness. Cornell Hotel Restaurant Adm Quart 44(17):17–26

Holton EF III, Coco ML, Lowe JL, Dutsch JV (2008) Blended delivery strategies for competency-based training. Adv Dev Human Resour 8(2):210–228

Huff-Eibl R, Voyles JF, Brewer MM (2011) Competency-based hiring, job description, and performance goals: value of an integrated system. J Library Adm 51(7-8):673–691

International Congress and Convention Association-ICCA (2014) 2013 country and city ranking. ICCA, Amsterdam
Jain SC, Haley GT (2009) Strategic marketing (Asia edition). Singage Learning, Singapore
Jauhari V (2006) Competencies for career in the hospitality industry: an Indian perspective. Int J Contemporary Hospitality Manage 18(2):123–143
Kotler P, Lane K (2009) Marketing management, 13th edn. Pearson/Prentice Hall, New York, NY
Langdon DG, Marrelli AF (2002) A new model for systematic competency identification. Performance Improvement 41(4):16–23
Leask A, Hood GL (2001) Unusual venues as conference facilities: current and future management issues. J Convention Exhibition Manage 2(4):23–37
Lee S, Hiemstra SJ (2001) Meeting planners' perception of relationship quality. J Hospitality Tourism Res 25:132–145
Lovelock CH, Patterson PG, Walker RH (2001) Service marketing: an Asia Pacific perspective, 2nd edn. Prentice Hall, Sydney
Mansfeld Y (1992) From motivation to actual travel. Ann Tourism Res 19:399–419
Martin PD, Pope J (2008) Competency-based interviewing – has it gone too far? Industrial Commercial Training 40(2):81–86
Melaia S, Abratt R, Bick G (2008) Competencies of marketing managers in South Africa. J Market Theory Pract 16(3):233–246
Neuman WL (2006) Social research methods, 6th edn. Pearson, Boston, MA
Neuman WL (2011) Social research methods, 7th edn. Pearson, New York, NY
Oppermann M, Chon KS (1997) Convention participation decision making process. Ann Tourism Res 24(1):178–191
Priyadarshini RRG, Dave D (2012) Compeency-based training needs assessment model. Manage Labour Stud 37(3):195–207
Purdue J, Ninemeier JD, Woods RH (2002) Comparison of present and future competencies required for club managers. Int J Comtemporary Hospitality Manage 14(3):142–146
Rainsbury E, Hodges D, Burchell N, Lay M (2001) Ranking workplace competencies: student and graduate perceptions. Asia-Pac J Cooper Educ 3(2):8–18
Roland Berger Strategy Consultants GMBH (2011) Trend compendium 2030
Shaw M, Lewis RC (1991) Measuring meeting planner satisfaction with hotel convention services: a multi variate approach. Int J Hospitality Manage 10(2):137–146
Simonet DV, Tett RP (2013) Five perspective on the leadership management relationship: a competency based evaluation and integration. J Leadership Organ Stud 20(2):199–213
Testa MR, Sipe L (2012) Service-leadership competencies for hospitality and tourism management. Int J Hospitality Manage 31:648–658
U.S. Bureau of Labor Statistics (2012) Meeting, convention, and event planners: occupational outlook handbook. Available via http://www.bls.gov.ooh/business-and-financial/print/meeting-convention-and-event-planners
Var T, Cesario F, Mauser G (1985) Convention tourism modelling. Tourism Management September:194–204
Weber K, Ladkin A (2008) Career profiles of convention industry professionals in Asia. Paper presented at the EUROCHRIE 2008, Dubai
Weber MR, Finley DA, Crawford A, Rivera D Jr (2009) An exploratory study identifying soft skill competencies in entry level managers. Tourism Hospitality Res 9(4):353–361

# Chapter 11
# Decisive Criteria for Strategic Management in the Air Transport Sector

**Susana Teles, Manuela Sarmento, and Álvaro Matias**

## 11.1 Introduction

One of the aims of strategic management is achieving a superior performance compared to the competitors. The identification of the sources of business profitability becomes essential for the companies, in order to formulate and implement strategies that derive from these sources. Strategic analysis provides concepts, frameworks and techniques that allow managers to take decisions more according to the needs perceived. In fact, the successive changes observed in a competitive environment, at an ever-increasing pace, obliges enterprises to respond effectively to the market, so as to improve their business competitiveness and success. This situation is not unusual in the tourism industry, which has witnessed the emergence of new business models, the change in customer preferences, fast technological developments and sometimes also deregulation, with direct implications on management.

Nowadays, tourism is a global phenomenon with a substantial economic importance in an increasing number of states around the world. The role of air transport in tourism development is so obvious and common sense that it tends to blend with the history of the aviation.

The air transport has been gaining a great importance over the past four decades, both for business and leisure travel. The duration of the flight and the distance associated with the progressive decline of prices, contributed to the democratization of the air transport sector.

S. Teles
University of Madeira, Funchal, Portugal

M. Sarmento (✉) • Á. Matias
Lusíada University, Lisbon, Portugal
e-mail: manuela.sarmento2@gmail.com



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_11

At present, more than 50 % of international arrivals are by air (ERAA 2013) as a result of technological development that allowed the increase of quality and safety of air transport, as well as the access to destinations hitherto unknown.

In strategy formulation, the company defines, on the one hand, goals, objectives and values, and on the other hand, resources and capabilities, considering its organizational structure and its management system, where stakeholders play an important role. It is crucial to realize what kinds of relationships the company has with its customers, its competitors and its suppliers. Equally important is the use of its resources, in order to fulfil its short and long-term goals. The formulation of the strategy is followed by its implementation, where communication and acceptance among its members is one of the relevant factors that leading to success. The managers responsible for the strategy—formulation and implementation—observe reality, reflect on it and make decisions.

In this paper, we consider briefly the relationship between the evolution of aviation and the expansion of tourism. An approach to strategic aviation alliances is also presented, due to the possible types of partnership that are key management factors in benefit sharing. The role that communication plays in the development of a successful strategy is also discussed and is reinforced by the results of empirical research, which is based on survey results and interviews created for the air transport industry.

## 11.2 Literature Review

### *11.2.1 Tourism and Aviation: Interdependence, Growth and Change*

Tourism has only become a global phenomenon when the benefits of aviation have evolved from a privilege of a few to a market service available to all. In fact, air transport and tourism have always been interlinked. Tourism is a driving factor and often a catalyst of change in air transport, namely through the development of new business models, such as charter airlines or low-cost carriers (Biegera and Wittmer 2006). At the same time, the evolution of air transport opened new destinations, what allowed tourists performing long-haul excursions.

The expansion of demand incremented the competition, not only in air transport but also in tourism destinations. Furthermore, the first commercial airliner facilitated the globalization in every aspect (European Commission 2011). In 2010 and 2011, the regions of Europe, Asia Pacific and North America, represent about 90 % of the total air traffic, contrasting with residual percentages in other regions. In the period from 2000 to 2011 the industry witnessed significant changes, due to severe circumstances (September 11 and the fluctuations in fuel prices) and also the effect of market forces. Barros and Couto (2013) refer that industry consolidation was reached with some mergers and airlines restructuring.

In the past decade, the changing trend in regulatory regimes in the European air transport sector has increased competition in the marketplace and originated various new actions and strategies in the European carriers, such as mergers, take-overs and alliances. Yet fierce competition has also led to the financial exhaustion of several existing carriers (as was the case with Swiss Air and Sabena). The same effect had repercussions in the USA air transport market.

Furthermore, in the 1990s the world saw an unprecedented economic change. Along with the Berlin Wall, many other frontiers came down. Virtually overnight the world was full of new opportunities to travel and to do business. Suddenly it became possible to share work on a global scale and to build new business relationships from continent to continent. At the same time the Internet created a global village, making communication easy, fast and inexpensive while facilitating globalization, which created travel patterns far beyond the traditional economic centres such as Tokyo, New York, Hong Kong and Frankfurt.

As a result of the above, the European aviation market is now a place of increased competition, leading, on one hand, to gains in economic efficiency and lower prices and, on the other hand, also stimulating companies to engage into strategic alliances to reinforce their competitive strengths. The tourism market benefits directly from this process both through lower prices and market expansion, such as new destinations and routes.

#### 11.2.1.1 Full Service Airlines or Traditional Airlines

With the development of air transport, airlines owned by governments have emerged, which became known as flag companies. At present, these carriers operate in network, the hub and spoke system, which is considered the most efficient way to connect a large number of destinations (Detzen et al. 2012; Kohl et al. 2007), while leaving the smallest routes for regional and low cost carriers.

According to Franke and John (2011) the traditional airlines or full service airlines have created a portfolio of different business models, operational formats and brands, in order to take greater profitability and strengthen their competitive position in the market.

As regards the European Commission (2008) the full service airlines are scheduled carriers with a business model that focuses on the diversity and extent of service operating internationally, covering a wide geographical area and providing air transport of several types.

#### 11.2.1.2 Regional Airlines

Many regional airlines have emerged by the opportunity, in part generated by the major airlines, of using inactive or unexplored routes. This service came to meet the market needs of small regions. Some of these airlines also serve as a regional feeder of large companies carrying passengers to hubs.

According to European Regions Airline Association Regional (2013) carriers currently fly at an average distance of 605 km, a distance significantly greater than the average distance travelled in 1988, which stood at 371 km.

The saturation level of the major European airports and the high fares required are other factors that contributed to the increase of domestic and intra-European unusual routes operated by regional airlines. These have contributed to local development and enabled greater investment inflows in the regions affected by these operations. By having a smaller organizational structure, the regional companies enjoy an advantage over flag airlines that is to adapt their operations more quickly to specific market needs.

#### 11.2.1.3 Low Cost Airlines

The business model of a low-cost carrier is based on (i) the control of fixed costs, (ii) reduction of maintenance costs and training, (iii) opting for a single type of aircraft and maximizing its use, (iv) concentrating on niche markets, (v) exploring new developments in computer technology, and (vi) offering a no-frills service (Correia et al. 2009).

This model considers the reduction of ground handling services, the operation of direct short-haul flights and the use of secondary airports, which are less expensive and without congestion problems. By contrast Abda et al. (2012) consider that in some periods this type of carrier focuses on large airports or airports with high density.

Surprisingly, these companies were able to expand their business and their market beyond their niche during the economic recession in the beginning of the millennium. With its alternative business model, the low-cost airlines were better prepared to adapt to changes in demand.

The low cost carriers have the ability to initiate or terminate routes in a very short time. A strategy of multiple hub was developed where cost savings is the primary consideration at the expense of loyalty to airports or markets.

#### 11.2.1.4 Charter Airlines

In the decade of 1960, charter airlines offered a combined product (travel and accommodation) at a low fare, which impelled the growth of the number of air passengers. But this was not the only innovation. These companies have exploited a new market, the holiday market, aimed at leisure passengers, letting the business market to the scheduled airlines. As a result new tourist destinations, hitherto unknown, have emerged.

According to the International Civil Aviation Organization Charter (2012), airlines have been experiencing a decrease in passengers carried in the last decade, having only 4 years of positive growth. During this period there is a decrease in 50 % of the global traffic share, from 13.6 % in 2001 to 6.3 % in 2012.

This sector has been consolidating, which gave rise to two major operators, Thomas Cook Airlines, that is the merger of Thomas Cook with MyTravel Airways and TUI Travel, which is the merger of TUIfly with First Choice. It is likely that more mergers and acquisitions occur, as well as the restructuring of fleet, operations and networks, maintaining its strategy of focusing on leisure long-haul destinations.

### *11.2.2 Strategy Formulation and Implementation*

A successful strategy must be consistent with the established mission, the goals of the organization and based on clear goals, taking into consideration the different perspectives of strategy formation (Reis 2008; Tavares 2004; Grant 2005; Selsky et al. 2007).

The environmental analysis is the process of monitoring the environment surrounding the organization, in order to identify trends, opportunities and threats. The internal analysis of the strengths and weaknesses of the company affect its activity and can contribute to achieve the established objectives. This task involves not only to gather information, but also to organize it, so as to draw conclusions and strategic guidelines for the organization. Most of the contextual environment factors are interdependent (Tavares 2004; Freire 1997).

Kaplan and Norton (2000) highlight the need to involve employees in strategy formation. In an uncertain environment the strategic process should be interactive and not the result of the vision of the leaders of the organization. In this recent perspective, the human resource is the engine of strategy, often arising at the individual level strategic alternatives (Tavares 2004; Kaplan and Norton 2000). Some experts refer to this source of strategic formulation as natural source, generating emergent strategies difficult to imitate.

Implementation might be considered the most difficult stage of the strategy process. It is the moment to translate ideas into practical plans, which must be carried out by members of the organization. Those responsible for implementing the strategy should consider the attitudes of the employees involved and their expectations for the new strategy. There will be those ranging from very motivated and enthusiastic up to the resistant and indifferent.

In a study conducted by Kaplan and Norton (2000) managers indicated that the ability to execute strategy was more important than the quality of the strategy itself.

There are many factors that influence the successful implementation of a strategy. According to Yang et al. (2010) these factors range from those who communicate or implement the strategy to systems and mechanisms for coordination and control.

Whittington (2006) believes that the strategy should not be considered as something that an organization has, but as something that its members do. In this sense, the activities involved in the deliberate formulation and implementation are the praxis of the strategy conceived and executed.

The role of employees is highlighted by Kaplan and Norton (2000), stressing that they can innovate and find new and unexpected ways to achieve strategic objectives. Employees should understand clearly the strategy that is being implemented and its underlying assumptions. However, strategy is dynamic and is in line with the market needs, what implies changes that can lead to discomfort among members of the organization, hindering the effectiveness of strategy implementation (Hutzschenreuter and Kleindienst 2006).

Communication is a tool that managers should use whenever implementing a strategy. Reis (2008) and Tavares (2004) believe that both sides should be considered, so that the message is understood. Thus, one can increase credibility and trust, values and beliefs influencing and changing behaviour.

According to Shah (2005) organizations pay little attention to internal communication, when it comes to making the strategy known.

However, if employees are unaware of the strategy they cannot adapt their work to contribute to an efficient implementation. They should not only know but also understand the strategy as their actions and decisions will affect it. If employees understand the strategy that is being launched, then they can easily find new and better ways to accomplish their daily tasks and achieve the proposed objectives.

In a study carried out by Shah (2005) managers from various industries identified 11 obstacles, 6 of which occurred in over 61 % of the companies analysed, as inadequate management skills, poor understanding of roles, inadequate leadership undertaken by department managers or poor definition of the tasks to be performed.

## 11.3 Methodology

As previously referred, this research aims to set the criteria recognized as determinant to strategy formation in the air transport sector beholding the influence of the economic factors, communication channels, obstacles to strategy implementation and the timing to review the strategy.

According to the Boeing (2013) the factors that most influence the growth of air transport are the economic. Thus, when countries' economy is going well, airline companies have conditions to be profitable, however, economic factors can negatively affect airline companies, as noted by Barros et al. (2013) with the example of the 2008 economic crisis, with the rising price of fuel, which forced many airlines to submit applications to insolvency. So, the following hypothesis is:

– Hypothesis 1: Economic factors are the ones that have the greatest influence in the airline's strategy.

Kaplan and Norton (2000) report that the most effective communication channels among managers and employees are those that allow the company to focus on the message in a personal way, to answer to questions of the employees, clarify doubts of the customers at the very moment, and receive feedback and assistance

from managers, and group leaders including the small group meetings and video-conferencing. So, the next hypothesis is:

– Hypothesis 2: The most efficient communication channels are video conferencing and small group meetings.

In the strategy implementation there several types of change, that go from small adoptions of the existing procedures to great modifications. Thus, the occurred changes can lead to discomfort among members of the organization, hindering the effectiveness of strategy implementation, as referred by Shah (2005). The next hypothesis is formulated as follows:

– Hypothesis 3: The biggest obstacles to the implementation of the strategy are the inadequate management skills and the poor understanding of roles to develop.

In the opinion of Kaplan and Norton (2000) at least every 4 months top management should evaluate the impact of external events to determine if and how their strategies should be modified. The last hypothesis is articulated as follows:

– Hypothesis 4: The strategy should be revised whenever it is necessary, regardless of when it was defined.

The research process followed in this study splits into literature review, and data collection that involves a survey and interviews directed to employees from multiple hierarchical levels, of different types of airlines operating in Portugal.

The survey has general questions about strategy and also specific issues, such as the identification of the main factors that influence the strategy. On the other hand, the interviews provide a comparative analysis between the perceptions of the different airlines.

The survey has closed questions with response scale, which enables measuring the intensity of the response according to the Likert scale of five levels: 1 (very low disagreement)–5 (very high agree). Also issues of identification were considered allowing the creation of groups among respondents, including gender, educational background or type of airline. The gathered opinions allow confirming the accuracy of the four formulated hypotheses

The sample includes employees of different hierarchical levels of the airlines operating in Portugal, who answered the online questionnaire between April and November 2012.

## 11.4 Results of the Survey and Interview

The total number of responses was 328, however 135 were excluded, because in the survey, the questions without answer were higher than 20 %. Thus the final sample includes 193 respondents.

**Table 11.1** Valid respondents by type of airline

| Type of airline | n | % |
|---|---|---|
| Regional | 18 | 9.3 |
| Charter | 61 | 31.6 |
| Low cost | 24 | 12.5 |
| Traditional full service | 90 | 46.6 |
| Total | 193 | 100.0 |

The sample, as shown in Table 11.1, has 90 employees of traditional full-service airlines, representing 46.6 % of the sample, and 31.6 % are employees of charter airlines.

The content analysis was applied to the nine interviews conducted to three top managers of three types of airlines, namely traditional, charter and low cost companies. The analysis of the fifth question "Factors that more influence the strategy formulation" is shown in Table 11.2.

The nine interviewees consider that the factors that have greater influence in strategy setting are the economic factors pertaining to the general environment. 66 % of respondents also point the suppliers as a major factor for setting the company strategy.

Although 81.6 % of the employees indicate that their objectives are aligned with the airline strategy, there is an association with the role that they play in the company, as shown in Table 11.3. The major responsible for this association are the board of directors and middle management.

Nevertheless the employees' position hold in the company, the largest number (44 %) believes that the strategy should be reviewed when required. However, it is important to emphasize the existence of 21.8 % of respondents who do not know or do not respond to this question, a percentage that is slightly higher for those of occupying non managerial position in the company as shown in Table 11.4.

The Chi-squared test applied to 193 employees of airline companies, regarding the association between the degree of resistance to change in implementing a new strategy and the causes that can be considered is shown in Table 11.5. There are three reasons that can be highlighted: (i) 29.3 % of the survey respondents consider that the change of strategy is disadvantageous (ii) 26 % have the opinion that there are lack of clarification of the new implemented strategy, and (iii) 24.7 % of the respondents have low tolerance to change the strategy, as shown in Table 11.5.

**Table 11.2** Synthesis of the content analysis of the fifth interview question

| Category | Subcategory | Registration units | Group of respondents | | | Total enumeration units | Results |
|---|---|---|---|---|---|---|---|
| | | | Airline type 1: Charter | Airline type 2: Low cost | Airline type 3: Traditional | | |
| Factors that more influence the strategy formulation | | | | | | | |
| Factors influencing strategy | Contextual (macro) environment | Economic | 3 | 3 | 3 | 9 | 9/9 |
| | | Political and technological | 3 | | | 3 | 3/9 |
| | | Sociocultural | | | 3 | 3 | 3/9 |
| | Transactional (meso) environment | Suppliers | 3 | | 3 | 6 | 6/9 |
| | | Customers, competitors and community | | | 3 | 3 | 3/9 |

**Table 11.3** Alignment with the company strategy according to the position in the airline company

| Employee personal objectives and goals aligned with the company strategy<br>X = 12.656<br>p = 0.005 | Position in the airline company | | | | |
|---|---|---|---|---|---|
| | Board of Director | Senior Manager | Middle Manager | Non managerial | Total |
| Yes | 90.9 % | 75.0 % | 91.7 % | 63.0 % | 81.6 % |
| No | 9.1 % | 25.0 % | 8.3 % | 37.0 % | 18.4 % |

**Table 11.4** Reviewing the strategy according to the position in the airline company

| Revision of implemented strategy<br>X = 17.918<br>p = 0.461 | Position in the airline company | | | | |
|---|---|---|---|---|---|
| | Board of Directors | Senior Manager | Middle Manager | Non managerial | Total |
| Every 2 years | 19.5 % | 8.8 % | 10.0 % | 8.6 % | 11.4 % |
| Every 5 years | 4.9 % | 8.8 % | 5.0 % | 5.7 % | 6.2 % |
| Whenever necessary | 29.3 % | 52.6 % | 50.0 % | 37.1 % | 44.0 % |
| When the external environment changes | 14.6 % | 7.0 % | 10.0 % | 14.3 % | 10.9 % |
| When the strategy matures | 4.9 % | 0.0 % | 1.7 % | 5.7 % | 2.6 % |
| When the strategy becomes obsolete | 7.3 % | 0.0 % | 3.3 % | 2.9 % | 3.1 % |
| Don't reply | 19.5 % | 22.8 % | 20.0 % | 25.7 % | 21.8 % |
| Total | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % |

**Table 11.5** Causes of resistance to change according to the degree of resistance

| Causes of resistance to change<br>X = 18.721<br>p = 0.095 | Degree of resistance to change in implementing a new strategy | | | | | |
|---|---|---|---|---|---|---|
| | Very low | Low | Medium | High | Very high | Total |
| Self-interest to change strategy | 16.7 % | 24.1 % | 10.4 % | 25.6 % | 33.3 % | 18.7 % |
| Lack of clarification and confidence of strategy | 33.3 % | 34.5 % | 32.8 % | 10.3 % | 11.1 % | 26.0 % |
| The change of strategy is disadvantageous | 33.3 % | 34.5 % | 25.4 % | 30.8 % | 33.3 % | 29.3 % |
| Low tolerance to change the strategy | 16.7 % | 6.9 % | 31.3 % | 30.8 % | 11.1 % | 24.7 % |
| Total | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % | 100.0 % |

## 11.5 Discussion and Conclusion

In the present study, 50 % of survey respondents reported that the economic environment has greatest influence on strategy formulation, which is confirmed by the all nine interviewees (100 %). These results validate the hypothesis 1: "Economic factors are the ones that have the greatest influence in the airline's strategy".

Half of the employees of the airline companies using video conferencing assign the value of 4.0 (Likert scale 1–5), which leads to the conclusion that this medium is perceived as very efficient.

Small group meetings have a low average of $x_m = 2.1$ (Likert scale 1–5), although it is the medium most used by administrators; 58.5 % of the administrators that took part in the survey reported that they communicate the strategy through this medium as well as 100 % of interviewees.

According to the interviews, in the meetings of executives are identified the problems, evaluated the changes in the operating and strategic environment and considered the new opportunities that may have arisen since the strategy was formulated. The airlines seek to adjust periodically the means to create greater awareness and involvement in strategy. Nevertheless the results do not validate the hypotheses 2: "The most efficient communication channels are video conferencing and small group meetings".

There are several obstacles to the implementation of the strategy, which should be discussed by the organization and eliminated or at least mitigated, in order to achieve a successful implementation. The obstacle "inadequate management skills" is considered, in a high degree, by 37.1 % of the survey respondents and "understanding its roles to develop" is the opinion, in a very high degree of 36.5 % of survey respondents. Thus, the results do not support the hypothesis 3: "the biggest obstacles to the implementation of the strategy are the inadequate management skills and the poor understanding its roles to develop".

In this research, 44 % of the survey respondents indicated that the strategy review should be performed when necessary. However, segmenting this analysis by the position in the airline company, 29.3 % of the board of directors consider this revision, in contrast with 52.6 % of senior managers and 50 % of middle managers. Thus, the hypothesis 4: "the strategy should be revised whenever it is necessary, regardless of when it was defined" is partially verified.

The increased competition in the air transport market stemming from the deregulation process started in Europe in the late eighties and prompted a series of new actions and competitive strategies from European carriers in the past decade, such as mergers, take-overs and alliances. As a result of this process, a new dynamic market equilibrium occurred, with increased quantities and lower prices, benefiting tourism and travel.

The air transport market is characterized by having a limited number of supply agents. This oligopolistic nature of the market implies that competitors often tend to regard certain forms of strategic cooperation as a more efficient way of competing. The increasing number of alliances established among air transport companies in the recent past is a trend reflecting an increasingly competitive industry.

Small market niches will probably remain to be explored by low-cost airlines, which are flexible in terms of the cost structure, to continue to benefit from the residual demand from official carriers. In this sense, the most efficient low-cost airlines will continue to face important sources of competitive pressure from the most consolidated airline strategic alliances, namely in what regards domestic and short distance flights.

This research has as its central question the criteria that may be considered decisive in the formation of a strategy for airlines. It is easy to understand that a company without an established strategy is in serious danger of failing to survive due to the lack of vision and accurate options. Grant (2005) notes that the most successful organizations are driven by a sense of purpose. The mission follows the vision and has an associated set of goals that will guide the organization's activity. The strategy should be consistent with the mission and the goals established, with the aim to create a competitive advantage, considering that the analysis of environment is the starting point in the strategy process.

A successful implementation of the strategy is a challenge for managers of any company. Only with effective implementation of the strategy will it be possible for the company to approach its maximum potential.

From the present research we found that the analysis of the environment is crucial for defining the strategy, while the economic factor was highlighted by 100 % of the interviewees and 50 % of the respondents. The involvement of employees at all stages of the process is also highlighted as a fundamental part of the process, since 81 % of the respondents confirmed that their personal objectives and goals are aligned with the company strategy. This enhances the importance of communication, which is mainly performed by administrators, seen as the most efficient group for communication by 45.6 % of survey respondents. The communication strategy of the company is indicated as a basic point of the definition of the strategy.

From the results obtained it is possible to infer that there are key elements in the formulation and implementation of a successful strategy, often deprecated or forgotten by employees of the organization. Consequently, it can lead to a gap between thought and action, between the definition and execution of the strategy.

The analysis, both at the contextual and transactional environment level and at the internal environment level is usefully worked in airlines and recognized as a key element to defining and updating the strategy.

Even a well-formulated strategy based on careful analysis in adequacy of resources to the purposes, and with a proper communication, it is imperative to monitor the environment, the developed practices and the perceptions of employees. The data collected will determine the revision or update of the implemented strategy.

## References

Abda M, Belobaba PP, Swelbar WS (2012) Impacts of LCC growth on domestic traffic and fares at largest US airports. J Air Transport Manage 18:21–25

Barros CP, Couto E (2013) Productivity analysis of European Airlines, 2000–2011. J Air Transport Manage 31:11–13

Barros CP, Liang QB, Peypoch N (2013) Technical efficiency of US Airlines. Transportation Res Part A 50:139–149

Biegera T, Wittmer A (2006) Air transport and tourism – perspectives and challenges for destinations, airlines and governments. J Air Transport Manage 12(1):40–46

Boeing (2013) Current market outlook 2013–2032. Available via http://www.boeing.com/assets/pdf/commercial/cmo/pdf/Boeing_Current_Market_Outlook_2013.pdf

Correia A, Pimpao A, Silva O (2009) Competitive positioning of low cost airlines. In: Procedures of the Third International Conference on Advances in Tourism Economics, Universidade Lusíada de Lisboa and Associação Portuguesa para a Investigação e Desenvolvimento em Turismo (CDROM)

Detzen D, Jain PK, Likitapiwat T, Rubin RM (2012) The impact of low cost airline entry on competition, network expansion, and stock valuations. J Air Transport Manage 18:59–63

European Commission (2008) Analyses of the European air transport market. Annual report 2007. German Aerospace Centre. Available via http://www.ec.europa.eu/transport/air/observatory_market/doc/annual_report_2007.pdf

European Commission (2011) Annual analyses of the EU air transport market 2010. Available via http://ec.europa.eu/transport/air/observatory_market/doc/annual-2010.pdf

European Regions Airline Association (2013) The ERA Yearbook 2013/14. Available via http://view.vcab.com

Franke M, John F (2011) What comes next after recession? – Airline industry scenarios and potential end games. J Air Transport Manage 17:19–26

Freire A (1997) Estratégia: Sucesso em Portugal. Editorial Verbo, Lisboa

Grant RM (2005) Contemporary strategy analysis, 5th edn. Blackwell, Oxford

Hutzschenreuter T, Kleindienst I (2006) Strategy-process research: what have we learned and what is still to be explored. J Manage 32:673–720

International Civil Aviation Organization (2012) Annual report of the council 2012. Available via http://www.icao.int/publications/Documents/10001_en.pdf

Kaplan RS, Norton DP (2000) The strategy focused organization. Harvard Business School Press, Boston, MA

Kohl N, Larsen A, Larsen J, Ross A, Tiourine S (2007) Airline disruption management – perspectives, experiences and outlook. J Air Transport Manage 13:149–162

Reis RL (2008) Estratégia Empresarial – Análise. Formulação e Implementação, 2nd edn. Editorial Presença, Lisboa

Selsky JW, Goes J, Babüroglu ON (2007) Contrasting perspectives of strategy making: applications in "Hyper" environments. Org Stud 28(1):71–94

Shah AM (2005) The foundations of successful strategy implementation: overcoming the obstacles. Glob Bus Rev 6:293–302

Tavares MM (2004) Estratégia e Gestão por Objetivos: duas metodologias de gestão para as organizações atuais, 2nd edn. Universidade Lusíada Editora, Lisboa

Whittington R (2006) Completing the practice turn in strategy research. Organ Stud 27:613–634

Yang L, Sun G, Eppler MJ (2010) Making strategy work: a literature review on the factors influencing strategy implementation. In: Mazzola P, Kellermanns FW (eds) Handbook of research on strategy process. Edward Elgar Publishing, Cheltenham, pp 165–181

# Part III
# Tourism Destinations

The final part of the book zooms in on different dynamics often observed in tourism destinations, arising from the interaction between tourists and local communities. This part includes a discussion of the social legitimacy of tourism in the face of its positive and negative impacts (a major issue at local level, with a growing relevance, as tourism assumes a more important role in shaping socio-economic conditions), an analysis of intermodal processes of competition among transportation modes (a critical issue regarding the mobility of tourists, but also a major question regarding the environmental impacts of tourism), or a discussion on methods for locational decisions in the hospitality sector. The perceptions and evaluations of local communities regarding the classification of World Heritage Sites or the organisation of major cultural events are also analysed at destination level. This part concludes with an original analysis of the role of tourism influencing the cultural and political values of tourists when operating in a different societal context. All articles highlight policy or managerial implications of the analysis conducted.

# Chapter 12
# Institutional Pressures, Environmental Responsibility and Social Legitimacy: Longitudinal Analysis Applied to Golf Tourism

**Alfonso Vargas-Sánchez and Francisco J. Riquel-Ligero**

## 12.1 Introduction

Tourism-related economic activity has not been unaffected by trends in social responsibility, especially over the last two decades, during which time this responsibility has become the basic principal by which organisations, and in particular businesses, have defined their responsibilities towards society above and beyond their responsibility towards their owners-stakeholders. In the opinion of Francés et al. (2003), this behaviour should be adopted voluntarily, a fact that favours the consideration of companies as economic and social agents. For authors such as Fernández de Gatta (2004), the emergence and consideration of the concept of sustainable development has resulted in environmental concerns attaining prevalence in business policies and practises, to the extent that they have become essential elements in the legitimacy and credibility of these businesses.

Tour operators have also incorporated this focus. Some years ago the World Tourism Organisation (WTO) stated that "*many environmentally-aware tourists are favouring destinations that are well planned and less contaminating over those that are badly designed and engender social and environmental problems*" (OMT 1999), a statement that signified full recognition of the increased importance that the environmental variable would have over subsequent years in the sector, a point of view that the World Conference on Sustainable Tourism (Canary Is, Spain) had been defending since the mid-1990s. This conference gave rise to what is known as the Charter for Sustainable Tourism (OMT 1995), in which it is explicitly recognised that tourist activity generates environmental deterioration and in which the need for the sector to preserve natural resources is emphasised. Since then, many public administration initiatives have been developed with a view to

A. Vargas-Sánchez (✉) • F.J. Riquel-Ligero
GEIDETUR – University of Huelva, Huelva, Spain
e-mail: vargas@uhu.es



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_12

raising public awareness and legislating in this area, a trend that has favoured the emergence of a highly institutionalised framework of an environmental nature within this activity sector.

For the purposes of this paper we have selected a product which, within the tourism sector, has experienced notable growth in recent years, namely, golf tourism, and more specifically, golf tourism in Andalusia, where the climate and environment are perfect for the practise of this sport. According to the latest information provided by the regional government, in 2011,[1] 425,000 golf tourists visited the region, principally from the UK and Germany. The recent boom in this type of tourism has prompted the regional sector to develop the facilities required for it to become a world reference in golf tourism. As a result, the increase in the number of golf courses, be they courses per se or complementary aspects to residential tourism offers, has been a reality that has left neither the environment, society nor the public administration sector unaffected.

The fact is that Andalusia, Spain's principal tourist destination, is currently home to 22.9 % of the country's golf courses, a total of 108, according to the Regional Government of Andalusia.[2] On the basis is this, we consider Institutional Theory to be the ideal means of explaining the evolution of the principal mechanisms that influence the environmental behaviour of this type of facility. This theoretical framework has been empirically applied in this paper using the *Partial Least Square* (PLS) statistical technique, which allows us to study the capacity of each institutional mechanism to influence both the environmental social responsibility of the golf courses as well as their evolution.

## 12.2 Theoretical Institutional Framework and Research Hypothesis

Following the approaches of authors such as Reyes (2008) and Fernández and Cuadrado (2011), we can classify scientific research on Corporate Social Responsibility into four substantial blocks. First of all there are those studies attempting to bestow a definition of the concept of Corporate Social Responsibility, an area in which consensus has yet to be reached. In second place there are those that propose modelizations on the concept of Social Responsibility in businesses. A third group comprises those studies that seek to analyse the relationship between the development of socially responsible policies and business results. And finally, there is a group of studies that focus on the examination of socially responsible practises among organisations in a particular sector.

[1] http://www.juntadeandalucia.es/turismoycomercio/export/sites/ctcd/archivos/estadisticas/estadisticas-oficiales-de-ctcd/golf_2011.pdf

[2] http://www.juntadeandalucia.es/turismoycomercio/export/sites/ctcd/archivos/estadisticas/estadisticas-oficiales-de-ctcd/golf_2011.pdf

Where there would appear to be general consensus is in the relationship between this type of socially responsible practise and the attainment of social legitimacy by organisations. In the majority of cases, these approaches have gone hand in hand with theoretical institutional development. It would appear, then, that both classical authors such as Meyer and Rowan (1977), DiMaggio and Powell (1983) and Scott (1995) as well as more recent authors who maintain the same theoretical perspective, such as Ahlstrom and Bruton (2001), Chen et al. (2006) and Díez et al. (2010), have suggested that the concept of the desire to attain social legitimacy has not only been present, but has been linked to Corporate Social Responsibility policy. Along these lines it is worth highlighting the approaches of Egels-Zandén and Wahlqvist (2007), which emphasise, from an institutional perspective, that in order for businesses to survive, they need to both acquire and maintain social legitimacy, as said legitimacy is a tool for obtaining increased resources.

In view of the above, we are of the opinion that Institutional Theory is a suitable approach to analysing the attainment of social legitimacy by businesses through the development of socially responsible practises. In this paper we will focus on the environmental aspect of Corporate Social Responsibility from an institutional perspective.

The first approaches to Institutional Theory appear in the works of Zucker (1977), Meyer and Rowan (1977), DiMaggio and Powell (1983) and Meyer and Scott (1983), among others, in which they highlight the existence of an institutional framework with the capacity to influence the behaviour of organisations and bestow them with both stability and direction. This stability is obtained by organisations in the form of social legitimacy and acceptance. According to authors such as Scott (1995) and Aldrich and Fiol (1994), organisational behaviour is directed towards exalting the social legitimacy of the organisation, while studies such as those by Meyer and Rowan (1977), Scott (1995) and Deephouse (1996) confirm that organisations will attain social legitimacy to the extent that their behaviour satisfies the expectations of the various groups of interest. Along with the aforementioned authors, we are in agreement with Institutional Theory hypotheses that affirm that the organisational objective of attaining social legitimacy is influential in aligning corporate values with social values. For Scott (1995), activities that bestow legitimacy are developed within what is known as the organisational field of the business, which is composed of all the interest groups and relevant agents with which the organisation has dealings.

For authors such as Hoffman (2001), Bansal and Clelland (2004) and Bansal (2005), one of the principal tools available to businesses that find themselves under severe institutional pressure to attain legitimacy is to reduce the negative impact of their activity on the natural surroundings and to demonstrate a strong commitment to the environment. It is easier for these businesses to gain access to resources and, therefore, their possibilities for organisational survival are increased (DiMaggio and Powell 1983).While it is true that environmental concerns have assumed a prominent role in the tourism industry since the 1990s (De La Cuesta 2004), as stated by Castellano et al. (2007) and Aragón and Rocha (2009), it is also true that it is a phenomenon that has spread very quickly, favoured by the globalisation process

experienced by the sector. Along these lines, the works of Valor and De La Cuesta (2008) and Boza and Pérez (2009) emphasise the role of the environmental variable in the concept of Corporate Social Responsibility within the tourism sector.

The environmental variable, therefore, as part of a wider-ranging concept of Corporate Social Responsibility, plays a vital role in the attainment of social legitimacy by businesses in the tourism sector and becomes even more relevant in tourism activities that have a significant impact on the environment, such as construction and the building of golf courses.

One of the principal conditioning elements on the behaviour of organisations in general, and in particular their behaviour towards the environment, is coercive pressure in the form of laws and regulations dictated by the various administrations and which are of obligatory compliance for businesses that form part of a specific organisational field. Studies by Oliver (1991) and, more recently, by Reid and Toffel (2009) have defended the influential capacity of legislation on the behaviour of businesses. More specifically, Henriques and Sadorsky (1996) establish a direct and positive relationship between this type of mechanism and the environmental behaviour of organisations. For authors such as Buysse and Verbeke (2003), coercive pressure in areas relating to the environment condition business practises through fear of the sanctions they may receive if they fail to comply with the legislation. For other authors, such as Camisón (2010), the prospect of future environmental legislation also has a direct influence on the adoption of environmental social responsibility policies by businesses.

Kostova and Roth (2002) establish a scale for gauging the influential capacity of coercive pressure. This scale is based on the knowledge that the businesses have of the legislation pertaining to the organisational field in which the business carries out its activity, the level of compliance with existent legislation, the existence of a variety of organisms with the power to legislate and the existence of social agreements that encourage legislation to this effect. Llamas (2005) adapts the same scale for cases involving pressure with an environmental focus.

In the case of Andalusian golf courses, there is even a specific law regulating the setting up and operating of golf courses within the autonomous community, the law in question being Decree 309/2010 of the 15th of June which, in turn, modifies Decree 43/2008 of the 12th of February, which regulates the conditions for the implementation and operation of golf courses in Andalusia. This law allows for the development of, and facilitates the implementation of, golf courses that may be classified by the autonomous government as being of interest to tourism in an economic climate in which it is advisable to take measures to increase the competitiveness of the Andalusian tourism sector.

Based on this approach, we propose the following research hypothesis:

**H.1.a** *The coercive pressure resulting from laws and other applicable regulations has a positive influence on the adoption of sustainable environmental practises.*

Another of the pillars of Institutional Theory refers to what are known as normative pressures. According to Palmer et al. (1993), these pressures are the result of the professionalization and organisational associationism within a

determined sector, and these phenomenon give rise to routines, myths which condition the behaviour of organisations towards a search for increased social legitimacy and performance.

Studies as the carried out by Henriques and Sadorsky (1996) demonstrate the prevalence of this type of pressure in the conditioning of the environmental behaviour of organisations, where these regulations are disseminated throughout the sector in question and end up becoming widely accepted practises (Liu et al. 2010).

In the case of the golf course sector in Andalusia we have identified the following guidelines influencing the environmental behaviour of sector businesses: "Committed to Green", by the European Golf Association, "Biosphere Golf", a distinction awarded by UNESCO via the Institute for Responsible Tourism (IRT), "Audubon Cooperative Sanctuary Programme for Golf Courses", an Audubon International certification, Regulation ISO 14001 and Regulation EMAS (*Eco-Management Audit Scheme*).

Based on the above argument, we propose the following hypothesis:

**H.1.b** *The values and rules originated within the profession and in sector and social associations exert a positive influence on the adoption of sustainable environmental practises.*

The final pillar of the Institutional Theory is mimetic pressures which, for authors such as of Lu (2002), are the principal causes that lead organisations towards isomorphic behaviour. Along these lines, Chen and Yu (2008) defend the primacy of this pressure mechanism in organisational change management. Among the principal motives for organisations to succumb to this type of pressure are increased efficiency (Heugens and Lander 2009), the reduction of risk in the implementation of innovations (John et al. 2001) and improvement in social legitimacy (Grewal and Dharwadkar 2002). For this to occur, other organisations perceived as successful are used as references and, therefore, imitated (Scott 1995).

In this area it is worth highlighting the environmental experiences of golf courses such as the 'Dunas de Doñana', in Matalascañas, Huelva, which was catalogued as the first ecological golf course in Spain,[3] the Valderrama golf course in San Roque, Cadiz, for their commitment to maintaining the autochthonous flora and fauna, and the Castellar de la Frontera course, also in Cadiz, which has been classified by the regional government as being of interest to tourists for its commitment to the environment.

Along these lines, we propose the following research hypothesis:

**H.1.c** *The dissemination of what are considered successful environmental practises has a positive influence on the adoption of the same practises by other organisations due to the imitation effect.*

[3] See news in: http://www.contenidosabcdesevilla.es/especiales/index.php?option=com_content&task=view&id=836&Itemid=83

**Table 12.1** Institutional pressure mechanisms and social legitimacy

| Pressure mechanisms | Coercive | Regulatory | Mimetic |
|---|---|---|---|
| What they are based on | Regulations, controls and sanctions (Scott 1995).<br>Coercive control mechanisms (DiMaggio and Powell 1983).<br>Predominance: force, fear and convenience.<br>The principal agent is the State. | Regulations with a prescriptive dimension accepted by the profession.<br>Values and roles. | Meaningful rules and formulas.<br>Associated with behaviours. |
| Relationship with legitimacy | Legal legitimacy.<br>Businesses acquire legitimacy through compliance with legal requisites.<br>Agents act according to restrictions and incentives that ensure their interests. | Legitimacy as a moral obligation.<br>Goes beyond legal requisites.<br>Greater interiorisation of regulations.<br>Intrinsic and extrinsic compensations.<br>Actions rooted in social context.<br>Moral dimension and orientation.<br>Establishes the relationship with others in each situation. | Seek legitimacy adopting accepted reference structures and behaviours.<br>Myths identified as rational, institutionalised beliefs or rules of the game (Scott 1995). |

*Source*: Sánchez (2012), based on Riquel (2010)

All these mechanisms condition the environmental behaviour of Andalusian golf courses in their search for social legitimacy. Along these lines, Sánchez (2012), based on the approaches made by Riquel (2010), summarises the relationship between these pillars and social legitimacy (Table 12.1).

Following on from the previous approach, we may formulate the following research hypothesis:

**H.2.a** *The principal motivation behind the development of Environmental Social Responsibility Policies is Social Legitimacy.*

## 12.3 Proposed Longitudinal Sample and Research Model

The research model we will use is based on the theoretical reference framework developed in the previous section and, in the terms proposed by Kleinbaum et al. (1988) will be longitudinal in nature insofar as we will use repeated

**Table 12.2** Samples taken

| | 2009 questionnaire with data from 2007 | 2012 questionnaire with data from 2010 |
|---|---|---|
| Research field | Golf courses. | Golf courses. |
| Geographical location | Andalusia. | Andalusia. |
| Methodology | Structured questionnaire. | Structured questionnaire. |
| Universe | 96 golf courses in the Autonomous Region of Andalusia. | 108 golf courses in the Autonomous Region of Andalusia. |
| Sample size | Sample = Universe, 96 golf courses. | Sample = Universe, 108 golf courses. |
| Valid responses | 31 (32 %) | 33 (31 %) |
| Sample error | 7.42 % | 8.70 % |
| Level of trust | 95 %, p = q = 0.5; Z = 1.96 | 95 %, p = q = 0.5; Z = 1.96 |
| Data collection period | Pre-test September 2008. First sent December 2008. First resend January 2009. Second resend February 2009. Data treatment, February and March 2009. | First sent January 2012. First resend February 2012. Second resend March 2012. Data treatment, March and April 2012. |

measurements from the same golf course at different moments in time. For the purposes of this we have used the sample specified in Table 12.2. As can be seen, the same questionnaire has been provided on two different occasions: one in 2009, in which golf courses were asked to provide information from 2007, and the same questionnaire in 2012, in which they were asked to provide the same information from 2010.

The research model used in this paper is based on the hypothetical constructs and relationships represented in Fig. 12.1.

The measurement scales used have been extensively validated in previous studies. In order to measure the pressures that configure the institutional environmental framework of the golf courses in Andalusia we have used the same measuring mechanisms used by Kostova and Roth (2002), DiMaggio and Powell (1991), Llamas (2005) and Scott (1995). In the case of the development of environmental social responsibility we have used the scale designed by Romero (2005) for precisely this type of organisation. For social legitimacy we have used the scale proposed by Deephouse (1996) with the adaptations suggested by Llamas (2005).

Table 12.3 shows the indicators that comprise each of the constructs proposed in our research model. For measurement we have used is a five points (1–5) Likert scale.

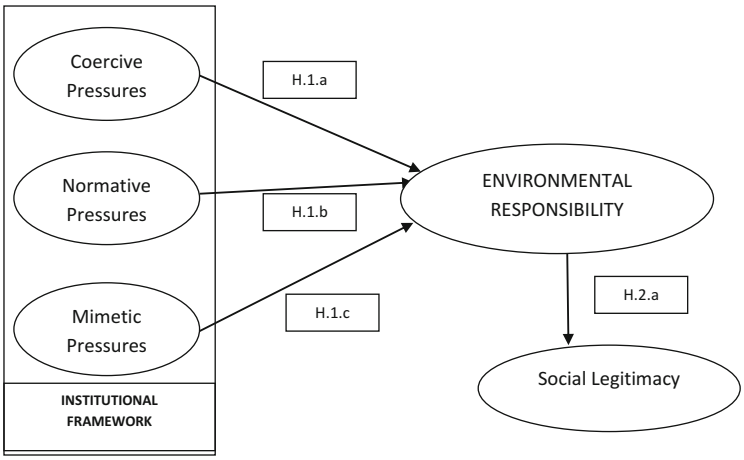


**Fig. 12.1** Longitudinal research model

## 12.4 Longitudinal Statistical Analysis with Partial Least Square

The *Partial Least Square* statistical technique has been specifically designed to reflect the theoretical and empirical conditions of the social sciences, where the need to reinforce theories and perform analyses with little available information is commonplace (Wold 1979). For the purposes of our analysis we will follow the sequence proposed by Díez Medrano (1992), focussing on the measurement models and the analysis of structural models. In our case we have employed Visual-PLS software.

### *12.4.1 Longitudinal Analysis of Measurement Models*

In order to analyse these models, the individual reliability of the items, the internal consistency, or composite reliability (pc), the convergent validity (the average variance extracted, AVE) and the discriminant validity (Roldán and Leal 2003) are analysed. The values of these indicators appear in Tables 12.4, 12.5 and 12.6 along with the corresponding acceptance thresholds generally used in the majority of scientific papers.

With regard to the individual reliability of the items, following a number of re-specifications we are left with 21 and 22 items, respectively, in other words, those that exceed the 0.505 weight limit established by Falk and Miller (1992). Both scenarios comply with the reliability and validity requirements demanded of this type of study.

**Table 12.3** Constructs and indicators

| Constructs (abbreviations) | Measurement scales (sources) | Indicators |
|---|---|---|
| Coercive pressures (CoerPres) | Kostova and Roth (2002) | Knowledge of laws |
| | | Level of compliance with laws |
| | | Existence of regulatory bodies |
| | | Existence of governmental agreements |
| Normative pressures (NormPres) | DiMaggio and Powell (1991), Kostova and Roth (2002) and Llamas (2005) | Moral obligation |
| | | Coherence with contextual values |
| | | Coherence with social norms |
| Mimetic pressures (MimPres) | Scott (1995) and Llamas (2005) | Obtaining of information |
| | | Existence of models to follow |
| | | Imitation of practises |
| | | Knowledge of successful experiences |
| Environmental social responsibility (ESR) | Romero (2005) | Environmental proposals (n°) |
| | | Proposals implemented (n°) |
| | | Proposals that attain objectives (n°) |
| | | Environmental actions (cost) |
| | | Environmental infractions (n°) |
| | | Employees with environmental training (n°) |
| | | Environmental training (hours) |
| | | Suppliers with environmental certification (n°) |
| | | Purchases from suppliers with environmental certification (% s/total purchases) |
| | | Dissemination expenses (% total expenses) |
| | | Percentage of environmental awareness actions (% environmental actions) |
| Social legitimacy (Legitim) | Deephouse (1996) | Social recognition |
| | | Organisational values |
| | | Legitimacy of governments |
| | | Legitimacy of employees |
| | | Legitimacy of citizens |
| | | Legitimacy of communications media |
| | | Legitimacy of customers |
| | | Legitimacy of suppliers |
| | | Legitimacy of ecological associations |
| | | Legitimacy of professional associations |
| | | Legitimacy of the sector |
| | | Relationship with interest groups |

**Table 12.4** Internal consistency and convergent validity

| Years | Scenario 2007 | | Scenario 2010 | |
|---|---|---|---|---|
| Constructs | Composite reliability (pc) ≥ 0.7, Numally (1978) | AVE ≥ 0.5, Fornell and Larcker (1981) | Composite reliability (pc) ≥ 0.7, Numally (1978) | AVE ≥ 0.5, Fornell and Larcker (1981) |
| CoerPres | 0.696866 | 0.537728 | 0.778753 | 0.645800 |
| NormPres | 0.802909 | 0.580300 | 0.856214 | 0.567023 |
| MimPres | 0.710043 | 0.574898 | 0.776942 | 0.551234 |
| ESR | 0.914991 | 0.576030 | 0.979557 | 0.642314 |
| Legitim | 0.874458 | 0.543700 | 0.858301 | 0.586231 |

**Table 12.5** Discriminant validity, scenario 2007

| Constructs | CoerPres | NormPres | MimPres | ESR | Legitim |
|---|---|---|---|---|---|
| CoerPres | 0.733 | | | | |
| NormPres | −0.357 | 0.761 | | | |
| MimPres | −0.257 | 0.477 | 0.770 | | |
| ESR | −0.379 | 0.435 | 0.389 | 0.759 | |
| Legitim | −0.322 | 0.589 | 0.402 | 0.457 | 0.781 |

**Table 12.6** Discriminant validity, scenario 2010

| Constructs | CoerPres | NormPres | MimPres | ESR | Legitim |
|---|---|---|---|---|---|
| CoerPres | 0.804 | | | | |
| NormPres | −0.325 | 0.753 | | | |
| MimPres | −0.078 | 0.188 | 0.742 | | |
| ESR | −0.259 | 0.386 | 0.275 | 0.801 | |
| Legitim | 0.346 | 0.409 | 0.382 | 0.558 | 0.766 |

### *12.4.2 Longitudinal Analysis of the Structural Model*

According to the studies of Falk and Miller (1992), Leal and Roldán (2001) and Chin et al. (2003), structural analysis is based on the analysis of the standardised path coefficients (β), the explained variance of variables (R2) and the T-Students calculated using the Bootstrap re-sampling technique. Figure 12.2 shows the structural analysis statistics from a comparative perspective.

Table 12.7 shows the predictive capacity of both models, measured using the value of the explained variances of the latent variables:

As we can see, in the respective scenarios the relationships formulated as hypotheses in relation to the latent variables have an acceptable predictive level, applying the criteria of Falk and Miller (1992), where values above 0.1 are considered acceptable.

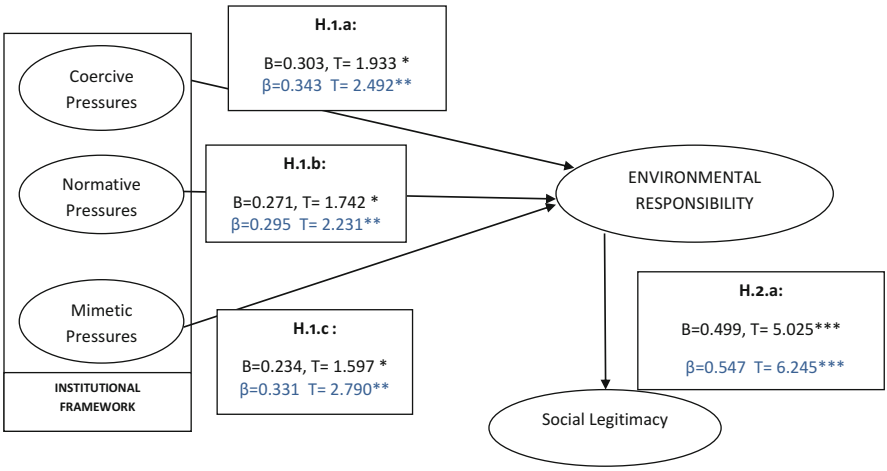


**Fig. 12.2** Longitudinal analysis of the structural model. Significance levels: *P < 0.1; **P < 0.05; ***P < 0.001 (based on $t_{(499)}$ of two tail test). Year 2007 (values in the *upper line* of the table corresponding to the hypothesis). Year 2010 (values in the *lower line* of the table corresponding to the hypothesis)

**Table 12.7** $R^2$ Values

| | Scenarios | |
|---|---|---|
| Constructs | Year 2007 | Year 2010 |
| Environmental responsibility | 0.327 | 0.358 |
| Social legitimacy | 0.249 | 0.317 |

## 12.5 Conclusions

As principal conclusions of this study, we can highlight the following:

1. Among the classifications defined by Reyes (2008) and Fernández and Cuadrado (2011), our study may be classified among the group of studies that attempt to modelize the social behaviour of businesses, in particular their environmental aspects.
2. For the purposes of the study we have identified the principles and pressures included in what is known as Institutional Theory (Meyer and Rowan 1977; DiMaggio and Powell 1983; Scott 1995) as applied to Andalusian golf courses. From an institutionalist perspective, laws and regulations that originate in public administrations are those that exert the most pressure when it comes to adopting socially responsible behaviours towards the environment.
3. This situation is maintained and reinforced over time. As we have seen in our model, coercive pressures reinforce the capacity for influence as time passes and we progress from one temporal scenario to another. In the case of Andalusian golf courses, a considerable difference (increase) in environmental regulations

has been noted between the two temporal scenarios analysed and this has had a direct effect on the business activity of the golf courses in the region.

4. These conclusions can be found in the works of Claver and Molina (2000), in which they defend the role of laws as the principal driving element behind the adoption by businesses of practises that are respectful towards the environment. Other authors, such as Porter and Van Der Linde (1995), Shrivastava (1995) and Gónzalez and González (2005) go so far as to confirm that this relationship between laws and environmental behaviour affects the competitive position of the business within the sector.
5. The weight of mimetic pressures increases notably, taking precedence over normative pressures. It is our understanding that the increased capacity of the influence of this type of pressure responds to the opinions of authors such as Guillén (2002), Meyer (2001) and Lu (2002), who contend that, in complex environments, mimetism is the best tool for reducing the risks and uncertainties generated by any type of change or innovation.
6. Even so, we can also observe a slight increase in the evolution of normative pressures, and this leads to the reinforcement of their capacity for influence. Young et al. (2001) affirm that this type of pressure becomes relevant in environments in which the professionalism of the sector has improved and work networks have been encouraged. This is precisely the situation that has been experienced in recent years in the Andalusian golf sector, where numerous debating forums dealing with the sustainability of this type of facility have been established and training relating to environmental management of tourism-related golf courses has increased considerably.
7. As we can see, the institutional framework of an environmental nature in Andalusian golf courses increases its power of influence and isomorphism as time progresses and conditions the Environmental Responsibility policies of this type of organisation.
8. The self-perception of the attainment of social legitimacy, or acceptance, of the Andalusian golf courses also increases between the two temporal scenarios, thereby reinforcing the hypothesis between the two scenarios under study. This conclusion is in line with the approaches proposed by authors such as DiMaggio and Powell (1983), Scott (1995), Riquel (2010) and Sánchez (2012).

Principal recommendations for golf course management:

1. The complexity resulting from the large number of legal provisions that condition the environmental behaviour of this kind of organisation make it all the more necessary for managers of this type of business to have some means of monitoring the frequent changes in regulations pertaining to this subject matter.
2. The above recommendation becomes all the more necessary in the Andalusian golf course sector due to the fact that it is the principal conditioning factor in the attainment of social legitimacy in environmental matters. Not dealing with these legal matters could suppose high risk of administrative sanctions, competitive disadvantages and decreased credibility among a primarily international customer base with a high level of culture and environmental awareness.

3. Efforts should be made to increase the dissemination of the environmental values that currently exist in the management of Andalusian golf courses. The realisation of environmental awareness campaigns and the publication of statements on environmental social responsibility that can be accessed by tour operators, the local community, suppliers and public administration, are two elements that favour the acceptance of this type of facility, a type of facility which, in recent times, has unfortunately been closely linked to urban developments of a speculative nature.
4. Perseverance in the 'professionalisation' of the sector is fundamental. Between the two scenarios studied, the increase in the number of collaboration networks and debating forums dealing with environmental questions, the increased specialisation of university environment training and the dissemination of successful experiences have led to the strengthening of the institutional framework of an environmental nature in this area.

## References

Ahlstrom D, Bruton GD (2001) Learning from successful local private firms in China: establishing legitimacy. Acad Manage Exec 15(4):72–83

Aldrich H, Fiol C (1994) Fools rush in? The institutional context of industry creation. Acad Manage Rev 19(4):645–670

Aragón J, Rocha F (2009) Los actores de la responsabilidad social empresarial. Cuadernos de Relaciones Laborales 27(1):147–167

Bansal P (2005) Evolving sustainably: a longitudinal study of corporate sustainable development. Strat Manage J 26(3):197–218

Bansal P, Clelland I (2004) Talking trash: legitimacy, impression management, and unsystematic risk in the context of the natural environment. Acad Manage J 47(1):93–103

Boza J, Pérez D (2009) Estudio de la responsabilidad social de las empresas. Aplicaciones a las empresas de Gran Canaria. EAWP: Documentos de Trabajo en Análisis Económico 8 (4):29–38

Buysse K, Verbeke A (2003) Proactive environmental strategies: a stakeholder management perspective. Strat Manage J 24(5):453–470

Camisón C (2010) Effects of coercive regulation versus voluntary and cooperative auto-regulation on environmental adaptation and performance: empirical evidence in Spain. Eur Manage J 28:346–361

Castellano M, Martín I, Caro FJ (2007) Propuesta de una escala de medición de la Responsabilidad Social Corporativa (RSC) en la actividad turística. En: Conocimiento, innovación y emprendedores: camino al futuro, Logroño: Universidad de La Rioja, pp 2621–2632

Chen H, Yu C (2008) Institutional pressures and initiation of internationalization: evidence from Taiwanese small- and medium-sized enterprise. Int Bus Rev 17:331–348

Chen H, Griffith D, Hu M (2006) The influence of liability of foreignness on market entry strategies: an illustration of market entry in China. Int Market Rev 23(6):636–649

Chin WW, Marcolin BL, Newsted PN (2003) A Partial Least Squares latent variable modelling approach for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. Inf Syst Res 14(2):189–217

Claver E, Molina J (2000) Medio ambiente, estrategia empresarial y competitividad. Revista Europea de Dirección y Economía de la Empresa 9(1):119–138

De la Cuesta M (2004) El porqué de la responsabilidad social corporativa. Información Comercial Española (ICE) 2813:45–58
Deephouse D (1996) Does isomorphism legitimate? Acad Manage J 39:1024–1039
Díez Medrano J (1992) Métodos de análisis causal. Cuadernos Metodológicos, 3. CIS, Madrid.
Díez F, Blanco A, Prado C (2010) Medición de la legitimidad organizativa: El caso de las Sociedades de Garantía Recíproca. Cuadernos de Economía y Dirección de la Empresa 13:115–143
DiMaggio P, Powell W (1983) The iron cage revisited: institutional isomorphism and collective rationality in organization field. Am Sociol Rev 48:147–160
DiMaggio P, Powell W (1991) The new institutionalism in organizational analysis. University Chicago Press, Chicago, IL
Egels-Zandén N, Wahlqvist E (2007) Post-partnership strategies for defining corporate responsibility: the business social compliance initiative. J Bus Ethics 70(2):175–189
Falk R, Miller N (1992) A primer soft modelling. The University of Akron Press, Akron
Fernández de Gatta D (2004) Auditorias y Sistemas de Gestión Ambientales en la Unión Europea: Evolución, régimen vigente y perspectivas futuras. Noticias UE, 228
Fernández M, Cuadrado R (2011) La Responsabilidad Social Empresarial en el Sector Hotelero: Revisión de la Literatura Científica. Cuadernos de Turismo 28:47–57
Fornell C, Larcker D (1981) Evaluating structural equation model with unobservable variables and measurement error. J Market Res 18(February):39–50
Francés P, Borrego A, Velayos C (2003) Códigos éticos en los negocios. Pirámide, Madrid
Gónzalez J, González O (2005) Environmental proactivity and business performance: an empirical analysis. Omega 33:1–15
Grewal R, Dharwadkar R (2002) The role of the institutional environment in marketing channels. J Market 66:82–97
Guillén MF (2002) Structural inertia, imitation, and foreign expansion: South Korean firms and business groups in China: 1987–95. Acad Manage J 45(3):509–525
Henriques I, Sadorsky P (1996) The determinants of an environmentally responsive firm: an empirical approach. J Environ Econ Manage 30:381–395
Heugens P, Lander MW (2009) Structure! Agency! (and other quarrels): a meta-analysis of institutional theories of organization. Acad Manage J 52(1):61–85
Hoffman AJ (2001) Linking organizational and field-level analyses. Organ Environ 14(2):133–252
John C, Cannon A, Pouder W (2001) Change drivers in the new millennium: implications for manufacturing strategy research. J Oper Manage 19:143–160
Kleinbaum DG, Kupper LL, Muller KE (1988) Applied regression analysis and other multivariate analysis methods. PWS-Kent Publishing Company, Boston, MA
Kostova T, Roth K (2002) Adoption of an organizational practice by subsidiaries of multinational corporations: institutional and relational effects. Acad Manage J 45:215–243
Leal A, Roldán JL (2001) Validación de un Modelo de Implantación de Gestión de Calidad Total y su Efecto en los Resultados Empresariales: un Estudio Causal Predictivo Mediante Análisis Mediante Análisis PLS (Partial Least Squares). En: F. Carlo Morabito y P. Laguna Sánchez (eds). pp 541–555. X International Conference, European Association of Management and Business Economics, Reggio Calabria, Italia
Liu S, Costanza R, Farber S, Troy A (2010) Valuing ecosystem services. Theory, practice, and the need for the transdisciplinary synthesis. Ann NY Acad Sci 1185:54–78
Llamas R (2005) Un análisis institucional de la implantación de la Agenda Local 21 por los Ayuntamientos españoles. PhD dissertation, University of Granada
Lu W (2002) Intra and inter-organizational imitative behaviour: institutional influences on Japanese firms' entry mode choice. J Int Bus Stud 33(1):19–37
Meyer K (2001) Institutions, transaction costs, and entry mode choice in Eastern Europe. J Int Bus Stud 32(2):357–367
Meyer J, Rowan B (1977) Institutional organizations: formal structure as myth and ceremony. Am J Sociol 83:340–363

Meyer J, Scott W (1983) Centralization and the legitimacy problems of local government. In: Meyer J, Scott W (eds) Organizational environment: ritual and rationality. Sage, Beverly Hills, CA, pp 199–215
Numally J (1978) Psychometric theory, 2nd edn. McGraw-Hill, New York, NY
Oliver C (1991) Strategic response to the institutional process. Acad Manage Rev 16(1):145–179
OMT (1995) Carta del Turismo Sostenible. World Conference on Sustainable Tourism. Spain
OMT (1999) Código Ético Mundial del Turismo. Resolución A/RES/406(XIII). UNWTO General Assembly. Chile
Palmer DA, Jennings PD, Zhou X (1993) Late adoption of the multidivisional form by large U.S. corporations: institutional, political and economic accounts. Adm Sci Q 38(1):100–126
Porter M, Van Der Linde C (1995) Green and competitive: ending the stalemate. Harv Bus Rev 73:120–137
Reid E, Toffel M (2009) Responding to public and private politics: corporate disclosure of climate change strategies. Strat Manage J 30(11):1157–1178
Reyes L (2008) La investigación en responsabilidad social en los diez últimos años: un análisis de las publicaciones en business and management. En: XXII Congreso Anual de AEDEM. Estableciendo puentes en una economía global (vol 1), ESIC
Riquel F (2010) Análisis institucional de las prácticas de gestión ambiental de los campos de golf andaluces. PhD dissertation, University of Huelva
Roldán JL, Leal A (2003) A validation test of an adaptation of the DeLone and McLean's model in the Spanish EIS field. In: Cano JJ (ed) Critical reflections on information systems. A systemic approach. Idea Group Publishing, Hershey, pp 66–84
Romero Q (2005) Modelo para la evaluación del comportamiento medioambiental: Una aplicación a los campos de golf españoles. Tesis doctoral, Universidad de Las Palmas de Gran Canaria
Sánchez M (2012) A responsabilidade social corporativa no marco da teoría institutional. Universidade de Minho, Centro de Investigação en Ciências Sociais. Working Paper 6:1–35
Scott W (1995) Institutions and organizations. Sage, New York, NY
Shrivastava P (1995) The role of corporations in achieving ecological sustainability. Acad Manage Rev 20(4):936–960
Valor C, De la Cuesta M (2008) El papel del tercer sector en la promoción de la empresa: análisis de cuatro vías de actuación. Revista Asturiana de Economía 41:25–41
Wold H (1979) Model construction and evaluation when theoretical knowledge is scarce: an example of the use of partial least squares. Cahiers du Département d'Économétrie. Faculté des Sciences Économiques et Sociales, Université de Genève, Genève
Young G, Charns M, Shortell S (2001) Top manager and network effects on the adoption of innovative management practices: a study of TQM in a public hospital system. Strat Manage J 22:935–951
Zucker L (1977) The role of institutionalization in cultural persistence. Am Sociol Rev 42 (5):726–743

# Chapter 13
# Intermodal Competition and Temporal Interdependencies in Passenger Flows: Evidence from the Emerald Coast

**Massimiliano Castellani, Pierpaolo Pattitoni, and Lorenzo Zirulia**

## 13.1 Introduction

Travellers commonly perceive available transport modes (e.g. planes and ships) as substitutes, forcing transportation providers into competition for the same routes. Existing research in the literature on intermodal competition focuses on the determinants of traveller preference (Park and Ha 2006; Rigas 2009; Behrens and Pels 2012; De Witte et al. 2013) and the effects of intermodal competition on prices and quality of service (Ivaldi and Vibes 2008; Bilotkach et al. 2010; Albalate et al. 2015).

Another strand of transport literature focuses on time series analysis of passenger flows. Most of these studies analyse univariate or multivariate air passenger arrival time series using monthly data (e.g. Jorge-Calderón 1997; Abed et al. 2001; Marazzo et al. 2010; Castellani et al. 2011; Tsui et al. 2014) and, to a lesser extent, higher-frequency data such as daily time series (e.g. Haldrup et al. 2007; Divino and McAleer 2010; Chen and Wie 2011).

Very little attention has been paid, however, to the connection between the two lines of research, i.e. intermodal competition and time series analysis of passenger flows. This is surprising, since in contexts where intermodal competition does matter, time series models that do not consider intertemporal interdependencies may be problematic, and the analyses based on them, such as forecasting exercises,

M. Castellani (✉) • L. Zirulia
Department of Economics, University of Bologna, Bologna, Italy

The Rimini Centre for Economic Analysis (RCEA), Rimini, Italy
e-mail: m.castellani@unibo.it

P. Pattitoni
The Rimini Centre for Economic Analysis (RCEA), Rimini, Italy

Department of Management, University of Bologna, Bologna, Italy



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_13

flawed. In order to start filling this gap, we develop a Threshold-VAR (TVAR) regression model that simultaneously takes into account the intertemporal interdependencies between the airport and seaport arrival time series generated by the intermodal competition and the existence of (possibly) multiple time regimes due to the temporal heterogeneity in traveller preferences. Our analysis focuses on daily passenger arrivals at Olbia (Italy) airport and seaport from 2005 to 2008. Olbia is a major regional logistics hub, and the most populous city of North-eastern Sardinia, the second largest island in the Mediterranean Sea. Situated on the Emerald Coast, Olbia is a well-established elite tourist destination, and one of the most exclusive seaside resorts of Europe.

This island provides an ideal setting to test the implications of intermodal competition for passenger arrival time series, since travellers can only arrive by air or sea, meaning these two modes of transport are (at least partially) substitutable and in competition with each other. Additionally, the distribution of traveller preference for mode of transport is likely characterized by a certain degree of temporal heterogeneity across the year, since tourists typically travel during the summer period.

Our results show that intertemporal interdependencies and multiple time regimes do indeed exist. In particular, we find negative correlations in the two time series both within (autocorrelation) and across (cross-correlation) transport modes when the level of demand is low (i.e. in the low-season regime) and positive correlations (at one lag) when the level of demand is high (i.e. in the high-season regime). In addition, during the high season, the strongest correlation is observed within the mode (instead of across modes).

These empirical results are interpreted within a conceptual framework that includes key factors such as traveller preferences for both mode of transportation and departure date, and capacity constraints in the transport mode. We argue that capacity constraints may explain the opposite sign in the correlation of arrival time series (both within and across transport modes) observed for the low and high seasons. The heterogeneity in the travellers' preferences (and specifically a stronger relative preference for the transport mode over the departure date) may explain the strongest correlation observed within the mode in the high season.

The remainder of the chapter is structured as follows. Section 13.2 presents the conceptual framework; Sect. 13.3 is concerned with the empirical analysis; Sect. 13.4 provides a brief discussion of results; and, finally, Sect. 13.5 concludes.

## 13.2 A Conceptual Framework

Our premise recognizes that passenger flows (with intermodal competition) should be analysed within a framework accounting for the choice travellers must make between the different transport modes.[1] In a static perspective, travellers' choices

[1] See De Witte et al. (2013) for a recent survey of the empirical literature on modal choice.

will be determined by preferences for modes and prices. At equal prices, each traveller will choose the mode containing the largest amount of characteristics she attaches more value to. However, a sufficiently large price differential may reverse consumer choices. In a dynamic framework, travellers also value the departure date. In fact, as economic theory suggests, different goods or services offered on different dates can indeed be treated as different goods (Mas-Colell et al. 1995). In some cases, such as for instance for business travellers or in the case of demand associated with specific events, the departure date may indeed be the most relevant characteristic, but in general travellers can be characterized by a certain degree of flexibility regarding their departure dates.

Therefore, what becomes relevant is the relative importance the travellers attach to mode and departure date. Some travellers may have a strong preference for mode, so that, if their preferred mode is not available on their preferred date because of exhausted capacity, they prefer to keep the mode but change the date. Other travellers, however, may have relatively weak preferences for the mode, which would lead to the opposite choice. For instance, with reference to our empirical application, long-distance travellers from Sardinia (and in particular travellers for whom reaching ports is particularly expensive) clearly have a strong preference for the air mode, while travellers who intend to bring their own car to the island (e.g. tourists) have a strong preference for the ship mode. Other travellers could assign more importance to price and thus less to the mode.

In order to derive the implications of our approach for temporal interdependencies in passenger flow, we point out that the relative preference for the mode only matters when the risk that the capacity for a specific mode on a specific date might become exhausted is substantial. In our empirical analysis, we first specifically consider two "seasons" (regimes) over the year, corresponding to different levels of overall demand for transport services by travellers: during the low season capacity constraints are not binding; during the high season capacity constraints are binding.

During the low season, travellers are always able to select their preferred mode and date. Since the level of the demand is low, positive demand shocks (for a specific transport mode) are typically more intense than negative ones and are immediately followed by a reversal adjustment in the time series, thereby generating negative auto and cross-correlation, i.e. within and between modes. The above argument is summarized in the following proposition.

**Proposition 1** *In low season, the passenger arrival time series are characterized by negative autocorrelation (within mode) and cross-correlation (between modes).*

In the high season, the capacity for travellers' preferred date and mode can be exhausted. In this case, travellers' choices will depend on the strength of their relative preference for the mode: travellers with strong preferences for the mode will prefer to keep the mode and change the date; consumers with weak preferences for the mode will make the opposite choice. While the existence of travellers with strong preferences for the mode generates positive autocorrelation in the within-mode arrival time series, the presence of travellers with weak preferences for the

mode generates positive cross-correlation across the two time series. In addition, the distribution of preferences among travellers, and in particular the prevalence of strong or weak preferences, affects the magnitude of the correlation coefficients. The following proposition summarizes our argument.

**Proposition 2** *In high season:* i) *if some travellers have strong preferences for the mode, autocorrelations of arrivals are positive;* ii) *if some travellers have weak preferences for the mode, cross-correlations of arrivals are positive;* iii) *if travellers with strong preferences are more frequent in the population than travellers with weak preferences, the magnitude of the autocorrelation is greater than that of cross-correlation.*

## 13.3 Empirical Set-Up

In this section, we first describe our data set (Sect. 13.3.1). Then we estimate two TVAR regression models. In Sect. 13.3.2, we initially consider a restricted model with one lag and two regimes. Then, we extend the model to a number of lags and regimes that are endogenously (and optimally) determined, and we discuss the empirical results in light of our conceptual analysis.

### *13.3.1 Data Set Description*

Our data set includes daily passenger arrivals at Olbia airport and port from 1 January 2005 to 31 December 2008 (1095 observations). We gathered our data from the Olbia airport Management Company (airport arrivals) and the Italian Ministry of Transportation and Navigation (port arrivals).[2]

Figure 13.1 plots the two series, which present a clear seasonal pattern: arrivals tend to be concentrated during the summer and reach the lowest values during the winter. Table 13.1 presents descriptive statistics on the airport and port series both in levels and logarithms. The table also reports the Jarque-Bera normality test statistics.

Port arrivals exhibit a higher average and median than airport arrivals. However, airport arrivals show a higher range of variation, standard deviation and coefficient of variation, indicating a more heterogeneous behaviour than the port. Both series are non-symmetrical and leptokurtic, implying non-normality. Indeed, normality

[2] While all port arrivals are from Italy, a third of airport arrivals are from abroad. Sardinia has three international airports (Alghero Airport, Olbia Costa Smeralda Airport and Cagliari Elmas Airport) and seven ports (Porto Torres, Olbia, Golfo Aranci, Arbatax, Santa Teresa Gallura, Palau and Cagliari). Most of the passengers directed to Costa Smeralda arrive at Olbia airport and port, i.e. those that we analyse in our research.

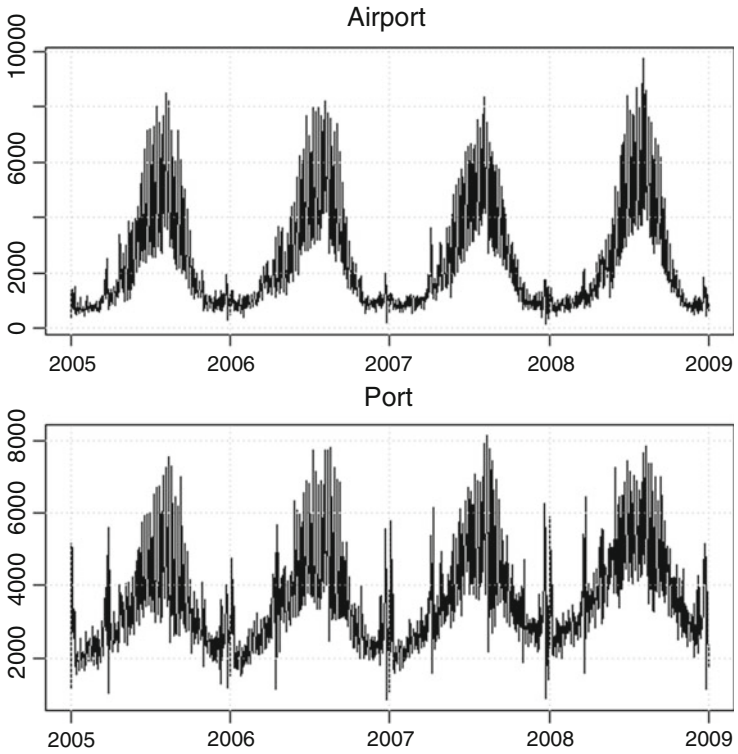


**Fig. 13.1** Time series plot of airport and port arrivals

**Table 13.1** Descriptive statistics

| | Level | | Log | |
|---|---|---|---|---|
| | Airport | Port | Airport | Port |
| Average | 2334 | 3540 | 7.49 | 8.11 |
| Median | 1629 | 3271 | 7.4 | 8.09 |
| Range | 9553 | 7322 | 4.02 | 2.28 |
| Standard deviation | 1793.78 | 1269.73 | 0.72 | 0.35 |
| Coefficient of variation | 0.77 | 0.36 | 0.1 | 0.04 |
| Skewness | 1.37 | 0.99 | 0.26 | 0.04 |
| Kurtosis | 4.32 | 3.89 | 2.12 | 3.07 |
| Jarque-Bera normality test | 562.58*** | 289.38*** | 62.98*** | 0.67 |

***, ** and * indicate statistical significance at the 1 %, 5 % and 10 % level

**Table 13.2** Test statistics

| Test | Airport | Port |
|---|---|---|
| Time effect | 0.1 | 1.05 |
| Year effect | 4.88*** | 2.09* |
| Month effect | 638.55*** | 220.66*** |
| Day-of-the-week effect | 85.28*** | 39.66*** |

***, **, * indicate statistical significance at the 1 %, 5 %, 10 % level

tests indicate that both series (in levels and logarithms) are non-normal, the only exception being the logarithm of the port series.[3]

Before analysing the stochastic interdependence of airport and port arrivals, we removed from our series any deterministic component. In particular, we use auxiliary regression models in which the logarithm of the two series is regressed on a deterministic trend, and on a set of dummies that account for any year, month and day-of-the-week effects. Table 13.2 shows the results, including test statistics of an auxiliary regression with a linear trend (time effect) and seasonal effects (year, month and day-of-the-week effects). The time effect is tested through a t-test, while F-tests are used to test the joint significance of dummy sets. Inference is based on HAC standard errors. The trend component is statistically non-significant for both series. However, year, month and day-of-the-week effects are all statistically significant. Arrivals are concentrated in July and August, and during the weekend. Conversely, October and November, and the working days register the lowest values of arrivals. The residuals of these auxiliary regression models (i.e. the deseasonalized series) are used in the following empirical analyses and are referred to as airport and port arrivals for simplicity.

The stationarity of airport and port arrivals is assessed using the Augmented Dickey-Fuller test (ADF), the Phillips-Perron test (PP) and the Kwiatkowski-Phillips-Schmidt-Shin test (KPSS). In Table 13.3, we present our results from three unit root tests: the Augmented Dickey-Fuller test (ADF), the Phillips-Perron test (PP) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test. The ADF and PP tests strongly rejected the null hypothesis of unit root for both series, and the KPSS test reinforces this conclusion by not rejecting the null hypothesis of stationarity.

### *13.3.2 Threshold-VAR Models*

**One Lag and Two Regimes** We first model airport and port arrivals (denoted by $y_{At}$ and $y_{Pt}$) through a bivariate TVAR model with two regimes, corresponding to

[3] Considering the whole time period (2006–2008), the ratio between airport arrivals and total arrivals is about 36 %. However, this ratio is significantly higher during the summer and at the weekend. This result may suggest that tourists, who travel mostly during the summer, prefer aeroplanes over ships for their travel. The opposite applies to non-tourists.

**Table 13.3** Unit root tests

| | ADF | PP | KPSS |
|---|---|---|---|
| Airport | −12.39*** | −910.25*** | 0.09 |
| Port | −11.98*** | −952.91*** | 0.09 |

***, ** and * indicate statistical significance at the 1 %, 5 % and 10 % level

the low and high seasons (denoted by the superscript $L$ and $H$ respectively), and one lag of each dependent variable. Following Tsay (1998, 2005), our TVAR model takes the form:

$$\begin{cases} \begin{bmatrix} y_{At} \\ y_{Pt} \end{bmatrix} = \begin{bmatrix} c_A^L \\ c_P^L \end{bmatrix} + \begin{bmatrix} \varphi_{AA}^L & \varphi_{AP}^L \\ \varphi_{PA}^L & \varphi_{PP}^L \end{bmatrix} \begin{bmatrix} y_{At-1} \\ y_{Pt-1} \end{bmatrix} + \begin{bmatrix} \varepsilon_{At}^L \\ \varepsilon_{Pt}^L \end{bmatrix} & \text{if} \quad y_{At-2} + y_{Pt-2} \leq \theta \\ \begin{bmatrix} y_{At} \\ y_{Pt} \end{bmatrix} = \begin{bmatrix} c_A^H \\ c_P^H \end{bmatrix} + \begin{bmatrix} \varphi_{AA}^H & \varphi_{AP}^H \\ \varphi_{PA}^H & \varphi_{PP}^H \end{bmatrix} \begin{bmatrix} y_{At-1} \\ y_{Pt-1} \end{bmatrix} + \begin{bmatrix} \varepsilon_{At}^H \\ \varepsilon_{Pt}^H \end{bmatrix} & \text{if} \quad y_{At-2} + y_{Pt-2} > \theta \end{cases} \tag{13.1}$$

where all $c$s and $\varphi$s are parameters to be estimated, and all $\varepsilon$s are serially uncorrelated error terms. We choose the sum of lagged airport and port arrivals (total arrivals) as a threshold variable.[4] If this sum is below the threshold value $\theta$, the two series are in the low season; the opposite applies if total arrivals are above $\theta$. $\theta$ has been chosen from a grid of values taking the best fit as the final estimate. In light of our two propositions, we expect:

1. $\varphi_{AA}^L, \varphi_{AP}^L, \varphi_{PA}^L, \varphi_{PP}^L < 0$ (negative auto and cross-correlations in the low season);
2. $\varphi_{AA}^H, \varphi_{AP}^H, \varphi_{PA}^H, \varphi_{PP}^H > 0$ (positive auto and cross-correlations in the high season).

Also, $\varphi_{AA}^H > \varphi_{AP}^H$ and $\varphi_{PP}^H > \varphi_{PA}^H$ will suggest a predominance of travellers with strong preferences for the mode.

Table 13.4 presents the estimation results of a TVAR model with one lag and two regimes (standard errors are reported in parentheses). The estimated coefficients are consistent with our propositions. In the low-season case, all coefficients are negative (although the lagged value for port is not statistically significant in the port equation). Similarly, in the high-season case, all coefficients are positive. Also, we notice that coefficients within modes are always greater than coefficients across modes, suggesting that for the air and sea transport modes travellers with strong preferences for mode over date of departure are the majority. The difference between the coefficients is larger for the airport arrival time series, suggesting

[4] Our threshold variable is stationary according to the results of ADF, PP and KPSS tests. We considered lagged values of airport and port arrivals as alternative threshold variables. Since, in our application, results are unaffected by the choice of the threshold variables, we continue our analysis using total arrivals.

**Table 13.4** Estimation results

| | Low season | | High season | |
|---|---|---|---|---|
| | Airport | Port | Airport | Port |
| Intercept | −0.3199*** (0.0430) | −0.2053*** (0.0359) | −0.0063 (0.0064) | −0.0069 (0.0053) |
| Airport(1) | −0.2014* (0.0940) | −0.1903* (0.0786) | 0.4680*** (0.0352) | 0.2060*** (0.0294) |
| Port(1) | −0.2126* (0.0885) | −0.0573 (0.0416) | 0.0922* (0.0416) | 0.2771*** (0.0348) |
| $\theta$ | −0.4598 | | | |

***, ** and * indicate statistical significance at the 1 %, 5 % and 10 % level

that for the "air-oriented" travellers in the high season (which include also foreign tourists), the sea mode option is considered only a weak substitute.[5]

**Extended Model** In the previous section, we estimated a bivariate TVAR model with two regimes and one lag of each dependent variable. In this section, we propose an extension of that model which allows for an arbitrary number of regimes and autoregressive order. This extended model takes the form:

$$\begin{bmatrix} y_{At} \\ y_{Pt} \end{bmatrix} = \begin{bmatrix} c_A^j \\ c_P^j \end{bmatrix} + \sum_{i=1}^{n} \begin{bmatrix} \varphi_{iAA}^j & \varphi_{iAP}^j \\ \varphi_{iPA}^L & \varphi_{iPP}^L \end{bmatrix} \begin{bmatrix} y_{At-i} \\ y_{Pt-i} \end{bmatrix} + \begin{bmatrix} \varepsilon_{At}^j \\ \varepsilon_{Pt}^j \end{bmatrix} \text{ if } \theta_{j-1} < y_{At-n-1} + y_{Pt-n-1} \leq \theta_j \quad (13.2)$$

where $j = 1, \ldots, s$ is a superscript indicating the regime that the two series are in, $s$ is the maximum number of regimes and $n$ is the autoregressive order.

We used likelihood ratio tests to choose the number of regimes. In particular, we followed Lo and Zivot (2001), who proposed a multivariate extension of the linearity test of Hansen (1999). Their test compares the covariance matrices of each model and has non-standard asymptotic distribution. We used bootstrap methods to compute approximate p-values. We limited the maximum number of regimes to three. First, we checked the need to use a threshold model testing a simple VAR model (one regime) against both a two-regime TVAR model and a three-regime TVAR model. Then, we tested the two-regime TVAR model against the three-regime TVAR model. The test results, reported in Table 13.5, suggest choosing a specification with three regimes ($s = 3$).

For any given $n$ and keeping $s = 3$ fixed, all $\theta_j$ have been chosen from a grid of values taking the best fit as the final estimate. Multivariate BIC has been used to

[5] In the text, we comment on the economic difference between the coefficients. This comparison is possible as the scale of the two dependent variables after the logarithmic transformation is approximately the same. With regard to the statistical significance (tests are not reported), we found a statistical difference between the coefficients in the airport equation but no statistical difference between the coefficients in the port equation.

**Table 13.5** Linearity tests (multivariate extension)

| Test | |
|---|---|
| Linear Var vs. 1-threshold-TVAR | 181.21*** |
| Linear Var vs. 2-threshold-TVAR | 274.8*** |
| 1-threshold-TVAR vs. 2-threshold-TVAR | 93.59*** |

***, ** and * indicate statistical significance at the 1 %, 5 % and 10 % level

detect the autoregressive order of the model. In particular, limiting the maximum autoregressive order to 31, we choose $n = 2$. The estimated model is, thus, a TVAR model with three regimes and two lags of each dependent variable.

Table 13.6 presents the estimation results of a TVAR model with two lags and three regimes (again, standard errors are reported in parentheses). The interdependence between the arrivals at Olbia via airport and port is confirmed. While in the first and in the third regimes we observe a bidirectional feedback between the series, in the second regime the lag structure suggests that the airport Granger causes port. As for the signs of the coefficients, these can be interpreted in light of the conceptual framework. Regime 1 corresponds to the low-season case, and, as expected, it gives rise to negative coefficients. Regime 3, corresponding to high season, shows all positive coefficients for the first lag. Regime 2, which is an intermediate case, exhibits mixed results, although it appears more similar to the high-season case (the first lag coefficients that are statistically significant are all positive). A final aspect we can comment upon is that second lags always have a negative sign. One way to account for this is to rely on a mechanism similar to the one we hypothesized for the low-season case, i.e. a negative coefficient may be observed if a positive shock for demand in a given period reduces the probability that travellers "appear" later on.

## 13.4 Discussion

As we indicated in the Introduction, our work is intended as a first step toward bridging the gap between two streams of literature, i.e. intermodal competition and time series analysis. In that respect, beyond the specific case of interest, our chapter may have a pedagogical value in showing the opportunities raised by considering the complex interplay of factors that influence travellers' preferences regarding transportation modes and intermodal competition dynamics. These may concern other forms of intermodal competition (e.g. high-speed trains vs planes) and other data frequencies (e.g. weekly data).

As for implications, we deem that our contribution, and other works along these lines, may be relevant for both public and private decision-makers. On the one hand, policymakers are interested in forecasting the passenger demand to make decisions about investments in transport infrastructure and, thus, improve the transport efficiency and the quality of the supplied services (Tsekeris 2011), or in

**Table 13.6** Estimation results

| | Regime 1 | | Regime 2 | | Regime 3 | |
|---|---|---|---|---|---|---|
| | Airport | Port | Airport | Port | Airport | Port |
| Intercept | −0.3909*** (0.0505) | −0.2518*** (0.0405) | −0.0508*** (0.0148) | −0.0515*** (0.0118) | 0.0146 (0.0135) | −0.0115 (0.0108) |
| Airport(1) | −0.2372** (0.0949) | −0.1817** (0.0761) | 0.3344*** (0.0773) | 0.1448** (0.0619) | 0.4587*** (0.0566) | 0.2332*** (0.0453) |
| Port(1) | −0.2622*** (0.0901) | −0.0861 (0.0722) | −0.0409 (0.0934) | 0.0015 (0.0748) | 0.1379** (0.0551) | 0.4833*** (0.0441) |
| Airport(2) | −0.0304 (0.1037) | −0.12 (0.0831) | −0.0763 (0.0482) | −0.0824** (0.0387) | −0.0002 (0.0461) | 0.1010*** (0.0369) |
| Port(2) | −0.3536*** (0.1214) | −0.1737* (0.0973) | −0.0514 (0.0637) | −0.1893*** (0.0510) | −0.2179*** (0.0509) | −0.2405*** (0.0408) |
| $\theta_j$ | −0.4598 | 0.0298 | | | | |

***, ** and * indicate statistical significance at the 1 %, 5 % and 10 % level

evaluating the impact of negative shocks induced by phenomena such as natural disasters or terrorist attacks. On the other hand, private decision-makers, such as airline and shipping companies, are interested in forecasting the passenger demand to develop corporate plans that take capacity utilization, manpower requirements and financial projections into account and thus reduce their business operative risk (Abed et al. 2001). Our work, by showing the significance of cross-correlation coefficients, and then the existence of intertemporal interdependencies across transport modes, implies that relying on a single-equation (single-mode) analysis would have missed relevant information, with a possible impact on the quality of the decision-making process.

Our work may also be of relevance for the literature on tourism demand modelling (Song and Li 2008). In this context, time series analysis has traditionally played an important role. Our contribution suggests that opening the "black box" of tourist arrival data by distinguishing between modes can be important in assessing the overall impact of investments (or negative shocks) affecting specific modes; moreover, seasonality turns out to be crucial not only in explaining the total number of arrivals, as is the case for most destinations, but also in affecting the nature of the relationship between arrivals by different modes.

## 13.5 Conclusions

In this chapter, we analyse empirically and try to rationalize within a simple conceptual framework the consequences of intermodal competition for the time series of passenger flows.

Taking into account travellers' preferences regarding transport modes and departure dates and the capacity constraints in the transport mode, on the basis of our conceptual framework we expect negative correlations of arrivals, both within and across transport modes, during the low-season period (when the level of demand is low), and positive correlations during the high-season period (when the level of demand is high). Moreover, if most travellers have strong relative preferences for mode with respect to departure date in the high-season period, we expect stronger correlations within modes.

We test these predictions, which we state in two propositions, by analysing daily passenger arrivals at Olbia airport and port from 2005 to 2008. Our empirical analysis supports all predictions. Furthermore, a generalization of our empirical model (which considers three regimes and an autoregressive order of two) suggests that the intertemporal relationship between port and airport arrivals may be more complicated than that described by a simple TVAR model with one regime an autoregressive order of one.

Needless to say, our work could be extended in several directions. For instance, the collection and analysis of data on prices, in addition to quantities, in this or in another context of intermodal competition is surely a fruitful direction for future

work; and the interaction between intermodal and intramodal competition could also be investigated.

## References

Abed SY, Ba-Fail AO, Jasimuddin SM (2001) An econometric analysis of international air travel demand in Saudi Arabia. J Air Transport Manage 7:143–148

Albalate D, Bel G, Fageda X (2015) Competition and cooperation between high-speed rail and air transportation services in Europe. J Transport Geogr 42:166–174

Behrens C, Pels E (2012) Intermodal competition in the London–Paris passenger market: high-speed rail and air transport. J Urban Econ 71:278–288

Bilotkach V, Fageda X, Flores-Fillol R (2010) Scheduled service versus personal transportation: the role of distance. Reg Sci Urban Econ 40:60–72

Castellani M, Mussoni M, Pattitoni P (2011) Air passenger flows: evidence from Sicily and Sardinia. Almatourism – J Tourism Cult Territorial Dev 1:16–28

Chen MC, Wie Y (2011) Exploring time variants for short-term passenger flow. J Transport Geogr 19:488–498

De Witte A, Hollevoet J, Dobruszkes F et al (2013) Linking modal choice to motility: a comprehensive review. Transport Res Part A Policy Pract 49:329–341

Divino JA, McAleer M (2010) Modelling and forecasting daily international mass tourism to Peru. Tour Manage 31:846–854

Haldrup N, Hylleberg S, Pons G et al (2007) Common periodic correlation features and the interaction of stocks and flows in daily airport data. J Bus Econ Stat 25:21–32

Hansen B (1999) Testing for linearity. J Econ Surv 13:551–576

Ivaldi M, Vibes C (2008) Price competition in the intercity passenger transport market: a simulation model. J Transport Econ Policy 42:225–254

Jorge-Calderón JD (1997) A demand model for scheduled airline services on international European routes. J Air Transport Manage 3:23–35

Lo MC, Zivot E (2001) Threshold co-integration and nonlinear adjustment to the law of one price. Macroecon Dyn 5:533–576

Marazzo M, Scherre R, Fernandes E (2010) Air transport demand and economic growth in Brazil: a time series analysis. Transport Res Part E Logistics Transport Rev 46:261–269

Mas-Colell A, Whinston MD, Green JR (1995) Microeconomic theory. Oxford University Press, New York, NY

Park Y, Ha HK (2006) Analysis of the impact of high-speed railroad service on air transport demand. Transport Res Part E Logistics Transport Rev 42:95–104

Rigas K (2009) Boat or airplane? Passengers' perceptions of transport services to islands The example of the Greek domestic leisure market. J Transport Geogr 17:396–401

Song H, Li G (2008) Tourism demand modelling and forecasting—a review of recent research. Tour Manage 29:203–220

Tsay RS (1998) Testing and modeling multivariate threshold models. J Am Stat Assoc 93:1188–1202

Tsay RS (2005) Analysis of financial time series. Wiley, Hoboken, NJ

Tsekeris T (2011) Greek airports: efficiency measurement and analysis of determinants. J Air Transport Manage 17:140–142

Tsui WHK, Ozer Balli H, Gilbey A et al (2014) Forecasting of Hong Kong airport's passenger throughput. Tour Manage 42:62–76

# Chapter 14
# Location and Business Creation: An Analysis of the Lodging Sector

**Rubén Lado-Sestayo, Milagros Vivel-Búa, Luis Otero-González, and Isabel Neira-Gómez**

## 14.1 Introduction

Localization is one of the main factors analyzed by firms on creation decisions. (Sainaghi 2011; Ribes et al. 2011; Gomezelj and Mihalič 2008; De la Cruz 2003). The most attractive locations will attract new competitors (Urtasun and Gutiérrez 2006a; Porter 2008). However, there may be a number of factors that act as entry barriers preventing or reducing the establishment of new firms (Suzuki 2013; Conlin and Kadiyali 2006).

Several studies have analyzed the factors that contribute to the creation of companies in a particular location (Yang 2012; Baum and Haveman 1997; Croes 2010). Other studies have focused on the factors that act as entry barriers preventing or hindering the entry of new competitors (Suzuki 2013; Conlin and Kadiyali 2006). All these studies correspond to analysis of specific, very small and peculiarities markets. Thus, it is difficult to generalize their results.

This paper identifies what factors attract the entry of new companies (drivers) and what impede the entry into the market (entry barriers). We used a database with information about 8992 hotel establishments and the 97 tourist destinations located in Spain during the period 2005–2011.

The main contributions of this research lie in two aspects. First, unlike previous studies, the results are extrapolated to different locations. Spanish hotel industry has a relevant position in the global tourism context so it can generate relevant results to other economies. Spain is the European leader and ranks second worldwide in obtaining international tourism receipts, reaching $56,000 million in 2012,

R. Lado-Sestayo (✉)
University of A Coruña, A Coruña, Spain
e-mail: ruben.lado.sestayo@udc.es

M. Vivel-Búa • L. Otero-González • I. Neira-Gómez
University of Santiago de Compostela, Santiago de Compostela, Spain



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_14

according to the World Tourism Organization (UNWTO). In turn, Spain has a diverse tourist offer and legislation due to regional policies, which may influence on the development of hotels. Therefore, the Spanish market analysis provides results in different environments which can be extrapolated to other locations. The second contribution is related to the identification of the variables that act as drivers and entry barriers.

The paper is structured as follows. After this introduction, the second part presents the related literature focused on the determinants of business creation in the hotel sector. Subsequently, in third section the hypothesis and the variables used are presented. A descriptive analysis and the empirical analysis are presented in fourth section. The fifth section explains the main conclusions. Finally, the paper concludes with a sixth section that identifies all references.

## 14.2 Literature Review

The literature on entrepreneurship in the hotel sector is divided into two study groups. The first focuses on the analysis of the characteristics of a location which influence on the creation of hotels. For example, some factors are customer profile (Egan and Nield 2000) and the level of accessibility to tourist destination (Thrane 2007; Shoval 2006). The second group of studies focuses on analyzing market variables and their agents in each tourist destination. Thus, some authors study the impact of the competitive structure on the creation of new hotels (Pan 2002; Lee et al. 2000). Their results show that a high concentration of market favors collaborative practices between the companies and this strategy hinders the entry of new competitors (Wang and Fesenmayer 2007; Mason 1939, 1949; Bain 1951, 1956). For example, this collaboration can influence political institutions to create barriers to entry (Suzuki 2013; Rodríguez and Murdy 2006). Regarding the actors in the market, some studies analyze the existence of externalities and its positive impact on business creation and development of the sector (Yang 2012; Baum and Haveman 1997; Hallin and Marnburg 2008; Kalnins and Chung 2004). On the contrary, there are also studies that suggest the existence of a threshold that causes inverted U-shaped relationship. For example, Urtasun and Gutierrez (2006b) identified a maximum level of development of tourism in Spain. If this level is exceeded, there are negative externalities that reduce the population attractive tourist destination. This reduces the creation of new businesses in this tourist destination.

The volume of initial investment may also influence the entry of new firms. Several authors have shown that an increase in this investment reduces the creation of new hotels (Rosenthal and Strange 2003; Sutton 2007). Previous studies also found that the existence of excess capacity reduces the entry of competitors in the hotel industry (Conlin and Kadiyali 2006; Spence 1977; Waldman 1987, 1991).

Finally, the integration process may also act as a barrier to entry (Zhao 1994) because they allow companies to increase its size and efficiency (Damsetz 1973; Williamson 1975, 1985) and to have economies of scale (Sinclair and Stabler

1997). However, no previous study has analyzed the impact of the level of efficiency on building new hotels.

## 14.3 Hypothesis and Variables

On Fig. 14.1 we show net business creation by tourist destination (number of new entrants minus number of closed companies) during 2005–2011 according to the criteria of allocation of tourist destinations exposed. As can be seen, the islands and the east coast show the lowest values, where a decrease was observed in the number of firms are presented. A detailed analysis shows that this is associated with an increase in the level of market concentration in those points, where traditionally the occupancy is high and the hotels consists of big hotels. By contrast, only Madrid and Barcelona have a net creation more than 20 companies, showing a change from the traditional sun and beach destinations.

The objective of this paper is, first, to identify what factors determine the creation of new businesses. Table 14.1 presents the variables analyzed. According to previous literature, one factor that favors the entry of new firms is the existence of rents available in a tourist spot (Porter 2008). Also, the externalities generated by firms that are already installed in a tourist spot destination have a positive impact (Yang 2012). However, with an excessive number of firms, this may be a barrier to entry because they can generate negative externalities, for example, a higher level

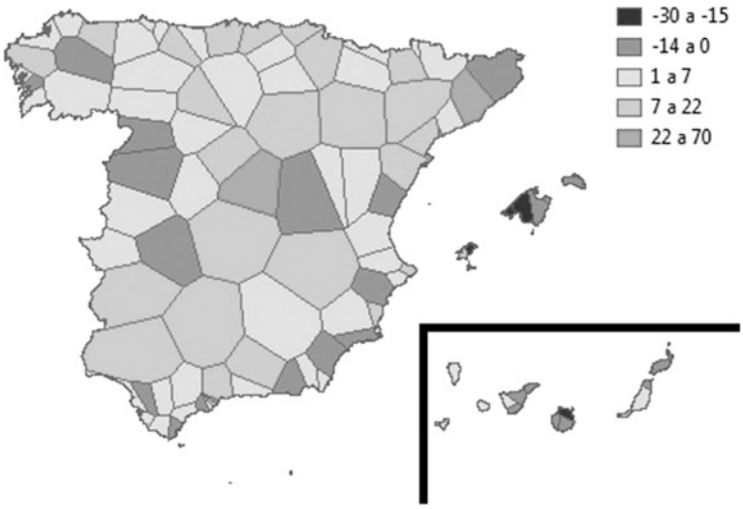


**Fig. 14.1** Net creation hotel establishments in the Spanish Tourist destinations during the 2005–2011 period (number of establishments). *Source*: Compiled using data from the National Statistics Institute

**Table 14.1** Used variables: measurement and hypothesis part

| Factor | | Variable | Units | Definition | Source | Expected relationship |
|---|---|---|---|---|---|---|
| *Endogenous variable* | | | | | | |
| Access | | Existence entry | Dummy variable (takes the value 1 if there is new entrants and 0 if not present) | Entry of New Firms$_{it}$ | SABI | |
| *Exogenous variables* | | | | | | |
| Attractive | | Operating profit | Logarithm | $Ln_{it}\left(\sum_{j=1}^{n} Profit_j\right)$ | SABI | + |
| Externalities | | Number of hotel establishments | Establishments | $No.\ of\ Establishments_{it}$ | SABI | ∩ Inverted U-shaped |
| Efficiency | Assets | Asset turnover | Logarithm | $Ln_{it}\left(\frac{\sum_{j=1}^{n}\frac{Sales_j}{Assets_j}}{J}\right)$ | SABI | – |
| | Labour | Revenue per employee | Thousands of euros | $\frac{Total\ Revenue_{it}}{No.\ of\ Employees_{it}}$ | NSI | – |
| Investment | | Medium size | Places of establishment | $\frac{No.\ of\ rooms_{it}}{No.\ of\ Establishments_{it}}$ | NSI | – |
| Idle capacity | | Oversize | Percentage | $\frac{\sum_{m=1}^{12} 1-Average\ Occupancy_{tm}}{12}$ | NSI | – |
| | | Seasonality | Percentage | $\sigma_{it}\left(\frac{\sum_{m=1}^{12} Average\ Occupancy_m}{12}\right)$ | NSI | Control |
| Collaboration | | Herfindahl Index | Points | $\sum_{j=1}^{J}(s^2)_j^i * 100$ | SABI | ∪ U-shaped |
| Age | | Average years | Years | $\frac{\sum_{j=1}^{J} Antique_{jt}}{No.\ of\ Firms_{it}}$ | SABI | ∪ U-shaped |

| | | | |
|---|---|---|---|
| *Control variables* | | | |
| Closures (two measurements) | For the estimation of a model whose endogenous variable is dichotomous, the closures variable takes the value 1 if there is closure and 0 otherwise | SABI | + |
| Temporal effect | Temporary dummy variables are included as a way to control the possible existence of temporal heterogeneity | – | Control |

*Notes*: i represents each tourist destination; j represents each firm, t represents the year and m indicates the months. Finally, s is the market share. The Herfindahl index can have a value between 0 (low concentration) and 1 (maximum concentration)

of pollution or noise (Urtasun and Gutierrez 2006b). Other entry barriers identified in previous studies are: the level of efficiency and idle capacity[1] achieved by incumbent firms (Damsetz 1973; Williamson 1975, 1985; Conlin and Kadiyali 2006), the initial investment required to operate on a tourist destination (Rosenthal and Strange 2003; Contractor and Kundu 1998).

Another barrier to entry is related to networking among companies (Dale and Robinson 2007; Wang and Fesenmayer 2007). In fact, this may allow these companies, especially larger ones, have great power to influence institutions and tourism policy on avoid or impede creation of new firms (Crouch 2011; Orea 2011; Vasconcelos 2005).

Finally, an analysis of business creation must also include particulars relating to the industry and the general economic environment variables. Thus, it is necessary to consider the renewal of tourism, business closures as well as the temporal characteristics that may affect the sector (Suzuki 2013).

To perform the analysis we have considered the 97 tourist destinations that exist in Spain according to the National Statistics Institute. To consider the area of influence of each tourist destination we use the minimum distance criterion. So, it is considered that each company is created in the area of influence of the nearest tourist destination. Data on the number of new entrants have been obtained from the SABI database (Amadeus version for Spain), which includes information about 8992 establishments in Spain, tourist information of each tourism destination has been collected from the Hotel Occupancy Survey conducted by the National Institute Statistics.

## 14.4 Empirical Analysis

This section begins with a descriptive analysis and then presents a multivariate analyze which is focused on the impact of the above factors on the existence of creation of new businesses.

### *14.4.1 Descriptive Analysis*

Table 14.2 presents the descriptive statistics. Thus, it appears that the creation of new hotels has presented a negative trend in the period and has increased the number of closed businesses. Therefore, main tourist destination has a smaller number of companies. Benefits also show a negative trend, especially since the economic crisis began in 2007. Nevertheless, there is an increase in the average size

[1] Should be noted that idle capacity may be related to the level of seasonality, which requires to control this variable in the empirical analysis.

**Table 14.2** Descriptive statistics

| Year | Statistic | Access | Attractive[a] | Externalities | Efficiency | | Investment | Idle capacity | Seasonality | Collaboración | Age | Closure number[a] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Assets[a] | Labour | | | | | | |
| 2005 | Mean | 0.05 | 6911.31 | 73.23 | 0.39 | 115.18 | 139.89 | 50.52 | 0.27 | 0.09 | 10.30 | 1.88 |
| | SD | 0.22 | 18,191.08 | 97.23 | 0.13 | 84.12 | 145.41 | 11.54 | 0.13 | 0.07 | 2.74 | 2.76 |
| 2006 | Mean | 0.12 | 7080.07 | 76.08 | 0.39 | 122.13 | 144.82 | 49.09 | 0.25 | 0.09 | 10.83 | 2.42 |
| | SD | 0.33 | 19,818.58 | 100.85 | 0.12 | 82.65 | 149.81 | 12.10 | 0.12 | 0.08 | 2.83 | 3.19 |
| 2007 | Mean | 0.22 | 10,728.44 | 78.24 | 0.39 | 120.14 | 147.85 | 49.39 | 0.26 | 0.10 | 11.58 | 2.24 |
| | SD | 0.41 | 31,056.36 | 102.44 | 0.12 | 81.68 | 152.98 | 12.38 | 0.13 | 0.07 | 2.86 | 2.80 |
| 2008 | Mean | 0.21 | 8353.16 | 78.05 | 0.36 | 122.34 | 150.64 | 51.79 | 0.27 | 0.09 | 12.35 | 1.30 |
| | SD | 0.41 | 22,116.47 | 103.39 | 0.12 | 87.92 | 157.13 | 12.09 | 0.13 | 0.07 | 2.86 | 2.44 |
| 2009 | Mean | 0.26 | −4112.30 | 75.41 | 0.32 | 119.49 | 152.07 | 54.83 | 0.27 | 0.08 | 13.07 | 2.26 |
| | SD | 0.44 | 18,509.34 | 101.54 | 0.10 | 86.22 | 158.84 | 11.30 | 0.12 | 0.06 | 2.91 | 4.42 |
| 2010 | Mean | 0.39 | 934.41 | 74.11 | 0.32 | 123.76 | 154.38 | 53.72 | 0.29 | 0.09 | 13.94 | 2.78 |
| | SD | 0.49 | 9699.21 | 98.96 | 0.11 | 94.85 | 157.93 | 11.86 | 0.12 | 0.06 | 3.01 | 4.60 |
| 2011 | Mean | 0.55 | 5371.12 | 69.24 | 0.34 | 107.89 | 157.22 | 52.28 | 0.29 | 0.10 | 14.84 | 3.19 |
| | SD | 0.50 | 16,004.04 | 91.78 | 0.13 | 95.82 | 157.96 | 13.83 | 0.12 | 0.07 | 3.13 | 4.34 |
| Total | Mean | 0.26 | 5038.03 | 74.91 | 0.36 | 118.77 | 149.46 | 51.64 | 0.27 | 0.09 | 12.42 | 2.29 |
| | SD | 0.44 | 20,690.51 | 99.13 | 0.12 | 87.42 | 153.70 | 12.28 | 0.12 | 0.07 | 3.27 | 3.64 |

*Notes*: SD means standard deviation

[a]Value without logarithmic transformation

of each hotel and the average age has a positive trend, reaching 15 years in 2011. Therefore we can say that they have gone smaller companies while large have remained in the market. This can be explained by the greater efficiency of larger firms (Damsetz 1973). Finally, although the level of market concentration decreases in 2008 and 2009, back up in 2011.

### *14.4.2 Determinants of Hotel Creation*

This section analyzes the determinants of firm creation in the Spanish hotel industry through probit and logit models (Table 14.3). The dependent variable is a dummy that takes the value 1 in those tourist destinations where firms in each year of the period are created and 0 otherwise.

The results show that the creation of new hotels is positively related to the efficiency of labor. In addition, there is an inverted U-shaped relationship with the number of companies that exist in a tourist spot and U-shaped with the level of market concentration (Herfindahl index) and age. Table 14.4 shows the thresholds obtained for these variables.

**Table 14.3** Estimates of probit and logit building new hotels

| | Dependent variable: 1 = firms creation; 0 = Otherwise | | | |
|---|---|---|---|---|
| | Probit | | Logit | |
| Factor | Coef. | M.E. | Coef. | M.E. |
| Attractive | −0949<br>(0.796) | −0.222<br>(0.186) | 1588<br>(1.424) | −0.218<br>(0.195) |
| Externalities | 0.011***<br>(0.004) | 0.002***<br>(0.001) | 0.019**<br>(0.008) | 0.003**<br>(0.001) |
| Externalities$^2$ | −0.000**<br>(0.000) | −0.000**<br>(0.000) | −0.000*<br>(0.000) | −0.000*<br>(0.000) |
| Efficiency assets | 0.217<br>(0.184) | 0.051<br>(0.043) | 0.386<br>(0.327) | 0.053<br>(0.045) |
| Efficiency labour | 0.430***<br>(0.126) | 0.101***<br>(0.029) | 0.731***<br>(0.224) | 0.100***<br>(0.030) |
| Investment | −0.141<br>(0.128) | −0.033<br>(0.030) | −0.235<br>(0.222) | −0.032<br>(0.030) |
| Idle capacity | −0.008<br>(0.009) | −0.002<br>(0.002) | −0.013<br>(0.016) | −0.002<br>(0.002) |
| Seasonality | −0.252<br>(0.588) | −0.059<br>(0.138) | −0459<br>(1.032) | −0.063<br>(0.142) |
| Collaboration | −0.087**<br>(0.039) | −0.020**<br>(0.009) | −0.143**<br>(0.067) | −0.020**<br>(0.009) |
| Collaboration$^2$ | 0.002*<br>(0.001) | 0.000*<br>(0.000) | 0.003*<br>(0.002) | 0.000*<br>(0.000) |

(continued)

**Table 14.3** (continued)

| | Dependent variable: 1 = firms creation; 0 = Otherwise | | | |
|---|---|---|---|---|
| | Probit | | Logit | |
| Factor | Coef. | M.E. | Coef. | M.E. |
| Age | −0356*** (0.124) | −0.083*** (0.029) | −0573*** (0.220) | −0.079*** (0.030) |
| $Age^2$ | 0.009** (0.004) | 0.002** (0.001) | 0.015** (0.008) | 0.002** (0.001) |
| Closures | 0.175 (0.111) | 0.041 (0.026) | 0.259 (0.199) | 0.036 (0.027) |
| Year 2006 | −0579** (0.284) | −0.136** (0.067) | −1.060* (0.558) | −0.146* (0.077) |
| Year 2007 | −0948*** (0.285) | −0.222*** (0.067) | 1672*** (0.557) | −0230*** (0.076) |
| Year 2008 | −0819*** (0.300) | −0.192*** (0.070) | 1459** (0.587) | −0.201** (0.081) |
| Year 2009 | −0883*** (0.301) | −0.207*** (0.070) | 1582*** (0.585) | −0217*** (0.080) |
| Year 2010 | 1313*** (0.312) | −0308*** (0.072) | 2287*** (0.601) | −0.314*** (0.081) |
| Year 2011 | −1.719*** (0.350) | −0.403*** (0.080) | 2936*** (0.665) | −0404*** (0.089) |
| Constant | 15,022 (9668) | – – | 24,956 (17,328) | – – |
| Observations | 664 | | 664 | |
| $R^2$ | 0.251 | | 0.245 | |
| Log Lik | −280.6 | | −282.6 | |
| LR test $\chi^2$ | 187,751*** | | 183,826*** | |
| Count $R^2$ (%) | 78.6 | | 78.5 | |
| AIC | 0.905 | | 0.911 | |
| BIC | −3623.674 | | −3619.749 | |
| Hosmer-Lemeshow (10) | 12.00 | | 11.84 | |
| Lroc | 0.8297 | | 0.8288 | |

*Notes*: Coef. are coefficients and M.E. represent marginal effects. Standard errors are in brackets ***, **, * significant at 1 %, 5 % and 10 %, respectively

**Table 14.4** Thresholds obtained for *externalities*, *collaboration* and *age* variables

| Model | Externalities (number of firms) | Collaboration (HHI Index) | Age (years) |
|---|---|---|---|
| Probit | 592 | 23.36 | 19 |
| Logit | 613 | 23.42 | 19 |
| Threshold | Maximum | Minimum | Minimum |

## 14.5 Conclusions

This paper analyzed the entry determinants of hotels in Spain during 2005–2011. The results show that labor is an important determinant, which can be related to the existence of knowledge spillovers. The hotel service quality relies heavily on labor. Thus, workers are likely to transfer the know-how to other hotels through his departure from the company or through informal interactions.

Another significant variable was the average size in the tourist destination. A high initial investment reduces the creation of new hotels because the low liquidity of this investment generates an abandon cost. In addition, this research also found that the existence of idle capacity acts as a barrier to entry.

The number of companies that exist in the tourist destination also influences the creation of new hotels. However, this study has found that there is a threshold beyond which further reduces the number of companies created. This could be explained by the existence of negative externalities that reduce or eliminate the institutional support to expand the sector.

Finally, market concentration and the average length of firms in a tourist spot negatively influence the creation to reach certain levels. Therefore, the existence of collusive business practices is not maintained in the medium and long term. Also, an increase in age of the hotel shows a better adaptation to the market. However, investment in the renewal of the company as a result of reaching a certain age high, favors the creation of new hotels.

## References

Bain JS (1951) Relation of profit rate to industry concentration: American manufacturing, 1936–1940. Quart J Econ 65:293–324

Bain J (1956) Barriers to new competition. Harvard University Press, Cambridge, MA

Baum J, Haveman H (1997) Love thy neighbor? Differentiation and agglomeration in the Manhattan hotel industry: 1898–1990. Adm Sci Q 42:304–338

Conlin M, Kadiyali V (2006) Entry-deterring capacity in the Texas lodging industry. J Econ Manage Strat 15:167–185

Contractor JF, Kundu KS (1998) Modal choice in the world of alliances: analyzing organizational forms in the international hotel sector. J Int Bus Stud 29:325–358

Croes R (2010) Testing the empirical link between tourism and competitiveness: evidence from Puerto Rico. Tourism Econ 16:217–234

Crouch GI (2011) Destination competitiveness: an analysis of determinant attributes. J Travel Res 50:27–45

Dale C, Robinson N (2007) Strategic imperatives for tourism SMEs. In: Thomas R, Augustyn M (eds) Tourism in the New Europe. Perspectives on SME policies and practices. Elsevier, Oxford, pp 47–61

Damsetz H (1973) Industry structure, market rivalry and public policy. J Law Econ 16:1–9

De La Cruz T (2003) Developers overcome obstacles for desirable projects. Hotel Motel Manage 218:14
Egan DJ, Nield K (2000) Towards a theory of intraurban hotel location. Urban Stud 37:611–621
Gomezelj DO, Mihalič T (2008) Destination competitiveness—Applying different models, the case of Slovenia. Tour Manage 29:294–307
Hallin CA, Marnburg E (2008) Knowledge management in the hospitality industry: a review of empirical research. Tour Manage 29:366–381
Kalnins A, Chung W (2004) Resource-seeking agglomeration: a study of market entry in the lodging industry. Strateg Manag J 25(7):689–699
Lee C, Lee WR, Hsu HW (2000) An empirical study on the relationship between strategic groups and performance in Taiwan's international tourist hotel industry. J Bus Adm 48:89–120
Mason ES (1939) Price and production policies of large-scale enterprise. Am Econ Rev 29:61–74
Mason ES (1949) The current state of the monopoly problem in the United States. Harv Law Rev 62:1265–1285
Orea L (2011) Entry deterrence through regional regulation and strict licensing policy: an analysis of the large retail establishments in Spain. Oxf Econ Papers 64:539–562
Pan CM (2002) Market concentration ratio analysis of the international tourist hotel industry in Taipei area. Tourism Manage Res 2:57–66
Porter M (2008) The five competitive forces that shape strategy. Harv Bus Rev 1:137–145
Ribes JFP, Rodriguez AR, Jimenez MS (2011) Determinants of the competitive advantage of residential tourism destinations in Spain. Tourism Econ 17:373–403
Rodríguez AE, Murdy J (2006) Anti-competitive practices in the tourism industry: the case of small economies. J Bus Econ Res 4:43–49
Rosenthal S, Strange W (2003) Geography, industrial organization, and agglomeration. Rev Econ Stat 85:377–393
Sainaghi R (2011) RevPAR determinants of individual hotels: evidences from Milan. Int J Contemporary Hospit Manage 23:297–311
Shoval N (2006) The geography of hotels in cities: an empirical validation of a forgotten model. Tourism Geogr 8:56–75
Sinclair MT, Stabler MJ (1997) Tourism economics. Routledge, London
Spence A (1977) Entry, capacity, investment and oligopolistic pricing. Bell J Econ 8:534–544
Sutton J (2007) Sunk costs and market structure: price competition, advertising, and the evolution of concentration. The MIT Press, Cambridge, MA
Suzuki J (2013) Land use regulation as a barrier to entry: evidence from the Texas lodging industry. Int Econ Rev 54:495–523
Thrane C (2007) Examining the determinants of room rates for hotels in capital cities: the Oslo experience. J Revenue Pricing Manage 5:315–323
Urtasun A, Gutiérrez I (2006) Tourism agglomeration and its impact on social welfare: an empirical approach to the Spanish case. Tour Manage 27:901–912
Urtasun A, Gutierrez I (2006) Hotel location in tourism cities: Madrid 1936–1998. Ann Tourism Res 33:382–402
Vasconcelos H (2005) Tacit collusion, cost asymmetries, and mergers. Rand J Econ 36:39–62
Waldman M (1987) Noncooperative entry deterrence, uncertainty, and the free-rider problem. Rev Econ Stud 54:301–310
Waldman M (1991) The role of multiple potential entrants/sequential entry in noncooperative entry deterrence. RAND J Econ 22:446–453
Wang Y, Fesenmayer DR (2007) Collaborative destination marketing: a case study of Elkhart country. Indiana Tourism Manage 28:863–875
Williamson O (1975) Markets and hierarchies: analysis and antitrust implications. Free Press, New York, NY

Williamson O (1985) The economic institutions of capitalism: firms, markets, relational contracting. MacMillan, London

Yang Y (2012) Agglomeration density and tourism development in China: an empirical research based on dynamic panel data model. Tour Manage 33:1347–1359

Zhao JL (1994) The antecedent factors and entry mode choice of multinational lodging firms: the case of growth strategies into new international markets. Thesis Dissertation, Faculty of Virginia Polytechnic Institute and the State University, United States

# Chapter 15
# Tourism Impacts of a Portuguese World Heritage Historic Center: Resident's Perceptions

**Laurentina Vareiro and Raquel Mendes**

## 15.1 Introduction

The World Heritage List (WHL) is widely considered a powerful tool for national tourism campaigns. Sites inscribed on the WHL by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) are commonly treated as catholicons in promoting the tourism industry, which in turn helps to promote economic growth and development.

This study analyzes local community perceptions of the importance of the World Heritage Site (WHS) classification of the historic center of the Portuguese city of Évora. The research also includes an analysis of the local residents' perceived tourism impacts on the municipality of Évora. The methodology consists of quantitative research based on a self-administered survey applied to convenience samples of local residents of the municipality of Évora in the beginning of 2014. The local residents' perceptions of the level of importance of the WHS classification to the municipality and its impact in the increase of tourists is analyzed. Positive and negative tourism impacts are then ranked and a principal components factor analysis is employed separately to the two groups of impacts in order to identify underlying dimensions associated with residents' perceptions on tourism development. Based on the results of the factor analysis, independent sample *t*-tests are used to investigate differences regarding positive and negative tourism impacts between residents that live near and far from the historic center, and between residents who work/have worked in the tourism sector and residents that work/have worked in other sectors.

This paper is organized as follows. The first section is dedicated to a brief literature review. The second section describes the methodology used for empirical

L. Vareiro (✉) • R. Mendes
Polytechnic Institute of Cávado and Ave, Barcelos, Portugal
e-mail: lvareiro@ipca.pt



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_15

purposes, while the third section reports and discusses the estimated results. The final section reports the main conclusions.

## 15.2 Literature Review

Based on their merits as the best possible examples of cultural and natural heritage (UNESCO 2005), numerous sites throughout the world have been formally designated as World Heritage. With this designation, the UNESCO aims to encourage the protection and preservation of cultural and natural heritage considered to be of outstanding value to humanity. In accordance with the heritage classification defined by the UNESCO, sites inscribed on the WHL are classified into three categories: cultural, natural and mixed (cultural and natural) heritage. Both cultural and natural heritage have always been a major tourist attraction. The impact on tourism development may be even more significant when a particular heritage is designated a UNESCO WHS (Drost 1996; Hergesell 2006; Huang et al. 2012; Li et al. 2008; Sadiki 2005; Yang et al. 2010). Indeed, certified sites may have potential advantages with regard to tourism. On the one hand, these sites are commonly used in marketing campaigns aimed at promoting national tourism. These campaigns may increase the international visibility of destinations and therefore attract more tourists (Yang et al. 2010). The growth in attractiveness and tourist activity is not solely attributable to an increase in public visibility but also to the association of the certification with quality. The WHS certification itself is perceived as an internationally recognized marker of quality (Hergesell 2006). On the other hand, countries that lack in resources to protect and maintain the certified sites are provided financial and technological aid by UNESCO for the preservation of these sites (Yang et al. 2010). The fulfilled expectations of the visitors are essential to strengthen the credibility of the WHS certification as a marker of quality.

It is important to note that although tourism may profit from heritage certification, it may benefit it as well. It is generally assumed that tourism and heritage are interdependently related (Aas et al. 2005; Hergesell 2006). Tourism may support the WHS objectives in various manners: creation of funds for conservation efforts; raise of public awareness of conservation by informing visitors about world heritage objectives; promotion of cultural values by enabling visitors to experience heritage (Hergesell 2006).

Despite the mutual benefits, a conflict between heritage preservation and tourism development may arise (Drost 1996; Jimura 2011; Li et al. 2008; Yang et al. 2010). The WHS certification may attract an excessive number of tourists and tourism activities resulting in overcrowding and the destruction of the cultural and natural integrity of heritage sites that are not prepared to accommodate such a large number of visitors. Hence, the success of a heritage site must balance its preservation and visitation.

It is commonly accepted that the success of heritage tourism within a given destination depends upon unique and attractive resources, maintainability, and an adequate tourism policy (Chen and Chen 2010). Additionally, heritage residents' support for tourism development is considered a key factor to that overall success (Chen and Chen 2010; Jimura 2011; Yoon et al. 2001). Given that this support is affected by the perceived impacts of tourism, policy-makers and planners need to incorporate local communities' opinions into tourism development by continuously monitoring these opinions in order to maximize the benefits, and to minimize the adverse affects (Faulkner and Tideswell 1997; Jackson 2008).

Research on residents' perceptions of the impacts of tourism is extensive, suggesting that tourism development affects the local communities in both positive and negative ways. These benefits and costs are typically classified as economic, social and cultural, and/or environmental (Andereck et al. 2005; Besculides et al. 2002; Brunt and Courtney 1999; Chen and Chen 2010; Dogan 1989; Dyer et al. 2007; Faulkner and Tideswell 1997; Jackson 2008; Kim et al. 2006; Ko and Stewart 2002; Kuvan and Akan 2005; Liu and Var 1986; Ozturk et al. 2015; Pizam 1978; Renda et al. 2014; Sharma and Dyer 2009; Yoon et al. 2001). The economic impacts include positive elements such as tax revenue, increased jobs, and additional income, and negative elements such as tax burdens, inflation, and local government debt. The sociocultural impacts include positive elements such as resurgence in traditional crafts and ceremonies, increased intercultural communication and understanding, and negative elements such as increased crime rates and changes in traditional cultures. Among the environmental impacts are positive elements such as the protection of parks and wildlife, as well as negative elements that include crowding, pollution, vandalism, and litter.

Local residents' level of acceptance of costs brought on by tourism is largely dependent on the perceptions of the benefits derived from it. The trade-off between benefits and costs may be explained through the social exchange theory. This theory posits that social behavior is the result of an exchange process by which the exchange is subjectively evaluated based on the benefits and costs that result from that exchange (Emerson 1976; Homans 1958). The purpose is to maximize the benefits and to minimize the costs. Hence, and according to this theory, residents' attitudes toward tourism and their subsequent support for its development are influenced by their evaluation of tourism effects. If the perceived benefits exceed the potential costs, residents are likely to view tourism positively and to support it, whereas if the perceived costs outweigh the benefits, residents are likely to evaluate tourism negatively and to oppose to it (Andereck et al. 2005; Ap 1990, 1992; Gursoy et al. 2002; Jackson 2008; Jurowski and Gursoy 2004).

Different types of factors may influence residents' perceptions of tourism impacts. Based on a two-dimensional interface of tourism development/community, Faulkner and Tideswell (1997) summarize these factors as extrinsic and intrinsic factors. The extrinsic factors are related to the characteristics of the location with regard to its role as a tourism destination. These comprise the nature and stage of the location's tourism development, the level of tourist activity, and the type of tourists the location involves. The intrinsic factors refer to characteristics of

the members of the community that may affect variations in the tourism impacts within the community. Among other factors, these include socio-demographic characteristics of the resident population, such as age, gender, education, length of residency, and ethnicity, economic dependency on the tourism industry, residential proximity to the tourism activity, community attachment, and attitudes about environmental issues (Faulkner and Tideswell 1997; Gursoy et al. 2002; Jurowski and Gursoy 2004; Kuvan and Akan 2005; Liu and Var 1986; Nicholas et al. 2009; Renda et al. 2014; Sharma and Dyer 2009; Vareiro et al. 2013; Williams and Lawson 2001).

As shown above, empirical research regarding residents' perceptions of tourism impacts is very well documented. However, there are still very few studies that focus the Portuguese case (Renda et al. 2014; Vareiro et al. 2011, 2013). The present study aims to contribute to the limited research regarding residents' attitudes towards tourism impacts.

## 15.3 Methodology

This study analyzes local community perceptions of the importance of the WHS classification of the historic center of Évora. It also measures positive and negative tourism impacts on the municipality of Évora, perceived by local residents.

The municipality of Évora is located in the Alentejo region, in southern Portugal. Composed of 19 parishes, the municipality covers an area of 1307.08 $km^2$, with a total of 56,596 inhabitants (INE 2012). The municipality is seated by the city of Évora, one of the most important historical cities in Portugal, with a strong cultural significance. Given its immense and varied historical and monumental heritage, the city is commonly referred to as a "museum-city". The historic center of Évora was designated a WHS by the UNESCO in November 1986. This classification fostered not only the preservation of heritage, but also the promotion of tourism (Borges et al. 2013). The historic center's certified heritage attracts visitors from all over the world, positioning it as an important tourism destination in Portugal.

### *15.3.1 Questionnaire and Data Collection*

The questionnaire consists of three main sections. In the first section, information about the characteristics of the historic city center is collected. In the second section, respondents are asked to indicate to what extent they agree/disagree with statements about tourism impacts on their municipality using a five-point Likert scale (1 = totally disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = totally agree). Various items are used to assess residents' perceptions of tourism impacts on this Portuguese municipality. These items are based on previous empirical research (Jackson 2008; Jimura 2011; Sharma and Dyer 2009; Williams and Lawson 2001).

In the final section, information on socio-demographic characteristics of the residents, such as gender, age, residence, marital status, education, and occupation, are collected. In the beginning of 2014, a pre-test was carried out involving 10 graduate students with residence in Guimarães (a Portuguese municipality with a historic center classified by UNESCO in December 2001). This exercise made it possible, among other things, to discover and correct any potential problems. Minor changes, mostly related to the clarity of the questions, were included in the final questionnaire.

Data for this study were collected using a self-administered survey applied to local residents of Évora. Based on the purpose of this study, a public secondary school (Escola Secundária Gabriel Pereira) located in the municipality was used for constructing the survey sample. The questionnaires were mailed to the directors of the two classes (an 11th grade class and a 12th grade class) selected by the headmaster of the school. The class directors distributed four questionnaires to each student of the two selected classes. The student should answer one of the questionnaires, and family or friends that were residents in the city in analysis should fill in the remaining. The students were asked to return the filled in questionnaires within a 2 weeks' time schedule.

A total of 160 survey questionnaires were mailed in the beginning of 2014. Only 113 questionnaires were returned, which reveals an approximate 70.6 % response rate. However, four questionnaires were excluded: two due to a large percentage of missing values, and two due to not being from residents of the municipality under analysis. A total of 109 questionnaires (68.1 %) were analyzed in this study.

### *15.3.2 Data Analysis*

The data analysis in this study consisted of five stages. First the local residents' perceptions of the level of importance of the WHS classification to the municipality and its impact in the increase of tourists were analyzed. Second, positive and negative tourism impacts were ranked and the three most important and the three least important were highlighted. Third, the principal components factor analysis was employed separately to the positive and negative impacts expressions in order to identify underlying dimensions associated with residents' perceptions about tourism development. A varimax rotation, the most common choice in the orthogonal rotation method, was used since it generally provides easier interpretation and the resulting factors were expected to be utilized in the subsequent analysis (Hair et al. 1998). A cut-off eigenvalue of 1 was pre-determined. All items have factor loadings greater than 0.4 and were retained for each factor grouping. Cronbach's alpha was applied to test the reliability of factor groupings (Hair et al. 1998). Fourth, based on the results of the factor analysis, independent sample *t*-tests were used to examine the differences regarding positive and negative tourism impacts between the residents that live near and far from the historic center. The mean scores of positive and negative factors were compared to understand what

factors were perceived more important for residents considering the place of residence. Finally, the same procedure (*t*-tests) was used to investigate if there are any differences in the perceptions of those who have worked in the tourism sector and those who have not. Data were analyzed using the Statistical Package for the Social Sciences (SPSS), version 21.0.

## 15.4 Results

### *15.4.1 Sample Profile*

Table 15.1 summarizes the socio-demographic profile of the survey sample. The respondents are mostly female (56.9 %) and single (40.4 %). The largest age cohort is the cohort aged between 15–24 years old (29.4 %), followed by the 25–44 years old (25.7 %) cohort.

A total of 45.9 % of the survey respondents is endowed with a secondary education and 24.8 % with a higher education level. The majority of respondents

**Table 15.1** Sample profile

| | Total (N = 109) |
|---|---|
| Gender | |
| Female | 62 |
| Male | 47 |
| Age | |
| 15–24 | 32 |
| 25–44 | 28 |
| 45–64 | 25 |
| 65 and over | 24 |
| Marital status | |
| Single | 44 |
| Married | 42 |
| Divorced | 8 |
| Widowed | 15 |
| Education | |
| Primary | 27 |
| High school | 50 |
| Graduate school | 27 |
| Place of residence | |
| Near the historic center | 79 |
| Far the historic center | 30 |
| Economic dependency on tourism | |
| Yes | 28 |
| No | 81 |

**Table 15.2** Perceptions of WHS classification

| WHS questions | Likert scale | | | | | M | SD |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| The WHS classification is important for the municipality | 0.0 | 0.9 | 10.1 | 36.7 | 52.3 | 4.40 | 0.71 |
| The WHS classification contributes to tourist increase | 0.0 | 0.9 | 14.7 | 35.8 | 48.6 | 4.32 | 0.76 |

(72.5 %) lives in or near the historic center (less than a 3 km distance), and 74.3 % of the sample does not depend, directly, from tourist activities.

### *15.4.2 World Heritage Site Classification*

Residents were asked to rate the level of importance that the classification of the historic center as a WHS has for the municipality and also the impact in the increase of the number of tourists using a five-point Likert scale (1 = totally disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = totally agree). As shown in Table 15.2, the mean rating of the importance of the classification of the historic center for the municipality across the whole sample was 4.40, indicating a strongly positive perception of the WHS designation. Almost 85 % reported that the classification of the historic center as a WHS had effect on tourist attraction. This finding is consistent with previous case studies in which it has been observed that many people rate the WHS classification as having a positive impact on tourism development.

### *15.4.3 Ranking of Tourism Impacts*

In the second part of the questionnaire, residents were asked about 26 specific impacts that tourism may have on a host community. Specifically, the respondents were asked to indicate to what extent they agree/disagree that the tourism impact occurred in their municipality based on the five-point Likert scale (1 = totally disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = totally agree) used in the first part of the questionnaire. Table 15.3 shows the highest levels of agreement and disagreement rankings of tourism impacts expressions delineated into the positive and negative categories.

With only two items with mean scores below 3, the highest levels of agreement with positive items include “increase in the number of tourist facilities” (3.84), “preservation of the local culture” (3.64) and “improvement in the quality of services” (3.31). On the other hand, “increase in real estate” (2.92) and “increase in the number of recreational activities” (2.97) were considered the least important/

**Table 15.3** Rankings of tourism impacts

| | Rank | | Items | Mean | SD |
|---|---|---|---|---|---|
| Positive | More | 1 | Increase in the number of tourist facilities | 3.84 | 0.89 |
| | | 2 | Preservation of the local culture | 3.64 | 0.92 |
| | | 3 | Improvement in the quality of services | 3.31 | 1.08 |
| | Less | 1 | Increase in real estate | 2.92 | 0.92 |
| | | 2 | Increase in the number of recreational activities | 2.97 | 1.10 |
| | | 3 | Improvement of local infrastructure | 3.03 | 0.89 |
| Negative | More | 1 | Increase in the price of many goods and services | 3.55 | 1.01 |
| | | 2 | Increase in traffic congestion and related problems | 2.77 | 1.08 |
| | | 3 | Too many resources on the promotion of tourism | 2.74 | 1.01 |
| | Less | 1 | Social conflicts | 1.96 | 0.88 |
| | | 2 | Increase in prostitution | 2.13 | 1.00 |
| | | 3 | Disturbance of peace and tranquility | 2.14 | 0.91 |

highest level of disagreement. The top three items of negative factors included "increase in the price of many goods and services" (3.55), "increase in traffic congestion and related problems" (2.77) and "too many resources on the promotion of tourism" (2.74). The least strongly perceived negative items were related to "social conflicts" (1.96), "increase in prostitution" (2.13) and "disturbance of peace and tranquility" (2.14).

### *15.4.4 Tourism Impact Factors*

In order to determine the underlying dimensions of the tourism impacts, the 13 positive and 13 negative items were factor analyzed utilizing two principal components analyses with varimax rotation.

*Positive Factors* Three factors were derived from the factor analysis of 13 positive items (Table 15.4). These factors explained 52.77 % of the variance. The first positive factor was labeled "activities, services, and local infra-structures" and accounted for 32.06 % of the variance. It had a reliability alpha of 0.78 with an eigenvalue of 4.17. The second factor, labeled "culture and environment" was comprised of four items: "increase in the cultural and educational experience", "conservation of local natural resources", "increase in the number of recreational activities" and "reinforcement of the beauty of the municipality". With an eigenvalue of 1.57, it captured 12.06 % of the variance in the positive impacts. The third factor was labeled "real estate and enterprises" had the lowest explanatory power (8.65 %) with a reliability alpha of 0.47.

**Table 15.4** Factor analysis for positive tourism impacts

| Positive factors (reliability alpha) | Loading | Eigen-values | Explained variance | Mean |
|---|---|---|---|---|
| (1) Activities, services, and local infra-structures (0.78) | | 4.17 | 32.06 | 3.35 |
| Increase in the number of tourist facilities | 0.76 | | | |
| Increase in the number of employment opportunities | 0.69 | | | |
| Encouragement of a variety of cultural activities | 0.68 | | | |
| Improvement in the quality of services | 0.61 | | | |
| Improvement of local infrastructure | 0.59 | | | |
| Preservation of the local culture | 0.52 | | | |
| (2) Culture and environment (0.66) | | 1.57 | 12.06 | 3.13 |
| Increase in the cultural and educational experience | 0.81 | | | |
| Conservation of local natural resources | 0.69 | | | |
| Increase in the number of recreational activities | 0.60 | | | |
| Reinforcement of the beauty of the municipality | 0.49 | | | |
| (3) Real estate and enterprises (0.47) | | 1.12 | 8.65 | 3.05 |
| Increase in real estate | 0.77 | | | |
| Increase in the variety of businesses | 0.65 | | | |
| Restoration of local buildings | 0.45 | | | |
| Total variances explained | 52.77 | | | |

*Notes*: Extraction method—Principal component analysis; Rotation method—Varimax with Kaiser normalization; KMO = 0.77; Bartlett's test of sphericity: p = 0.00

In sum, two factors, "activities, services, and local infra-structures" and "culture and environment", captured 44.12 % of the positive variance, contributing to explaining much of residents' positive perceptions of tourism impacts in Évora.

Based on the structure of the five-point scale for tourism impacts used in the survey, level 3 can be interpreted as an indifferent point that does not make a distinction between agreement and disagreement. The higher the mean score is, the higher the level of agreement is. With the highest mean agreement of 3.35, "activities, services, and local infra-structures" was the most significant factor to the residents of Évora.

*Negative Factors* As negative effects of tourism development, the 13 negative items resulted in 3 factors with eigenvalues greater than 1, and the factors accounted for 59.28 % of the total negative impacts variance as presented in Table 15.5. These factors were labeled "disruption and environmental deterioration", "delinquent behavior and opportunity costs", and "living costs". The first negative factor, labeled "disruption and environmental deterioration", explained 40.67 % of the variance with a reliability coefficient of 0.85. It is followed by factor

**Table 15.5** Factor analysis for negative tourism impacts

| Negative factors (reliability alpha) | Loading | Eigen-values | Explained variance | Mean |
|---|---|---|---|---|
| (1) Disruption and environmental deterioration (0.85) | | 5.29 | 40.67 | 2.34 |
| Invasion of local residents' privacy | 0.85 | | | |
| Increase in use of drugs | 0.82 | | | |
| Disturbance of peace and tranquility | 0.76 | | | |
| Increase in traffic congestion and related problems | 0.64 | | | |
| Increase in litter | 0.51 | | | |
| Social conflicts | 0.47 | | | |
| (2) Delinquent behavior and opportunity costs (0.71) | | 1.23 | 9.46 | 2.41 |
| Increase in prostitution | 0.72 | | | |
| Increase in crime | 0.71 | | | |
| Too many resources on the promotion of tourism | 0.65 | | | |
| Increase in vandalism | 0.63 | | | |
| (3) Living costs (0.57) | | 1.19 | 9.15 | 2.89 |
| Pressure on local services | 0.70 | | | |
| Increase in the price of many goods and services | 0.60 | | | |
| Affects the traditional lifestyle | 0.50 | | | |
| Total variances explained | 59.28 | | | |

*Source*: Authors' own survey data. *Notes*: Extraction method—Principal component analysis; Rotation method—Varimax with Kaiser normalization; KMO = 0.85; Bartlett's test of sphericity: p = 0.00

2 (9.46 % of the total variance and Cronbach's alpha level of 0.71), which comprises items related to the "increase in prostitution", "increase in crime", "too many resources on the promotion of tourism" and "increase in vandalism". Factor 3, labeled "living costs", explained 9.15 % of the variance contained by the original variables, with the alpha level of 0.57. With high mean scores, "living costs" appeared as the most important negative factor to the residents of Évora.

The mean scores of the extracted factors were also consistent with the rankings of the individual tourism impacts items. "Activities, services, and local infrastructures", a positive factor with the highest mean of importance, includes the three top individual positive items. As the bottom negative factor, "disruption and environmental deterioration" encompasses two less important items of individual negative impacts.

**Table 15.6** Comparison of impact factors by place of residence

| Impact factors | | Near historic center | Far historic center |
|---|---|---|---|
| Positive | (1) Activities, services, and local infra-structures | **3.42*** | 3.17 |
| | (2) Culture and environment | **3.15** | 3.08 |
| | (3) Real estate and enterprises | **3.08*** | 2.98 |
| Negative | (1) Disruption and environmental deterioration | 2.23 | **2.62*** |
| | (2) Delinquent behavior and opportunity costs | 2.30 | **2.70** |
| | (3) Living costs | 2.78 | **3.19*** |

*Note*: Numbers in bold correspond to the highest values observed for each factor
*$p < 0.05$

### *15.4.5 Place of Residence Comparison on Positive and Negative Factors*

After the positive and negative impacts factors were delineated, their mean scores were compared across residents that live near and far from the historic centers (see Table 15.6). The comparison revealed how different positive and negative factors were in relation to the place of residence of respondents, although the factors most valued and least valued are common to all residents, in both positive and negative factors.

The positive factor "activities, services, and local infra-structures" scored the highest value for all residents, indicating that the residents of Évora believe that tourism is responsible for the creation of more and better equipments and activities. Also, all residents groups place "real estate and enterprises" as the least important factor among the positive factors. *T*-test results indicated, however, that only these factors (1 and 3) present differences statistically significant at the 0.05 level. The residents living near the historic center value factors 1 and 3 more than residents living far from the historic center.

With regard to negative factors, all residents ranked "disruption and environmental deterioration" as the least important factor, and place "living costs" as the most important factor. *T*-test results indicated, however, that only these negative factors (1 and 3) present differences statistically significant at the 0.05 level. Factors 1 and 3 are less important to the residents living near the historic center than to the residents living far from there.

**Table 15.7** Comparison of impact factors by economic dependency on tourism

| Impact factors | | Economic dependent | Others |
|---|---|---|---|
| Positive | (1) Activities, services and local infra-structures | **3.39** | 3.34 |
| | (2) Culture and environment | **3.23** | 3.09 |
| | (3) Real estate and enterprises | 3.04 | **3.05** |
| Negative | (1) Disruption and environmental deterioration | **2.39** | 2.32 |
| | (2) Delinquent behavior and opportunity costs | **2.46** | 2.40 |
| | (3) Living costs | 2.89 | 2.89 |

*Notes*: Numbers in bold correspond to the highest values observed for each factor

### *15.4.6 Economic Dependency Comparison on Positive and Negative Factors*

The mean scores of positive and negative impact factors were also used to investigate differences in the perceptions of residents economically dependent on tourism and residents that do not directly benefit from tourism (see Table 15.7).

Results indicated that residents economically dependent on tourism had higher mean scores in most factors, except "real estate and enterprises" and "living costs. However, *t*-tests showed that these differences were not statistically significant at the 0.05 level.

For all residents, the most valued positive factor was "activities, services, and local infra-structures", followed by "culture and environment". Both groups also put "disruption and environmental deterioration" as the least important factor among the negative factors and ranked "living costs" as the most important negative factor from tourism development.

## 15.5 Conclusions

This study attempted to examine local community perceptions of the importance of the WHS certification of the historic center of Évora. It also aimed at measuring tourism impacts on the municipality of Évora, perceived by local residents. Specifically, the objective was to determine positive and negative tourism impact factors, as well as to discover significant differences in these factors across the residents of the municipality of Évora (considering place of residence and economic dependency).

The main findings of this study reveal that local residents have a strongly positive perception of the WHS designation. The vast majority considers that the classification of the historic center as a WHS had a positive effect on tourist attraction.

The two principal component factor analyses delineated three positive and three negative factors. The positive factors were labeled: "activities, services, and local infra-structures", "culture and environment", and "real estate and enterprises". The

negative factors included "disruption and environmental deterioration", "delinquent behavior and opportunity costs" and "living costs".

The comparison of the mean scores of these positive and negative factors across residents living near and far from the historic center reveals that the most valued and least valued factors are common to all residents. With regard to the positive factors, the residents rank "activities, services, and local infra-structures" as the most important factor, whereas "real estate and enterprises" is considered the least important. Among the negative factors, the most highlighted factor for all residents is "living costs"; the least focus of concern to all residents is "disruption and environmental deterioration". There were significant differences between the mean ratings of two positive and two negative impact factors between residents living near and far from the historic center with the former group with higher means in terms of positive impacts and the latter with higher means in terms of costs.

Similar results are observed when comparing the mean scores of the positive and negative factors across residents economically dependent on tourism and residents that do not directly benefit from it. Hence, both groups of residents rank "activities, services, and local infra-structures" as the most important positive impact from tourism development and consider "real estate and enterprises" to be the least decisive impact factor among the positive factors. With regard to the negative factors, "living costs" is valued the most important, with the same mean score for both groups. Residents economically dependent on tourism had higher means in terms of positive and negative impacts; however the differences were not statistically significant.

From these findings, it can be stated that residents living closer to the historic center are more positive about tourism than those who live far from it. On the other hand, residents economically dependent on tourism are more conscious of benefits and costs linked to the tourism development. However, in this last case, the difference in benefits and costs rating by the two groups is not significantly different.

The insight gained by the empirical analysis conducted in this paper may be an important policy tool for tourism planners and managers in the development of strategies with regard to the future management of the historic center and tourism associated to it. The results of the study suggest that decision makers and tourism planners should consider local residents' concerns about the economic and environmental impacts of tourism (namely, the increase in the price of many goods and services, and the increase in traffic congestion and related problems). It is important that tourism planners and managers apply internal marketing techniques to inform local residents about not only the direct but also indirect benefits of tourism. These attempts can make residents have more realistic opinions. Also, a better communication between the residents and tourism planners and managers should be established through informal meetings. These meetings would be useful for explaining plans and policies and for obtaining a real public involvement and the opinion of local people about tourism activities in Évora, and particularly in the historic center.

## References

Aas C, Ladkin A, Fletcher J (2005) Stakeholder collaboration and heritage management. Ann Tourism Res 32(1):28–48

Andereck K, Valentine K, Knopf R et al (2005) Residents' perceptions of community tourism impacts. Ann Tourism Res 32(4):1056–1076

Ap J (1990) Residents' perceptions: research on the social impacts of tourism. Ann Tourism Res 17(4):610–616

Ap J (1992) Residents' perceptions on tourism impacts. Ann Tourism Res 19(4):665–690

Besculides A, Lee M, McCormick P (2002) Residents' perceptions of the cultural benefits of tourism. Ann Tourism Res 29(2):303–319

Borges M, Marujo N, Serra J (2013) Turismo cultural em cidades património mundial: A importância das fontes de informação para visitar a cidade de Évora. Tourism Hospit Int J 1(1):137–156

Brunt P, Courtney P (1999) Host perceptions of sociocultural impacts. Ann Tourism Res 26 (3):493–515

Chen C, Chen P (2010) Resident attitudes toward heritage tourism development. Tourism Geogr 12(4):525–545

Dogan H (1989) Forms of adjustment: sociocultural impacts of tourism. Ann Tourism Res 16 (2):216–236

Drost A (1996) Developing sustainable tourism for world heritage sites. Ann Tourism Res 23 (2):479–492

Dyer P, Gursoy D, Sharma B et al (2007) Structural modeling of resident perceptions of tourism and associated development on the Sunshine Coast, Australia. Tour Manage 28(2):409–422

Emerson R (1976) Social exchange theory. Annu Rev Sociol 2:335–362

Faulkner B, Tideswell C (1997) A framework for monitoring community impacts of tourism. J Sustain Tourism 5(1):3–28

Gursoy D, Jurowski C, Uysal M (2002) Resident attitudes: a structural modeling approach. Ann Tourism Res 29(1):79–105

Hair J, Anderson R, Tatham R, Black W (1998) Multivariate data analysis with readings. Prentice Hall, Englewood Cliffs, NJ

Hergesell A (2006) Influence of the world heritage certification on destination choice. Dissertation, Bournemouth University

Homans G (1958) Social behavior as exchange. Am J Sociol 63(6):597–606

Huang C, Tsaur J, Yang C (2012) Does world heritage list really induce more tourists? Evidence from Macau. Tour Manage 33(6):1450–1457

INE (2012) Censos 2011. Resultados definitivos – Portugal. Instituto Nacional de Estatística, Lisboa

Jackson L (2008) Residents' perceptions of the impacts of special event tourism. J Place Manage Dev 1(3):240–255

Jimura T (2011) The impact of world heritage site designation on local communities: a case study of Ogimachi, Shirakawa-mura, Japan. Tour Manage 32(2):288–296

Jurowski C, Gursoy C (2004) Distance effects on residents' attitudes toward tourism. Ann Tourism Res 31(2):296–312

Kim H, Gursoy G, Lee S (2006) The impact of the 2002 World Cup on South Korea: comparisons of pre- and post-games. Tour Manage 27(1):86–96

Ko D, Stewart W (2002) A structural equation model of residents' attitudes for tourism development. Tour Manage 23(5):521–530

Kuvan Y, Akan P (2005) Residents' attitudes toward general and forest-related impacts of tourism: the case of Belek, Antalya. Tour Manage 26(5):691–706

Li M, Wu B, Cai L (2008) Tourism development of world heritage sites in China: a geographic perspective. Tour Manage 29(2):308–319

Liu J, Var T (1986) Resident attitudes toward tourism impacts in Hawaii. Ann Tourism Res 13 (2):193–214

Nicholas L, Thapa B, Ko Y (2009) Residents' perspectives on a world heritage site: The Pitons Management Area. St Lucia Ann Tourism Res 36(3):390–412
Ozturk A, Ozer O, Caliskan U (2015) The relationship between local residents' perceptions of tourism and their happiness: a case of Kusadasi, Turkey. Tourism Rev 70(3):232–242
Pizam A (1978) Tourism impacts: the social costs to the destination community as perceived by its residents. J Travel Res 16(4):8–12
Renda A, Mendes J, Oom do Valle P (2014) The destination is where I live! Residents' perception of tourism impacts. J Spatial Organ Dyn 2(1):72–88
Sadiki F (2005) Sustainable tourism strategies at UNESCO world heritage sites. http://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=2478&context=thesesdissertations. Accessed 2 Feb 2014
Sharma B, Dyer P (2009) An investigation of differences in residents' perceptions on the Sunshine Coast: tourism impacts and demographic variables. Tourism Geogr 11(2):187–213
Vareiro L, Cadima Ribeiro J, Remoaldo P et al (2011) Residents' perception of the benefits of cultural tourism: the case of Guimarães. In: Steinecke A, Kagermeier A (eds) Kultur als Touristischer Standortfaktor – Potenziale – Nutzung – Management, Paderborn Geographical Studies, Institute series n° 23. University of Paderborn, Germany, pp 187–202
Vareiro L, Remoaldo P, Cadima Ribeiro J (2013) Residents' perceptions of tourism impacts in Guimarães (Portugal): a cluster analysis. Curr Issues Tourism 16(6):535–551
Williams J, Lawson R (2001) Community issues and resident opinions of tourism. Ann Tourism Res 28(2):269–290
UNESCO World Heritage Centre (2005) World heritage information kit. http://whc.unesco.org/en/activities/567/. Accessed 27 Oct 2014
Yang C, Lin H, Han C (2010) Analysis of international tourist arrivals in China: the role of world heritage sites. Tour Manage 31(6):827–837
Yoon Y, Gursoy D, Chen J (2001) Validating a tourism development theory with structural equation modeling. Tour Manage 22(4):363–372

# Chapter 16
# Resident's Perceptions on Impacts of Hosting the Guimarães 2012 European Capital of Culture: Comparisons of the Pre- and Post Periods

**Paula Cristina Remoaldo, Laurentina Vareiro, José Cadima Ribeiro, and José Freitas Santos**

## 16.1 Introduction

Residents tend to have high expectations regarding the benefits of hosting a mega-event, in particular the creation of new infrastructure, growth in GDP and employment, image enhancement and the spin-offs of attracting tourists and fostering sustainable growth of the cultural supply (Jeong and Faulkner 1996; Deccio and Baloglu 2002; Gursoy and Kendall 2006; Getz 2008; Langen and Garcia 2009; Ritchie et al. 2009; Gursoy et al. 2011; Palonen 2011). Nevertheless, they normally recognise that some costs will be incurred (Kim and Petrick 2005; Kim et al. 2006; Ritchie et al. 2009; Gursoy et al. 2011; Lee et al. 2013). So, it was not surprising that the nomination of Guimarães, a small city in the northwest of Portugal, as one of the two European Capitals of Culture in 2012 (2012 ECOC), had raised great expectations in the local community vis-à-vis its socio-economic and cultural benefits.

Our research was designed to examine the Guimarães residents' perceptions of the impacts of hosting the 2012 ECOC, approached at two different times: before and after the event, to try and capture the evolution of the residents' assessment of its impacts. From the empirical literature, we know that residents' perceived impacts tend to change as time goes by (Kim et al. 2006; Ritchie et al. 2009; Gursoy

P.C. Remoaldo (✉)
University of Minho, Braga, Portugal
e-mail: premoaldo@geografia.uminho.pt

L. Vareiro
Polytechnic Institute of Cávado and Ave, Barcelos, Portugal

J. Cadima Ribeiro
University of Minho, Braga, Portugal

J. Freitas Santos
Polytechnic of Porto, Porto, Portugal



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_16

et al. 2011; Lee et al. 2013). The data were gathered via two surveys applied to Guimarães residents, one in 2011, before the event, and the other afterwards, in 2013.

The Guimarães residents' assessment was thought to be essential to get an accurate appraisal of the impact of the mega-event as they were a main part of the hosting process. 2012 ECOC impacts were mainly felt by local people who, in most cases, will go on feeling them in the short and long term.

The research was thought to be socially pertinent as the opinions collected through the surveys can help to prevent repeating mistakes when similar mega-events are organised in the future, and to increase the positive impacts derived from hosting them. When we talk about the social pertinence of the empirical results, we want to stress that the expertise acquired can be useful to any host city or country.

This approach (covering the before and after event periods) was rarely applied to the 45 European Capitals of Culture (ECOC) prior to 2012. The during and after periods have been the most investigated. Additionally, residents have not usually been as major stakeholders in mega-events of this kind. In fact, most research has focused on assessing the impact on tourism activity and on the type of impacts (mainly the economic ones) felt.

Even though it was the third time that Portugal hosted an ECOC (Lisbon in 1994 and Porto in 2001), research of this nature had never been undertaken in the country before. Factor analysis and *t*-tests were used to process the data.

We believe it is worth remembering that ECOCs are at present the third most important event that takes place in Europe, after the Olympic Games and the World/European football championships (Van Heck 2011).

This chapter is organised as follows: the first section contains a review of the literature on the expected impacts of a mega-event and the host community's perceptions of those impacts; Sect. 16.2 presents a brief description of Guimarães and sets out the methodology used in the empirical approach; in the third section we present the main results of the empirical application; the fourth section discusses the results; finally, the conclusions section includes a few policy recommendations and possible paths for future research.

## 16.2 Literature Review

### *16.2.1 The ECOC as a Mega-Event and Its Impacts*

A mega-event is generally taken as a planned large-scale event (cultural, sporting and even commercial), lasting for 1 year or less, the staging of which claims large amount of resources (human and financial) and which tends to generate long-term impacts on host communities (Ritchie 1984; Roche 1994, 2000; Ritchie and Hall 1999; Ritchie et al. 2009; Gursoy et al. 2011; Liu 2012). Its dramatic character, mass appeal and international significance or international magnitude have been also underlined (Roche 2000; Liu 2012).

The opportunity for enhancing external visibility and promoting a welcoming image of the city or territory has been emphasised by Deccio and Baloglu (2002), Kim et al. (2006) and Strauf and Scherer (2010), and others.

Besides underlining its role in country branding, encouraging community integration and social cohesion, Getz (2012) makes mention that hosting this kind of mega-event can sometimes serve political ambitions, that is, it is used as an instrument of political promotion of certain agents.

A European Capital of Culture is an example of an annual mega-event (Palonen 2011; Remoaldo et al. 2014). The idea of European Capitals of Culture was born in Athens, in 1985. Twenty-nine years later, the European Capitals of Culture are the most ambitious cultural project staged in Europe, with budgets that exceed any other cultural event.

The intensity of the cultural activity normally realised within the scope of a European Capital of Culture and the duration of the project makes it a mega-event. It is perfect for challenging citizens, for stimulating feelings of citizenship through participation, and it is also an opportunity for regenerating the urban space of the host city (Palonen 2011).

Several studies have been conducted since the 1980s on mega-events and on their impacts (Remoaldo et al. 2014). Ritchie (1984), Getz (1991), and Hall (1992) were among the pioneers in such studies. Sports events such as the Olympics (e.g., Deccio and Baloglu 2002; Ritchie et al. 2009; Lee et al. 2013) and the Football World Cup (e.g., Lepp and Gibson 2011) were the ones that first attracted the attention of researchers.

As with other mega-events, the impacts of being an ECOC can be economic, socio-cultural, psychological, environmental, political and image related in nature, and be both positive and negative (Kim et al. 2006; Ritchie et al. 2009; Gursoy et al. 2011). Referring to those impacts, Kim et al. (2006), use the term "profound". According to the same authors, followed by Ritchie et al. (2009) and Gursoy et al. (2011), in the period prior to hosting the mega-event, in particular, residents tend to ignore or play down the negative impacts and accentuate the expected benefits.

Positive economic impacts may include increased employment and retail opportunities, and the growth of income, which tends to increase before, during and after the hosting of the mega-event (Gursoy and Kendall 2006; Langen 2008; Langen and Garcia 2009; Ritchie et al. 2009; Gursoy et al. 2011). But we can also add the opportunity for more advertising of the products and services of the host city and country (Jeong and Faulkner 1996; Deccio and Baloglu 2002; Gursoy and Kendall 2006; Langen and Garcia 2009), the attraction of investment to create new facilities and improve infrastructure, including projects related to transport (Deccio and Baloglu 2002; Gursoy and Kendall 2006; Getz 2008; Gursoy et al. 2011), landscape improvements and housing development, and the increase in local standards of living (Goeldner and Long 1987; Kim and Petrick 2005; Ritchie et al. 2009; Lee et al. 2013).

Negative economic impacts may be higher prices of goods, services and property and the increased cost of living (Kim and Petrick 2005; Ritchie et al. 2009; Lee

et al. 2013; Remoaldo et al. 2014). In this regard, a major contribution can come from the growth of tourism.

Positive socio-cultural impacts may be related to an increase in the community's self-esteem, an increase in the standard of living, the strengthening/preservation of local cultural values and traditions, help in the construction of a regional or national identity, the chance to meet new people and have more interesting things to do (Lee et al. 2013; Remoaldo et al. 2014). But we cannot forget the risk of increased delinquent behaviour, lack of security, an increased crime rate, overcrowding and the conflicts that can emerge between visitors and residents (Lee et al. 2013; Remoaldo et al. 2014). We can add also prostitution, additional political cost and corruption (Lee et al. 2013).

Along with the socio-cultural impacts, which tend to receive less attention (Hall 1992; Deccio and Baloglu 2002; Waitt 2003; Kim et al. 2006; Ritchie et al. 2009), the environmental impacts are, perhaps, least considered by local communities, even if the environment is probably the most fundamental ingredient of the tourism product.

In terms of socio-environmental impacts, the preservation of built heritage and improvement of public safety can be seen as the most important positive impacts, but several negative impacts can also be mentioned. The degradation of the physical and natural environment, the increase of litter and noise, the decline in quality of air and water, the traffic congestion and parking problems and the increase of rail and air traffic are among the more important ones.

As Gursoy and Kendall (2006), and Langen and Garcia (2009) make clear, cultural events have been placed on a secondary plan. Among the early exceptions we can find the work of Ritchie (1984), Getz (1991) and Hall (1992). Given the above, it is not surprising that there are few studies dealing with the impacts of European Capitals of Culture on host communities.

In Portugal, one of the first impact studies on hosting a mega-event is by Martins et al. (2004), which concerns the 2004 UEFA European Football Cup. It is one of the first inasmuch as no studies were produced on residents' perceptions of the impacts of the Lisbon 1994 ECOC and the Porto 2001 ECOC. One reason for that is that the European Commission has only made it compulsory since 2006 to file an impact assessment of the European Capitals of Culture (Decision 1622/2006/EC).

In the case of the 2012 Guimarães ECOC, an official assessment was performed, conducted by a technical team from the University of Minho, and the main results have been made public (Universidade do Minho 2012a, b, 2013a, b). The social, economic, media and digital impacts were measured using quantitative and qualitative methodologies.

Overall, the results were considered to be positive. Regarding tourism, those results show that the number of foreign visitors grew more than 50 % vis-à-vis the average figures of previous years. Figures for national visitors showed an increase of almost 300 %. Additionally, almost a quarter of the retailers surveyed considered that the business impact of the ECOC "was higher than expected" (Universidade do Minho 2013b: 158) and for more than 40 % of them the impact met their expectations (Universidade do Minho 2013b).

While the study performed by Universidade do Minho (2012a, b, 2013a, b) collected information from various stakeholders (e.g. participants in the events, tourists, younger residents, local cultural agents, local retailers), the main study that directly asked about the perceptions of residents was performed in the ex-ante period (December 2011). It was applied to a sample of 6815 students of the primary and secondary school system, on the assumption that these students were a relevant target population of the 2012 ECOC (Universidade do Minho 2012b).

### *16.2.2 Residents' Perceptions of Impacts: The Before-and-After Mega-Event Approaches*

Studies have been performed on residents' perceptions of tourism for several decades and their results published in international journals, as is well documented by Nunkoo et al. (2013). The empirical research (Nunkoo et al. 2013) clearly shows that to understand residents' attitudes it is crucial to gain their active support for tourism development and, in particular, to implement it in a sustainable way.

Whereas we can find many studies dealing with residents' perceptions of tourism and even on residents perceptions of the impacts of hosting mega-events, not very many have focused on residents' perceptions after the event and even fewer have developed a longitudinal approach to the phenomenon (Ritchie et al. 2009; Gursoy et al. 2011).

Even though most mega-events are single happenings, they are likely to have long-term effects on the territories and communities that host them (Hiller 1990; Roche 1994; Kim et al. 2006; Gursoy et al. 2011). By reviewing their overall success or failure, it is possible to determine the key issues behind it and thus derive recommendations which can later be used in the context of planning and managing future events (Ritchie et al. 2009). Post-event studies give an opportunity to establish economic, social, cultural benefits and international exposure effects. This helps to establish the true legacy and impacts of a mega-event (Ritchie et al. 2009; Gursoy et al. 2011).

Empirical studies that focused on mega sport events have shown that it is crucial to understand residents' perceptions at different periods of time. Kim et al. (2006), Ritchie et al. (2009) and Lee et al. (2013), in particular, have looked at the periods before and after the 2002 World Cup, the 2012 London Olympic Games, the 2008 Beijing Olympic Games, respectively, and studied residents' perceptions, calling attention to the way they changed with the passage of time. Gursoy et al. (2011) did a similar study but took into account the first week of the 2008 Olympic Games (on-going period) and the post-period.

All these approaches have demonstrated that a clear claim for the need to examine perceptual shifts in community reactions towards events has been raised (Ritchie et al. 2009). An attentive look at (monitoring of) these variations can help policy makers and mega-event planners to better understand residents' perceptions

and act accordingly, including the demystifying of unrealistic expectations of local communities.

Ideally, studies of this kind need to collect data in several waves, including the before, during and after periods, to get a clear picture of the change in perceptions (Gursoy et al. 2011), even if we have to admit that implementing it is quite difficult and expensive. In a few cases, researchers have taken the option of conducting sectional studies in the pre- and post-event hosting. This was the option taken, for example, by Ritchie et al. (2009), and also the one we decided to follow.

The 'after' period seems to be able to give a clearer picture of the impacts of the event than a survey conducted during it. Post-event studies try to establish if the event and all the effects and happenings connected with it met the expectations of participants, host community and other stakeholders. For this, it is usual to get information on various features, such as if community members perceived the event as valuable, if it was worth investing time and resources in it or if they would like to participate in a similar future event. Of course, as there will be long term effects, a more complete picture of those impacts can only be gained several years later (Kaiser et al. 2013).

As has been highlighted by the literature (e.g., Kim and Petrick 2005; Gursoy and Kendall 2006; Kim et al. 2006; Gursoy et al. 2011), before a mega-event residents tend to see it in a rather more positive way, especially if it is a first experience. Among the factors that contribute to it are the marketing campaigns conducted by the organisation committees and promotional information published by national media and government agencies (Kim et al. 2006; Ritchie et al. 2009).

After the event people have a much more realistic and less emotional approach to the impacts of having hosted it. We can also have a much clearer picture of how the event has impacted different kind of stakeholders, including the residents. We must keep in mind that the distribution of costs and benefits will affect different sectors of the local community differently and the perceptions of the impacts, positive or negative, will depend on the system of values of each group of the community members (Kim et al. 2006; Lee et al. 2013).

The members of a community that benefit from an activity, including tourism, tend to support it. However, those who derive little or no benefit from it tend to show their opposition (Kuvan and Akan 2005; Jackson 2008; Ritchie et al. 2009; Nunkoo et al. 2010; Lee et al. 2013; Vareiro et al. 2013). This is valuable whether the mega-event is of a sport, commercial or cultural nature, and regardless of the level of development of the tourism industry. After the event, if they (the residents and other stakeholders) receive the expected benefits, "they are likely to support hosting mega-events in future" (Kim et al. 2006: 87).

The residents' perception of mega-events is one of the most powerful potential indicators within the broader social impact evaluation of mega-events (Ritchie et al. 2009; Gursoy et al. 2011), for the amount of people involved in and for the political pressure that can be put on policymakers.

What seems to be unquestionable is the need to undertake research on communities' behaviour and reactions to the hosting of mega-events. Equally important is the need to obtain a better understanding of the change in perceptions of residents

throughout the process associated with that hosting and also, therefore, the relevance of monitoring it (Kim and Petrick 2005; Kim et al. 2006; Ritchie et al. 2009; Gursoy et al. 2011).

Securing a friendly and hospitable host community is essential to transforming a mega-event into an urban festival (Hiller 1990). That has to do with envisaging the provision of a significant experience to residents and visitors and the achievement of a positive balance in terms of short and long-term overall impacts.

Although it is quite hard and costly to conduct longitudinal research in its strict sense, empirical cross-sectional research that covers the periods before and after an event seem able to make valuable contributions that lead to a better understanding of the concerns mentioned above.

## 16.3 Methodology

The municipality of Guimarães is located in the northwest of Portugal. It has 69 parishes. It is one of the most important cities in the North Region, after Porto, Vila Nova de Gaia and Braga. Its historic centre city was declared a World Heritage Site by UNESCO in December 2001.

In 2012, it was the third time a small Portuguese city had hosted an ECOC, after the capital (Lisbon), in 1994, and the second most important city (Porto), in 2001. In terms of tourism, Guimarães can be considered an emerging cultural destination.

### *16.3.1 Questionnaire and Data Collection*

Data for this study were collected using a self-administered survey of local residents. Given the purpose of the research, four state secondary schools and one vocational school were used to recruit the survey samples. The goal of covering the 69 parishes that constitute the municipality of Guimarães was the reason for using the state secondary schools and a vocational school to deliver the questionnaire. This made possible to consider three generations of residents (15–24-year-olds, 25–64-year-olds and people aged 65 or over) in our two surveys.

The students were aged at least 15 and were the gateway to reach their siblings, parents, uncles and aunts, and grandparents. We asked the 10th to 12th year students to complete the questionnaire and take it home and distribute it to their family members. This was the most efficient way we found to achieve both a higher number of responses and a representative sample of the Guimarães residents.

Data were collected twice from two convenience samples: in the ex-ante period (October and December 2011) 471 questionnaires with complete data were obtained; and after the Guimarães 2012 ECOC (April and May 2013) 551 questionnaires were collected. This corresponds to a total of 1022 respondents.

The number of questionnaires used is similar to other studies, as Lee et al. (2013), where 1076 residents (567 before and 509 after) answered their survey. But it is much higher when compared to other empirical studies, such as that by Gursoy et al. (2011), where 319 residents were surveyed (here in the on-going and post-period).

In the discussion section of our paper we mostly have in mind the findings of Lee et al. (2013), as the samples and many of the items included in both surveys (ours and theirs) to capture the perceived impacts are quite similar.

A pre-test was performed to ensure the internal and external consistency of the questions. It was applied to 10 Guimarães residents before 29 September 2011.

The questionnaire consisted of 18 questions. It was divided into three parts. The first one was related to the intention to participate in the ECOC (in the ex-ante period) or the effective participation (in the ex-post period), and contained six questions. The second part concerned the perceptions of residents on the impacts of the 2012 ECOC (two questions). The third part addressed socio-demographic characteristics, which enabled us to construct a profile of the respondents (e.g. age, sex, marital status, level of education, parish of residence).

A total of 20 items were used in the two surveys to assess Guimarães residents' perceptions of the impacts of the 2012 ECOC. Those 20 items followed those in previous research on the impacts of events (Jeong et al. 1990; Soutar and McLeod 1993; Jeong 1998; Turco 1998; Gursoy and Kendall 2006; Kim et al. 2006; Gursoy et al. 2011). Respondents were asked to evaluate all statements on a five-point Likert-type scale (1 = completely disagree and 5 = completely agree).

Questionnaires distributed before the mega-event aimed to measure *expected* benefits and costs of the Guimarães 2012 ECOC, whereas questionnaires applied after the mega-event measured its *perceived* benefits and costs.

### *16.3.2 Data Analysis*

The respondents' demographic profile was examined first, and the mean scores for all 20 impact perception items from before the event and after the event samples were calculated. Subsequently, the data collected prior to the 2012 ECOC were used to conduct an exploratory factor analysis (EFA) with a principal component method, to detect scale dimensionality.

The appropriateness of factor analysis was determined by examining the Kaiser–Meyer–Olkin measure of sampling adequacy and Bartlett's test of sphericity. After identifying the dimensions, Cronbach's alpha was used to estimate the reliability of each measurement scale. The identified factors were validated with the data collected after the mega-event.

Later, a series of *t*-tests were conducted on the Guimarães residents' perceptions and each individual impact perception was examined utilising before and after data. The *t*-test assesses whether the means of two groups are statistically different from

each other. The *t*-value is positive if the first mean is larger than the second and negative if it is smaller.

## 16.4 Results

### *16.4.1 Sample Profile*

Table 16.1 summarises the demographic profile of the survey respondents taking the socio-demographic variables into account.

In the 'before the event' sample, the majority of the respondents were female (59.2 %), 54.4 % were aged 15–24. The dominant education level was up to 6 years (50.1 %), and 35.5 % of them had monthly household incomes between 500 € and 1000 €. Just over half (55.5 %) of the respondents to the follow up survey were female, 52.1 % were aged 15–24, and about 42.7 % of them had monthly household incomes between 500 € and 1000 €.

The two samples reveal middle to lower-middle class population, which features the characteristics of these categories (INE 2012).

According to these data, we can conclude that there were no major differences in gender and age distribution in the two samples. Also, samples follow the features of some other studies with respect to gender, as women tend to be more represented

**Table 16.1** Profile of respondents

| | Before (N = 471) | After (N = 551) | | |
|---|---|---|---|---|
| | Percent | | $\chi^2$ | p-value |
| Gender | | | 1.421 | 0.233 |
| Female | 59.2 | 55.5 | | |
| Male | 40.8 | 44.5 | | |
| Age | | | 2.614 | 0.271 |
| 15–24 | 54.4 | 52.1 | | |
| 25–64 | 43.1 | 43.6 | | |
| 65 and + | 2.5 | 4.4 | | |
| Education | | | 39.535 | 0.000*** |
| Up to 4 years | 16.0 | 13.5 | | |
| Up to 6 years | 50.1 | 35.8 | | |
| Secondary | 27.7 | 43.0 | | |
| University | 6.2 | 7.6 | | |
| Income | | | 9.442 | 0.024* |
| Less than 500 € | 11.5 | 19.2 | | |
| Between 500 € and 1000 € | 35.5 | 42.7 | | |
| Between 1001 € and 2500 € | 24.4 | 26.6 | | |
| More than 2500 € | 5.1 | 11.4 | | |

***$p < 0.01$, *$p < 0.1$

(e.g. Gursoy et al. 2011; Lee et al. 2013). However, findings indicated that there were more educated residents and in the extreme income groups ('less than 500 €' and 'more than 2500 €') in the 'after the event' sample.

### 16.4.2 Factor Analysis of the Impacts of the 2012 ECOC

Since we had several variables (20) to measure the expected impacts of the 2012 ECOC, an exploratory factor analysis with a principal component method and varimax rotation was conducted to assess the number of underlying factors. Five factors with eigenvalues greater than one were extracted. These factors explained 56.02 % of the total variance, as presented in Table 16.2.

The first factor, which contains seven perception items (all positive impacts), was labelled *Investments and immaterial benefits* and accounts for 22.56 % of the variance. It has a reliability alpha of 0.82 with an eigenvalue of 4.51. The second factor, labelled *Economic, social and environmental costs* comprises six items (all negative). With an eigenvalue of 2.44, it captures 12.21 % of the variance and has a reliability alpha of 0.69. The third factor, named *Safety and infrastructure,* incorporates two items (all positive impacts) and explains 9.35 % of the variance, with a reliability alpha of 0.64. The fourth factor, incorporating two items, both negative, is related to *Changes in traditional practices and habits*, with 6.55 % of variance explained and a reliability alpha of 0.63. With a reliability coefficient of 0.57, factor five, named *Economic and social benefits* (three items and all positive), accounts for 5.36 % of the variance.

Considering the internal consistency of the items within each dimension as measured by the Cronbach reliability alphas, there is a high level for factors 1 and 2 but reasonable for factors 3, 4 and 5. In fact, Nunnally (1978) suggests that reliability alphas close to 0.70 indicate a high level of internal consistency between the individual scale items and the related factors.

### 16.4.3 Comparison of the Guimarães Residents' Perceptions Before and After 2012 ECOC

After the impact factors had been depicted, independent samples *t* tests were conducted to investigate differences in Guimarães residents' perceptions (at the factor and item levels) before and after the mega-event (see Table 16.3).

From this we found that almost all the impacts have mean scores above the midpoint of the scale, even if that is more evident in the before period. This indicates that respondents' agreement with the items proposed was quite high.

The results of the *t*-test indicated that there were significant statistical differences ($p < 0.05$) in two positive impact factors (*Investments and immaterial benefits*

**Table 16.2** Factor analysis for 2012 ECOC expected impacts (N = 471)

| ECOC impact factors (Reliability alpha) | Loading | Eigenvalues | Explained variance | Mean |
|---|---|---|---|---|
| 1: Investments and immaterial benefits (0.82) | | 4.51 | 22.56 | 4.02 |
| Generates more public investment in culture | 0.75 | | | |
| Preserves the built heritage | 0.75 | | | |
| Offers recognition and recovery of traditions | 0.75 | | | |
| Improves the image of the municipality | 0.70 | | | |
| Attracts more investment | 0.69 | | | |
| Improves self-esteem of local population | 0.50 | | | |
| Increases the supply of cultural events | 0.44 | | | |
| 2: Economic, social and environmental costs (0.69) | | 2.44 | 12.21 | 3.25 |
| Creates parking problems | 0.71 | | | |
| Increases traffic | 0.68 | | | |
| Increases waste produced | 0.68 | | | |
| Increases crime | 0.67 | | | |
| Raises prices of goods and services | 0.48 | | | |
| Degrades the physical and natural environment | 0.48 | | | |
| 3: Safety and infrastructure (0.64) | | 1.97 | 9.35 | 3.67 |
| Improves public security | 0.79 | | | |
| Improves local infrastructure | 0.68 | | | |
| 4: Changes in traditional customs and habits (0.63) | | 1.31 | 6.55 | 3.12 |
| Changes habits of Guimarães residents | 0.83 | | | |
| Changes traditional practices | 0.74 | | | |
| 5: Economic and social benefits (0.57) | | 1.07 | 5.36 | 3.28 |
| Increases the income of residents | 0.78 | | | |
| Creates and/or increases employment | 0.60 | | | |
| Improves quality of life | 0.51 | | | |
| Total variance explained | 56.02 | | | |

*Notes*: Extraction method—principal component analysis; Rotation method—varimax with Kaiser normalization; KMO = 0.808; Bartlett's test of sphericity: p = 0.00

and *Economic and social benefits*) and one negative impact factor (*Economic, social and environmental costs*). This means that Guimarães residents expected the 2012 ECOC to generate many economic, social and cultural benefits. Nevertheless, after the mega-event, they realised that the ECOC did not generate as many benefits as they expected.

Respondents also reported a higher mean score for the negative *Economic, social and environmental costs* impact factor before the event than after it. This

**Table 16.3** Comparison of means of ECOC impact factors and items, before and after the mega-event

| ECOC impact factors and items | Mean | | *t*-value | Sig. |
|---|---|---|---|---|
| | Before (n = 471) | After (n = 551) | | |
| 1: Investments and immaterial benefits | 4.02 | 3.87 | 3.944 | 0.000 |
| Offers recognition and recovery of traditions | 4.02 | 3.86 | 3.137 | 0.002 |
| Preserves the built heritage | 4.16 | 3.97 | 3.617 | 0.000 |
| Generates more public investment in culture | 4.06 | 3.87 | 3.650 | 0.000 |
| Improves the image of the municipality | 4.28 | 4.19 | 1.691 | 0.091 |
| Attracts more investment | 4.02 | 3.81 | 3.736 | 0.000 |
| Improves self-esteem of local population | 3.86 | 3.83 | 0.482 | 0.630 |
| Increases the supply of cultural events | 3.74 | 3.53 | 3.846 | 0.000 |
| 2: Economic, social and environmental costs | 3.25 | 3.13 | 3.074 | 0.002 |
| Increases waste produced | 3.05 | 2.99 | 0.824 | 0.410 |
| Increases traffic | 3.68 | 3.61 | 1.171 | 0.242 |
| Increases crime | 2.69 | 2.40 | 4.177 | 0.000 |
| Creates parking problems | 3.83 | 3.77 | 0.984 | 0.325 |
| Raises prices of goods and services | 3.32 | 3.22 | 1.498 | 0.135 |
| Degrades the physical and natural environment | 2.94 | 2.77 | 2.626 | 0.009 |
| 3: Safety and infrastructure | 3.67 | 3.62 | 1.274 | 0.203 |
| Improves public security | 3.57 | 3.49 | 1.466 | 0.143 |
| Improves local infrastructure | 3.78 | 3.74 | 0.657 | 0.511 |
| 4: Changes in traditional customs and habits | 3.12 | 3.18 | −1.156 | 0.248 |
| Changes habits of Guimarães residents | 3.13 | 3.27 | −2.326 | 0.020 |
| Changes traditional practices | 3.11 | 3.09 | 0.304 | 0.761 |
| 5: Economic and social benefits | 3.28 | 3.13 | 3.455 | 0.001 |
| Creates and/or increases employment | 3.57 | 3.32 | 4.150 | 0.000 |
| Improves quality of life | 3.32 | 3.15 | 2.776 | 0.006 |
| Increases the income of residents | 2.95 | 2.91 | 0.618 | 0.536 |

finding suggests that, as time passed, residents realised that the mega-event had fewer costs than they thought it would.

To better understand the variations in impact perceptions due to temporal effects, a series of *t*-tests were carried out on 20 impact perception items (also presented in Table 16.3). The mean scores for all 20 impact perception items for the 'before the event' and 'after the event' samples are displayed in Table 16.3. Ten of the 20 impact items were found to differ significantly between the before and after assessment of impacts.

Findings also indicate that five of the 'before the event' *Investments and immaterial benefits* items have significantly higher mean values than 'after the event', which suggests that Guimarães residents had high expectations about the immaterial benefits and investments that accrue from the 2012 ECOC, but those expectations were not met.

The significantly higher 'before the event' *Investments and immaterial benefits* perceptions items were 'preserves the built heritage' ('before the event' $M = 4.16$; 'after the event' $M = 3.97$; $t = 3.62$; $p < 0.05$), followed by 'generates more public investment in culture' ('before the event' $M = 4.06$; 'after the event' $M = 3.87$; $t = 3.65$; $p < 0.05$), 'offers recognition and recovery of traditions' ('before the event' $M = 4.02$; 'after the event' $M = 3.86$; $t = 3.14$; $p < 0.05$), 'attracts more investment' ('before the event' $M = 4.02$; 'after the event' $M = 3.81$; $t = 3.74$; $p < 0.05$) and 'increases the supply of cultural events' ('before the event' $M = 3.74$; 'after the event' $M = 3.53$; $t = 3.85$; $p < 0.05$).

With respect to the three *Economic and social benefits* items, two in the 'before the event' have significantly higher mean values than in the 'after the event'. Residents indicated that 2012 ECOC 'creates and/or increases employment' ('before the event' $M = 3.57$; 'after the event' $M = 3.32$; $t = 4.15$; $p < 0.05$) and 'improves quality of life' ('before the event' $M = 3.32$; 'after the event' $M = 3.15$; $t = 2.78$; $p < 0.05$) less than they expected.

Examining the eight negative impact items, only three of them showed significant differences between the periods before and after the mega-event. Two of the 'before the event' negative perceptions have significantly higher mean values than 'after the event', indicating that the costs were lower than they expected. Before the event, residents expected crime to increase ($M = 2.69$) and the physical and natural environment to be damaged ($M = 2.94$), which did not occur in the way they thought.

In contrast with many previous studies, where residents realised afterwards that they had underestimated some of the costs of hosting a mega-event (Gursoy et al. 2011) only one of those differences in negative items suggests that the expected cost were higher than they had anticipated. That was the case of the variable 'changes habits' ('before the event' $M = 3.13$; 'after the event' $M = 3.27$; $t = -2.33$; $p < 0.05$).

## 16.5 Discussion

Our empirical approach closely followed others we can find in the literature, such as that described in Lee et al. (2013), which made use of 24 items (4 more than we used). Comparing the results of Lee et al. (2013) with our findings, it is noticeable that "Attracts more investment" (Factor 1) got a similar mean score before and after the mega-event (4.02 vs. 3.81 in our study and 4.02 vs. 3.85 in the Lee et al. 2013). This impact scored a high average in both studies, but it decreases after the hosting of the mega-event.

In seven items for which comparison is possible, the scores obtained by Lee et al. (2013) and by us (related to the increase of investment, price of goods, crime and litter, creation of traffic congestion, destruction of traditional culture, degradation of natural environment), are quite similar except for "increase of waste produced". We got a higher score for this item before the mega-event (3.05 vs. 2.57 in the Lee et al. study), which fell to 2.99 in the after period, while Lee et al. (2013) reported an increase to 3.54.

We believe the above result can be easily be understood as being related to the fact that the Olympic Games are more concentrated in time (duration of less than 1 month) and can attract more tourists than a European Capital of Culture, which organises events throughout a full year.

Also similar to the results reported by Lee et al. (2013) are those concerning the increase in crime. In their case the score did not decrease as much as in ours (2.37 vs. 2.30). Regarding environmental degradation, Lee et al. (2013) found, too, that residents had a higher level of concern in the before period ($M = 3.59$), but the decrease in the after period was greater ($M = 2.13$).

The items 'increases the income of residents' and 'improves quality of life' were found to reach the lowest mean score, both before and after the event. These findings are consistent with several previous studies, which suggests that residents feel that an event offers a major opportunity for improving the community's overall image but they are much less certain that they personally will benefit from it (Kim et al. 2006; Gursoy et al. 2011).

The highest negative shift between the 'before' and 'after' positive impacts perceptions was for the ECOC 'creates and/or increases employment', followed by 'attracts more investment'. The result mentioned is similar to those of Jeong and Faulkner (1996), Kim et al. (2006), and Gursoy and Kendall (2006) but contradicts Gursoy et al. (2011). This finding suggests that residents' expectations relative to the ECOC providing employment and investment opportunities resulted in disappointment.

The smallest negative shift between the 'before' and 'after' positive impacts perceptions, suggesting that the disappointment was lower, occurred with the items 'improved self-esteem of local population' and 'increases the income of residents'.

Residents seemed to have a low level of concern regarding a few negative impacts, like 'increases crime' and 'degrades physical and natural environment', both before and after the event. In that respect, the empirical results are similar to those of Ritchie and Aitken (1984) and Mihalik and Simonetta (1998).

Consistent with previous studies, the positive impacts perceived in the pre-event period were probably inflated by the organisers' advertising campaigns, which highlighted the expected benefits, especially regarding the increase in investment and the amount of visitors expected. After the ECOC, residents could establish a new reference point, realising that the benefits and costs generated were significantly lower than had been envisaged.

## 16.6 Conclusions

This study set out to measure the expected benefits and costs of the Guimarães 2012 ECOC perceived by residents before the mega-event and after its closure. Additionally, the study intended to determine if the residents' perceptions changed based on their experience.

As has been highlighted in the literature review, residents tend to have high expectations about the benefits of hosting a mega-event, although they do recognise that some costs will be incurred. Likewise, before hosting it residents tend to evaluate the event in a rather more positive way. After the event people have a much more realistic and less emotional approach to the impacts of having hosted it.

Our findings confirm some of those of previous research, but contradict a few others. The fall in mean values in all areas and items, except for 'changes in habits', shows that after the ECOC residents realised that the benefits generated were lower than expected. But the costs had also been overestimated.

The perception of negative impacts may have been overestimated as a result of the confrontational atmosphere that prevailed in the pre-event period between the *Fundação Cidade de Guimarães* (City of Guimarães Foundation) (the institution set up to plan and manage the event), the City Hall and the local cultural associations. In fact, an analysis of 239 news items published by one national daily and one local weekly newspaper in 2011, found many negative items related to the issue (Remoaldo et al. 2013).

Examining the positive impacts, three got the highest mean scores: 'improves the image of the municipality'; 'preserves the built heritage'; and 'generates more public investment in culture'. However, the 'after the event' assessment of the positive impacts proved to be lower.

Contradicting other studies, after the mega-event Guimarães residents realised that costs were not as high as they expected. Besides, comparison of the 'before' and 'after' negative impacts perceptions revealed that only the item, 'changes the habits of Guimarães residents', became worse after the ECOC.

We believe this kind of research can be useful as it deals with a stakeholder (residents) that has not attracted much attention from researchers in Southern Europe in general, and in Portugal in particular. Its results could also be important for local authorities handling the planning and management of mega-events and tourism, as, generally speaking, they are not used to considering local residents when reaching their decisions, and they should. If they had residents' concerns in mind, local authorities and event organisers might manage some the problems identified by our empirical research better, like parking, traffic congestion and higher prices of goods and services. We believe is time to move from a hallmark decision-making process to a more collaborative one.

Although the findings of this study could be a valuable contribution to the planning and management of future mega cultural events, some limitations can be pointed out. Our study made use of cross-sectional data from two time periods to investigate the influence of temporal effects. We recognise that the use of a

longitudinal panel of residents would be a better option, but, due to its complexity and to time and budget constraints, we were not able to implement this kind of approach.

Furthermore, data were collected before and after the mega-event (a few months after). Instead of collecting data just after the an event has come to an end, it would be better to gather it a few years after, when costs and benefits can be really fully assessed by residents. With this in mind, the research team intends to implement a new survey in 2015.

## References

Deccio C, Baloglu S (2002) Nonhost community resident reactions to the 2002 Winter Olympics: the spillover impacts. J Travel Res 41(1):46–56

Getz D (1991) Festivals, special events, and tourism. Van Nostrand Reinhold, New York, NY

Getz D (2008) Event tourism: definition, evolution, and research. Tour Manage 29(3):403–428

Getz D (2012) Event studies: discourses and future directions. Event Manage 16(2):171–187

Goeldner R, Long P (1987) The role and impact of mega-events and attractions on tourism development in North America. In: Proceedings of the 37th Congress of AIEST, Chapter 28, pp 119–131

Gursoy D, Kendall K (2006) Hosting mega events: modeling locals' support. Ann Tourism Res 33 (3):603–623

Gursoy D, Chi C, Ai J, Chen BT (2011) Temporal change in resident perceptions of a mega-event: the Beijing 2008 Olympic Games. Tourism Geogr 13(2):299–324

Hall CM (1992) Hallmark tourist events: impacts, management and planning. Belhaven Press, London

Hiller H (1990) The urban transformation of a landmark event: the 1988 Calgary Winter Olympics. Urban Aff Quart 26(1):118–137

INE (2012) Censos 2011 – Resultados definitivos. Instituto Nacional de Estatística, Lisboa

Jackson L (2008) Residents' perceptions of the impacts of special event tourism. J Place Manage Dev 1(3):240–255

Jeong G (1998) Residents' perceptions toward the tourism impacts of the '93 EXPO development on the city of Taejon. J Tourism Stud 18(1):153–173

Jeong G, Faulkner B (1996) Resident perceptions of mega-event impacts: the Taejon International Exposition Case. Festival Manage Event Tourism 4(1):3–11

Jeong G, Jafari J, Gartner W (1990) Expectations of the 1988 Seoul Olympics: a Korean perspective. Tourism Recreation Res 15(1):26–33

Kaiser S, Alfs C, Beech J, Kaspar R (2013) Challenges of tourism development in winter sports destinations and post-event tourism marketing: the cases of the Ramsu Nordic Ski World Championship 1999 and the St Anton Alpine Ski World Chamionship 2001. J Sports Tourism 18(1):33–48

Kim S, Petrick J (2005) Residents' perceptions on impacts of the FIFA 2002 World Cup: the case of Seoul as a host city. Tour Manage 26(1):25–38

Kim HJ, Gursoy D, Lee SB (2006) The impact of the 2002 World Cup on South Korea: comparisons of pre- and post-games. Tour Manage 27(1):86–96

Kuvan Y, Akan P (2005) Residents' attitudes toward general and forest-related impacts of tourism: the case of Belek, Antalya. Tour Manage 26(5):691–706

Langen F (2008) Evaluation: Scotland's year of highland culture. Centre for Cultural Policy Research, University of Glasgow, Glasgow

Langen F, Garcia B (2009) Measuring the impacts of large scale cultural events: a literature review. Impacts 08 European Capital of Culture Research Programme, University of Liverpool, Liverpool
Lee SB, Lee CK, Kang JS, Lee EY, Jeon YJJ (2013) Residents' perceptions of the 2008 Beijing Olympics: comparison of pre- and post-impacts. Int J Tourism Res 15(3):209–225
Lepp A, Gibson H (2011) Tourism and World Cup Football amidst perceptions of risk: the case of South Africa. Scand J Hospit Tourism 11(3):286–305
Liu JCY (2012) The strategy of city cultural governance: 2009 Kaohsiung world games and globalized city cultural images. J Leisure Stud 10(1):47–71
Martins V et al (2004) Avaliação do impacto Económico do EURO 2004, Relatório Final. Instituto Superior de Economia e Gestão, Universidade Técnica de Lisboa, Lisboa
Mihalik BJ, Simonetta L (1998) Resident perceptions of the 1996 Summer Olympic Games – Year II. Festival Manage Event Tourism 5(1):9–19
Nunkoo R, Gursoy D, Juwaheer T (2010) Island residents' identities and their support for tourism: an integration of two theories. J Sustain Tourism 18(5):675–693
Nunkoo R, Smith SLJ, Ramkissoon H (2013) Residents' attitudes to tourism: a longitudinal study of 140 articles from 1984 to 2010. J Sustain Tourism 21(1):5–25
Nunnally J (1978) Psychometric theory. McGraw-Hill, New York, NY
Palonen E (2011) European capitals of culture and the limits of the urban effects in Luxembourg and Sibou 2007. Revista Braliseira de Gestão Urbana 3(2):245–256
Remoaldo PC, Vareiro L, Cadima Ribeiro J, Santos JF (2013) Ex-ante evaluation by the media of the Guimarães 2012 European Capital of Culture. In: Pina H, Martins F, Ferreira F (eds) The overarching issues of the European space: strategies for spatial (re)planning based on innovation, sustainability and change (E-Book). Milena Press, Bucharest, pp 151–170
Remoaldo PC, Cadima Ribeiro J, Mota M, Vareiro L (2014) Perceptions of residents of hosting the "Guimarães 2012 European Capital of Culture": an ex-ante approach. Tourism Hospit Int J 2 (2):71–93
Ritchie JRB (1984) Assessing the impact of hallmark events: conceptual and research issues. J Travel Res 23(1):2–11
Ritchie JRB, Aitken CE (1984) Assessing the impacts of the 1988 Olympic Winter Games: the research program and initial results. J Travel Res 22(3):17–24
Ritchie B, Hall M (1999) Mega events and human rights, research note. http://www.ausport.gov.au/fulltext/1999/nsw/p102–115.pdf. Accessed 20 Feb 2014
Ritchie BW, Shipway R, Cleeve B (2009) Resident perceptions of mega-sporting events: a non-host city perspective of the 2012 London Olympic Games. J Sport Tourism 14(2):143–167
Roche M (1994) Mega-events and urban policy. Ann Tourism Res 21(1):1–19
Roche M (2000) Mega-events and modernity. Routledge, London
Soutar G, McLeod P (1993) Residents' perceptions on impact of the America's Cup. Ann Tourism Res 20(3):571–582
Strauf S, Scherer R (2010) The contribution of cultural infrastructure and events to regional development. In: 50th Congress of the Regional Science Association, Jönköping, Sweden, 19–23 August 2010
Turco D (1998) Host residents' perceived social costs and benefits toward a staged tourist attraction. J Travel Tourism Market 7(1):21–30
Universidade do Minho (2012a) Guimarães 2012: Capital Europeia da Cultura. Impactos Económicos e Sociais. Relatório Intercalar, maio de 2012, Fundação Cidade de Guimarães, Guimarães
Universidade do Minho (2012b) Guimarães 2012: Capital Europeia da Cultura. Impactos Económicos e Sociais. Relatório Intercalar, outubro de 2012, Fundação Cidade de Guimarães, Guimarães
Universidade do Minho (2013a) Guimarães 2012: Capital Europeia da Cultura. Impactos Económicos e Sociais. Relatório Intercalar, fevereiro de 2013, Fundação Cidade de Guimarães, Guimarães

Universidade do Minho (2013b) Guimarães 2012: Capital Europeia da Cultura. Impactos Económicos e Sociais. Relatório Executivo, Fundação Cidade de Guimarães, Guimarães
Van Heck I (2011) The European Capital of Culture: aims, expectations, outcomes and cooperations in relation to this high profile mega event. Nijmegen, Radboud University Nijmegen – Nijmegen School of Management, Master's Thesis – Economic Geography
Vareiro L, Remoaldo PC, Cadima Ribeiro J (2013) Residents' perceptions of tourism impacts in Guimarães (Portugal): a cluster analysis. Curr Issues Tourism 16(6):535–551
Waitt G (2003) The social impacts of the Sydney Olympics. Ann Tourism Res 30(1):194–215

# Chapter 17
# Tourism and Voyeurism in Heterotopia's: The Role of Perception and Information in the Behaviour of Visitors to Amsterdam

**Konstantina Zerva, Karima Kourtit, and Peter Nijkamp**

## 17.1 Setting the Scene

The terraces on the Ramblas in Barcelona or the Champs-Elysées in Paris attract every day thousands of visitors. Notwithstanding the relaxed atmosphere on these beautiful boulevards, it is hard to imagine that these massive volumes of visitors are exclusively attracted by the urban cultural-historical amenities of these boulevards. Both Barcelona and Paris have clearly much more to offer outside the Ramblas or the Champs-Elysées. But the terraces on these places are every day jampacked with tourists. If cultural-historical assets are not the main drivers of these tourists, what else can then be the explanation for such high concentrations of visitors?

The proposition put forward in this paper is that a specific form of social capital, viz. a continuous flow of visitors passing by and to be seen by others, offers a major explanation for tourist density. This phenomenon—known in economics as social externalities—is called *voyeurism,* which refers to the desire of a specific group of visitors that aims at observing the visible behaviour—or speculating on the intentions or features—of other visitors, even without necessarily identifying themselves with their behaviour or their intentions and without explicitly revealing their objective to observe others. The phenomenon of voyeurism has often a negative

K. Zerva
University of Girona, Department of Economics, Girona, Spain

K. Kourtit (✉)
KTH Royal Institute of Technology, Stockholm, Sweden

A. Mickiewicz University, Poznan, Poland
e-mail: karima.kourtit@abe.kth.se

P. Nijkamp
Adam Mickiewicz University, Poznan, Poland

VU University, Amsterdam, The Netherlands



Á. Matias et al. (eds.), *Impact Assessment in Tourism Economics*,
DOI 10.1007/978-3-319-14920-2_17

connotation, but in reality it may be seen as a normal social perception phenomenon. Voyeurism refers essentially to a meta-experience obtained by watching others, and may lead to a subjective interpretation of—or speculation on—the behaviour of other visitors. What are the motives and intentions of other visitors? It is of course an intriguing question to know what happens if full information were available on the real behaviour, goals or motives of the observed visitors. Would full information change the perception of observers? This would normally call for a panel study, based on a before and after experiment. But in reality, it is difficult to get tourists or visitors involved in a time-consuming panel experiment on their motives and intentions.

Voyeurism in the tourist sector is often also related to watching illegal or unconventional behaviour of others, for instance, of football hooligans or anarchists. Clearly, there is a wealth of literature on the statistical relationship between tourism and illegal activities in general (see e.g. Barker et al. 2002; Brunt et al. 2000; Pelfrey 1998; Walker and Page 2008), but another strand of literature, i.e. the attractiveness to visitors of places offering a sense of criminality, scariness or illegality, is much less developed (see e.g., Meschkank 2011; Mura 2010; Thurnell-Read 2009; Zerva 2013).

This phenomenon is sometimes called gang tourism, slum tourism, gaze tourism (Maoz 2006) or even—in a mild way— adventure tourism. The idea behind this type of tourism is that visitors have the opportunity—normally in the form of a supervised or guided tour—to be spectators of unconventional behaviour of others. The places or districts in a city where less conventional or less standard type of behaviour can be seen or perceived are sometimes called '*heterotopia*'s' (Foucault 1984, 1986), or also 'backstages' (Goffman 1959).

The present paper aims to shed some light of the perception change of tourists visiting heterotopias under a voyeuristic spirit. Adding the information provided by a professional tour guide, how does this service change the voyeur's perception and values on delicate matters such as prostitution and soft drugs consumption? An application of the analytical framework is offered for the city of Amsterdam, based on a systematic interview experiment with a participation of foreign students, in which prior and posterior perceptions and views are compared, after a guided information field tour on the organization of 'unconventional' tourist attraction sites was organized.

It is of course an intriguing question to know what happens if full information were available on the real behaviour, goals or motives of the observed visitors. Would full information change the perception of observers? This would normally call for a panel study, based on a before and after experiment. But in reality, it is difficult to get tourists or visitors involved in a time-consuming panel experiment on their motives and intentions.

The reason to choose Amsterdam is that the city has the reputation of unusual freedom, in the sense that many visitors perceive the climate in the city as something which is 'illegal' or 'not done' in their home countries. The Netherlands—often symbolized by Amsterdam—has a liberal legalized framework for often marginalized social activities, in particular, prostitution and soft drugs (see Korf 2002; Kavaratzis and Ashworth 2007). Visitors from all over the world perceive this

phenomenon as a high degree of tolerance and enjoy visiting these places in mass volumes, usually without using these services. They just watch the behaviour of the other visitors (Dahles 1998; Beedie 2008). This has even led to many organized tours for tourists in these unconventional areas. Therefore, Amsterdam may be regarded as an ideal place to study voyeurism under particular conditions.

The present study on tourism and voyeurism is organized as follows. After the introductory section which has outlined the aims and scope of this paper, we offer in Sect. 17.2 a concise overview of city marketing or branding for visitors in which some selected relevant studies are briefly described. We then zoom in on the case of Amsterdam as an interesting 'heterotopia', from both a behavioural and policy perspective. For our case study, two internationally well-known features of the city are highlighted, viz. window shopping (i.e. prostitution in the Red Light District) and coffee shopping (i.e. sales of soft drugs in a controlled setting). This information is contained in Sect. 17.4. Next, we provide a short description of the respondents (interviewees) in our empirical case study and of the three-stage research approach adopted in regard to a specific class of visitors, viz. foreign students in Amsterdam (Sect. 17.5). Descriptive statistical results of our field work are offered in Sect. 17.6, including pattern recognition results from the survey questionnaire based on a content cloud analysis. Further statistical results from a multivariate principal component analysis and an econometric modelling experiment are given in a subsequent Sect. 17.7, while Sect. 17.8 contains concluding remarks.

## 17.2 Concise Review on City Branding in Tourism

The tourism industry has over the past decades turned into a highly dynamic and competitive sector. It has become an international trade sector with a permanently rising economic importance (see Matias et al. 2013). Tourist destinations are increasingly and intensively competing for the favours of tourists, in order to maximize the economic revenues from an ever rising volume of both domestic and foreign visitors. City branding is an important vehicle in this context.

City branding—and the creation of an unique and uniform city image—focuses on the design of an attractiveness profile of the city, to be imagined as an attractive place for working, living, visiting or entertainment, as well as for global investment, while creating a competitive advantage compared to other regions (Neuts et al. 2013), through the reinforcement and smart management of visitors' perceptions of these cities by relevant target markets (Kavaratzis and Ashworth 2007). Amsterdam has been considered as a city that in the past decades has had many vague slogans branding it without a uniformity in style ("*Amsterdam has it*", "*Cool City*"), until the introduction of "*I Amsterdam*", slightly similar to the successful "*I ♥ New York*" slogan (Kavaratzis and Ashworth 2007). Various investigations have analyzed the image of Amsterdam, characterized as a thematically cohesive inner city (or "waterland") with its popular windmills and tulips in its surroundings, relating the capital of a seafaring nation and trading empire (Dahles 1998; Kavaratzis and Ashworth 2007), to creating expectations of Vermeer townscapes

with tightly packed canal houses and buildings. On the other hand, the city is also known for being the home of a socially and politically tolerated culture of sexual and soft drugs liberalism. The lack of a landmark in the form of e.g. the symbolic importance of the Eiffel Tower is Paris, has directed the promotional marketing of this tourism destination towards the concept of the Holland experience, based on an organized diversity of a city culture, which represents an amalgam of cultural structures and practices localized within a specific space and forming Hannerz's (1992) organization of cultural diversity among local, national and global products. This dual image between a "wealthy 'Golden-age' trading city" and a "radical hippie-Mecca" (Kavaratzis and Ashworth 2007: 17)—which has also revealed a gap in ambitions between the private and public sector—is the basic attraction for tourists (Dahles 1998), as it has been branded as a place where anything may be possible (Van Straaten 2000). This form of 'mental adventure' tourism has become an important trade mark of Amsterdam.

Dominated by youth tourism and backpackers, especially from the 1970s onwards, in recent years the city of Amsterdam—being economically and politically interested in attracting more high quality tourism (Neuts et al. 2013)—tries to reorient its present demand away from sex and drugs tourism through urban gentrification. This trend towards more high quality tourism refers to middle-aged, well-educated and economically well-established tourists, who keep a distance from what is considered by some as inappropriate liberalism—which has established a city image of vandalism, personal insecurity and public disorder (Dahles 1998; Kavaratzis and Ashworth 2007)—and who wish to learn about and to experience the motives of the cultural identity of the local residents; that is, these visitors' objectives refer to cultural tourism (Dahles 1998). Yet, for Neuts et al. (2013), this goal has three handicaps, namely, the possible loss of a unique selling point, the achievement of capacity limitations of existing cultural resources, and the loss of destination competitiveness, since on an European scale and from a cultural perspective, Amsterdam then has to compete with cities like Paris, London, Berlin, Barcelona and Prague, to name a few, while from a regional perspective, it mostly has to compete with The Hague and Rotterdam. Thus, there is a dilemma for tourist policy in the city: abandoning the image of a free haven for sex and drugs means an upscaling of the local tourist market, but perhaps with less of visitors in a competitive European setting. Can Amsterdam maintain its high rank in the European tourist industry, by changing its distinct profile? Amsterdam as a heterotopia will be discussed in the next sector.

## 17.3 Amsterdam as a Heterotopia for Voyeurism

Place identity is a major challenge in the tourist sector. It refers to a common sharing of public space reflecting a certain image among locals and visitors. The contribution of a certain space to wealth creation of cities has interested many researchers in the past. Representing a geographical context within which individuals develop their own behavior and interact with each other, space is a product of

social structure and role-playing relations (Gupta and Ferguson 1997; Andriotis 2010). This context can "give theoretical stories veracity and texture" (Arnould et al. 2006), while it can be sub-divided in as many categories as social structures can allow. Within these spaces, there are particular settings where individuals are liberated from the pressures of everyday life (Andriotis 2010); the tourism industry has been in a constant search of these settings so as to transform them into touristic products supported by city branding.

This type of social space different to other spaces has been called by Foucault (1984, 1986) a "*heterotopia*", meaning real places "outside of all places" (p. 24) working as counter-sites of illusion where human life is partitioned and where reordering is possible (Topinka 2010). For Foucault (1984, 1986), heterotopia's can function in different fashions according to the synchrony of the culture in which it develops; they can juxtapose in a single real place, or in several incompatible spaces; they open into heterochronies, where an individual has an absolute break from traditional time perceptions; they presuppose a system of opening and closing, where access is not free like a public place and entrance requires a certain permission; they function in relation to all the space that remains either by creating a space of illusion or of compensation; and finally, they exist in every culture in the form of crisis or deviation. This last form is of most interest in our case, where individuals express a behavior that deviates from the required or officially adopted norm. In the investigation of Andriotis (2010), a particular case of beach heterotopia was studied, where the physical space of the beach, the behavior of its users deviating from the heterosexual norm, and a community tolerance towards that activity left grounds for that space to be interpreted as heterotopia.

For Foucault (1986), some of the visitors of these heterotopia's are called 'guests in transit', meaning visitors with no involvement in the culture they visit, observing behaviours and activities foreign to what s/he is accustomed to. These guests are not engaged in activities with locals, remaining out of contact with them through sightseeing (Boorstin 1961). As outlined in Sect. 17.1, one way of sightseeing is known as '*voyeurism*'. A voyeuristic personality is defined as "one who seeks stimulation by visual means" (Blazer 2006: 379). For Calvert, western countries have become nations of voyeurists, where the individual "gets pleasure from watching other's lives without having to interact with them" (2000: 80), influenced by television programs, such as reality shows, that appeal to their curiosity and make them passive spectators. The more deviated from the norms the lives of the people observed are the higher the voyeuristic tendency is; and the more frequent the contact with such a content is, the lower the empathy of the voyeur is (Landwehr 2011), while new technological devices allow voyeurist to easily record their subject (Carvert 2000).

## 17.4 Two Attractiveness Vectors of Amsterdam

Although the city of Amsterdam has a wealth of tourist attraction forces (architecture, political history, water management, arts and culture etc.), it has over the past decades gained a reputation as a free haven for tolerance and liberalism, in particular in regard to two functions of its Red Light District, viz. prostitution and soft drugs. These two facts will now briefly be described.

### *17.4.1 Red Light District and Prostitution*

Amsterdam accommodates one of the most famous red light districts in Europe, called De Wallen or De Walletjes (Aalbers and Deinema 2012). Representing the sex capital of Western Europe (Ashworth et al. 1988) or adult theme parks (Aalbers and Sabat 2012; Neuts 2016), De Wallen has developed into a visible, safe and legal area of sex-related activities in the zone of Zeedijk, on the south-east part of the city, between and next to the Central Station and the symbolic city square De Dam.

The geographic setting where prostitution generally takes place depends on conflicting powers within cities (Aalbers and Sabat 2012), raised by how it is being socially perceived (Hubbard and Whowell 2008). We will offer here first a concise general description of this complex force field.

In general, in most societies, prostitutes have been marginalized as the exotic, erotic and demonized feminine Other (Hubbard 1998; Aalbers and Sabat 2012), characterized as fallen women or bad girls, and a threat to male bourgeois values (Roberts 1992), since they play with their fears and fantasies, challenging the dominant notions of socially respectable feminine sexuality, and defile the purity of the streets. The body and its parts are the basic instrument that expresses the other, and through commodification, prostitution transforms it from a human category into an object of economic and emotional desire (Sharp 2000). This body commodification of window prostitutes is highly visible in the Amsterdam Red Light District (Hubbard 1998), where the pleasure if looking at the Other as an erotic object endorses voyeurism, often in a passive form but also in a participative one (Ryan and Martin 2001).

Thus, the prostitute (mostly—though not exclusively—a female one), often considered aesthetically and morally offensive, stigmatized and stereotyped as the cause of environmental and social problems of inner city areas, is associated with dark and dangerous areas, where she is being contained, monitored and regulated, either in the form of ‘out of sight’ or on the street in red light districts (Hubbard 1998). These districts represent liminal spaces, known to be poor, dangerous and deprived, as well as rapidly transformed, where there are blurred boundaries between visibility and invisibility, forming what is named as ‘zones of transition’ (Burgess 1928; Aalbers and Sabat 2012). This moral geography designates where

each member of a society appropriately belongs according to the established moral and social structure of that society (Hubbard 1998; Aalbers and Deinema 2012).

Ever since the fourteenth century, the former inner-harbor of Amsterdam was the main reason for the attraction of prostitution and an important commercial activity in the area. In the year 1413, one of the first bye-laws of the City of Amsterdam claimed that prostitution was necessary in big commercial cities (Brants 1998), while the appropriate place for it to develop was the brothel, licensed by local authorities, which determined its location and visibility (Aalbers and Deinema 2012). Since then, social tolerance of the activity of prostitution became a fact in the Netherlands, creating a long social, political and legal tradition, which is the reason why culturally the 'Dutch solution' cannot be easily applied in other countries (Brants 1998).

Throughout time, an interplay between pro and against prostitution regulation has taken place in the Netherlands, whether for medical issues of the prostitutes and their clients, or the general image that was created, relating the Netherlands with crime and other vices that went together with prostitution. In 1850, brothel regulation was propagated, while in 1911 the keeping of brothels was criminalized, but not the prostitutes (Brants 1998; Aalbers and Deinema 2012), who were seen as entrepreneurs for their own protection. In the 1950s and 1960s, prostitutes were approached as vulnerable professionals that needed protection and to be re-socialized (Boutellier 2008). The Red Light District of De Wallen became a tolerated spectacle for the remaining residents and the non-related sex entrepreneurs on the area, combining danger and crime with excitement and freedom. This de facto decriminalization of window prostitution (as well as the use and selling of marihuana) is known as 'gedogen' in Dutch, meaning a regulated or pragmatic tolerance or a political compromise, under the shadow of criminal law (Brants 1998; Aalbers and Deinema 2012; Aalbers and Sabat 2012).

On October 1st, 2000, the controversial matter of prostitution was legalized (Aalbers and Deinema 2012), accepted as regular labor, governed by market forces (Brants 1998), withdrawing the brothel ban. In time, regulated tolerance came back transforming many old-fashioned brothels to the so-called window prostitution, attracting immigrant prostitutes from the Third World, former Dutch colonies in the West Indies as well as former East-block countries (Brants 1998), while opening lucrative sex clubs and theatres. Prostitutes are now required to be registered to the Chamber of Commerce, declare their earnings and pay taxes, while non-EU nationals need to have a valid working permit (Neuts et al. 2013). Yet, legalization of window prostitution had resulted in illegal and underground prostitution, with an increase in the number of undocumented migrants and under-aged prostitutes (Aalbers and Deinema 2012; Neuts et al. 2013). The passing of prostitution into big business meant the creation of various organized networks which controlled the area through illegal and semi-legal activities, transforming De Wallen from a romantic and safe part of the city during the 1960s to a no-go area during the 1990s.

A governmental entrepreneurial strategy to spatially redevelop the historical core of Amsterdam is reflected in the so-called Plan 1012 (or 'Operation 1012' or 'Coalition Project 1012), launched in 2007 and named after the zip code of the

district (Aalbers and Deinema 2012). This Plan focuses on the rebranding of Amsterdam's destination image so as to attract upper-scale cultural tourists, and more particularly on the reduction of criminal and abusive activities realized by marginalized social groups (such as prostitutes, junkies and enterprises like coffee shops and cheap tourist shops), and on the economic upgrade of the area, through gentrification based on public-private partnerships, like NV Stadsherstel, Grand Hotel Krasnapolsky, ING Real Estate and many more (Aalbers and Sabat 2012; Neuts et al. 2013). Prostitution, despite its tolerance and social recognition, has always been surrounded by the aura of illegal and, thus, the basic aim of the Plan is the reduction of its presence in De Wallen, closing down three-quarters of the windows, a target renegotiated constantly with the City of Amsterdam (Aalbers and Deinema 2012). The licensing system of window prostitution has been regulated, making sure that no more licenses can be offered.

Since the year 2007, window prostitution is reduced by 23 % through a windows exchange for a municipal zoning plan, and property sale to public or private cooperatives (where financial compensation of approximately 150,000 euros per window is given to the brothel owner), and expropriation (Neuts et al. 2013). Nonetheless, the desired and programmed situational improvement is not that evident and the reason for that is gentrification, because it can destroy the basis of attraction of a particular space. The decline of window prostitution is not the result of the decline of prostitution in general, but of its displacement from De Wallen, and its spatial—and occasionally short-term—substitution by the creative industry (meaning shops, ateliers, galleries, exhibitions and minimalist restaurants) in the center of the De Wallen (Aalbers and Deinema 2012). What many refer to as 'restoring the balance', basically has to do with hiding prostitution from the public eye, that is, making the relationship between sex, power and money no longer visible (Hubbard 1998, 2004), which is one of the most important tourist attractions of the area (Ashworth et al. 1988; Wonders and Michalowski 2001; Hubbard and Whowell 2008).

There is a clear connection between the sex and the tourism industry, which coexist spatially and economically, since prostitution has been considered as a leisure activity (Rojek 2000; Ryan and Martin 2001; Aalbers and Sabat 2012), while its clients, who are to an important degree tourists, need accommodation, restaurants and other tourist services. The economic profitability of the window brothels and the power of this 'experience economy' (Pine and Gilmore 1999) is without doubt the reason why new industries (unrelated to the sex industry) are reluctant in investing in the area and in achieving the profit levels of red light activities (Neuts et al. 2013). The Red Light District in Amsterdam is attracting approximately three million visitors a year (Hubbard and Whowell 2008), while many tours are in charge of guiding tourists and voyeurists around the district, explaining the actual local situation of prostitution and its related unconventional activities.

### *17.4.2 Red Light District and Coffee Shops*

The control and concentration of cannabis markets in the Netherlands became a vital issue for the local authorities and civic movements willing to protect middle-class youth from an uncontrolled contact with the drugs market, and particularly becoming marginalized and stigmatized. The nation's alternative as well as pragmatic orientation on the particular matter was called 'learning by doing' (MacCoun 2011), establishing the above mentioned so-called 'gedogen' policy (as previously mentioned in the case of prostitution), which in this case would refer to a certain degree of legal protection and tolerance of some segments of the soft drugs market in exchange for an unproblematic social behavior (Van der Veen 2009). The priority of the police and judicial authorities is focused on large-scale drugs trafficking and production (Monshouwer et al. 2011). In an effort to separate the hard and soft drugs market, distancing the cannabis buyer from hard drugs users and sellers (called the 'getaway theory', see in MacCoun 2011), and to standardize an economic sector what was formally illegal, Dutch authorities invented the coffee shop system. The latter began from the beginning of the 1970s, where some houses in Amsterdam that sold cannabis and hashish were developed into coffee shops (Van der Veen 2009). Their number increased during the 1980s, due to official non-enforcement guidelines and unclear directions from the government, leading during the 1990s to less desirable features of tolerance, that is, criminal activity. For this reason, many municipalities have decided to have no coffee shops within their jurisdiction (Van der Veen 2009). On an international level, though similar initiatives have been applied in countries like Canada, Switzerland, Thailand or the Amazon region (Uriely and Belhassen 2006; Van der Veen 2009), the transmissibility of the coffee shop system is highly influenced by cultural perceptions of the state, citizens and market actors in regard to drugs production and consumption.

Coffee shops represent coffee-like places—of a variety of styles and atmospheres—in the Netherlands where the sale of cannabis is tolerated when meeting the so-called AHOJ-G criteria (established in 1996); that is, no advertising, no sale of more than 5 g per person per day, no sale to persons under the age of 18, no sale of hard drugs and no nuisance in the vicinity, while each coffee-shop has a 500 g stock limit (MacCoun 2011; Monshouwer et al. 2011). Yet, in reality, they always have more supplies, renting tax-deductible safe-houses, while for their daily cash flow and administration they have legitimate bank accounts (Van der Veen 2009). Though being a widespread phenomenon in the country, their number is decreasing due to the so-called Damocles' Law, which allows local governments to close down coffee shops when they do not comply with the rules (Van der Veen 2009; Monshouwer et al. 2011). For example, in 2007, the national government decided to close coffee shops that were too close to schools, eliminating half of the coffee shops in Rotterdam (Van der Veen 2009). Their number reached at the end of 2011, 661 in a total of 104 municipalities, compared to 702 in 2007 (Bieleman et al. 2009, 2012). About half of them are located in the city center of Amsterdam, catering

mainly non-locals, since residents will choose to purchase soft drugs in their own neighborhood for reasons of quality and price (Van der Veen 2009).

Quality control from the retailers' part is a matter of expertise, trust in suppliers and trial, while some have their own plantations or work with specialized wholesale offices (kantoortjes). Generally, the supply of coffee shops with cannabis is known as the "back-door problem" (Monshouwer et al. 2011; MacCoun 2011), based on the need to control intensified cannabis cultivation and trade. In this case, there are no formal regulations regarding the precise conditions under which it can operate properly (Van der Veen 2009). Prices on the other hand, are rather high, especially in touristic areas, in order to cover the owners' costs of operating retail outlets, taking also in consideration the effects of the 'gray market' that exists between the higher level of the supply chain (growers and traffickers)—where the Dutch law enforces prohibition—and the user level—where there is 'de facto' legalization (MacCoun 2011; Monshouwer et al. 2011).

Yet, the establishment of the coffee shop system does not mean that in the Netherlands necessarily more cannabis products are consumed than in other countries. The Netherlands occupies a middle position in cannabis consumption by the adult population within Europe (Monshouwer et al. 2011), while countries like France, UK and Germany either match or exceed marihuana use of the Netherlands (Van der Veen 2009; MacCoun 2011). The difference is the open access to what is called in other countries as the forbidden fruit, converting this symbolic social meaning of the coffee shops into an important tourist attraction of the Netherlands (Van der Veen 2009), delivering enhanced economic and social benefits for the hosts, as well as a reputation for deviant tourism-related behaviors and a negative social impact upon the local community (Buultjens et al. 2013). Estimations indicate that a quarter of the 4–5 million tourist visitors in Amsterdam, visit a coffee shop, while 10 % of them state that as a reason of the travel (Amsterdam Tourist Information 2007). Considering that tourism in general is perceived as a legitimate departure from day-to-day behavioural constraints (Goffman 1959), this tourist profile represents what is known as 'drugs tourism', meaning the phenomenon of being attracted to locations of permitted access to licit or illicit drugs (Valdez and Sifaneck 1997; Korf 2002). Consumption of drugs is included as a possible activity—studied in terms of risk-taking and 'controlled decontrol' behaviour during a tourist visit (Uriely and Belhassen 2006)—, but it is not a necessary condition in order to practice drugs tourism.

### *17.4.3 The Role of Tour Guides*

Within the tourism industry, one of the most known and safe ways to quickly gaze particular settings of the destination is taking a tour. For Pearce (1984), tourists retain global impressions of the setting they visit through the tour, concerned without necessarily experiencing a radical change of concepts. Yet, the topic of the tour, its setting as well as the role of the tour guide could play an important part

in the way tourists end up perceiving the culture visited. Tour guides, usually local ones, are front-line employees responsible for the success of the tour (Geva and Goldman 1991), considered as key actors in providing access to Goffman's (1959) front stage as well as backstage tourism settings (Holloway 1981) and "localizing" a destination (Salazar 2005), through personal interaction with tourists for a considerable amount of time (Geva and Goldman 1991). The complex content of being a guide is defined in various ways, for example, as one "who leads or shows the way, especially to a traveller in a strange country" (Oxford 1933: IV/490), or "one who directs a person in his ways or conduct" (p. IV/491), or one "who interprets in an inspiring and entertaining manner, in the language of the visitors' choice, the cultural and natural heritage and environment" (IAMT, EFTGA 1998). The guiding role is multifaceted; a guide can be a pathfinder or a mentor, a leader or a mediator (Cohen 1985), an information-giver and fount of knowledge (Cohen 1985), acquired whether from training or from 'know-how', an ambassador for one's country, a host who creates a comfortable environment for the guest (Pond 1993), or an entertainer for the group (Holloway 1981). Their mission is to provide a deeper insight and understanding of the attractions tourists observe during the tour, solve problems that may occur during the tour (Geva and Goldman 1991), but also they could be more business-oriented, interested in selling particular images, information, or souvenirs in order to receive commission (Salazar 2005).

When tour guides mediate between tourists, locals and the environment, bridging and linking groups of different cultural backgrounds in order to reduce conflicts and enhance understanding on matters that can be interpreted in various ways, they are cultural brokers (McKean 1976; Leclerc and Martin 2004; Reisinger and Steiner 2008). Understanding different cultural systems while mediating cultural incompatibilities allows tourists to gaze—even momentarily—a different cultural context through the eyes of the local. Nonetheless, this is not an essay task, considering that tourists are not an homogeneous group of people, but a mixture of various national cultures, which previous investigations have shown to perceive and react differently to the same information given by the tour guide (Pizam and Sussman 1995; Pizam and Jeong 1996). This process of cultural broking is also known as 'glocalization' (Robertson 1994), a term used by Japanese businessmen to express "a global outlook adapted to local conditions" (Tulloch 1991: 134). For Moscardo et al. (2004) this happens, because tourists make links between their current knowledge and perception, and someone else's interpretations. Perceptions of a destination depends on the information exchange that occurs from an amalgam of sources such as previous guests to the destination, local tourism authorities, local tourism businesses, popular media, and, today, electronic word-of-mouth (Buultjens et al. 2013). According to Geva and Goldman's investigation (1991), the guide's influence on the consumers' perception in terms of conduct and expertise is highly important. Based on marketing strategies which support that "diversity sells", globalization leads to the construction of new consumer traditions (Salazar 2005), focusing on what tourists have seen, heard, experienced and interpreted.

In the remaining part of this paper we aim to find out which perception tourists from different cultural contexts have on Amsterdam and particularly the Red Light

District before visiting it, how they feel about the tolerant liberal policies regarding prostitution and soft drugs consumption, and how they change their perceptions about these sensitive policies after taking a guided and informed tour, taking into consideration that they do not represent sex or drug tourists but 'voyeurists'. Is the educational role of a tour in the heterotopia visited sufficient to change the tourists' pre-established perception of the importance of tolerance and legalization of social practices that are experienced differently in their home countries or culture of origin?

## 17.5 A Triple-Layer Research Design

The empirical part of the voyeurism research in this study focuses on the information perception and treatment by visitors of the city of Amsterdam. To that end, a dedicated survey questionnaire was designed, which contained both personal items (age, place of origin, etc) as well as perceptional items (on Evaluation of Red Light Phenomena). This survey was next used as a source of information from the participating visitors (i.c., foreign students). In this process, we adopted a triple-layer approach, which means that, once a group of visitors has been selected and been informed on the aims of the research, an extensive survey questionnaire is sent to each of these visitors individually to be filled out by everyone. This questionnaire contains in a systematic form a range of open-ended questions on:

- general ideas and specific perceptions on the city of Amsterdam prior to their visit (including information sources, assumed behaviour of tourists etc.)
- specific questions on the Red Light District of Amsterdam, subdivided into items on substitution and on soft drugs (including information on perceptions and rules of conduct in their country of origin).

Next to general informative questions, there was also a set of items to be responded to through close-ended questions, by using a 5-point Likert scale, e.g., on the importance of cultural heritage for tourists, on social policy in the city, on the perceived level of danger in the Red Light District, on information and marketings, on repeat visits etc. This step was the first stage in the triple-layer approach.

The next stage was to organize—a few days after the completion of the prior survey questionnaire—a professionally of 1 hour and a half guided tour through the Red Light District, where a local, qualified expert was providing all relevant and detailed information of the history, the local policy, the social circumstances and much more empirical information on the area concerned.

Finally, in the last stage all participants were asked to fill out a posterior survey questionnaire—of 16 open-ended and 16 close-ended questions, with largely similar items, to test whether the perceptions and value beliefs of these visitors had changed, after they had participated in the field tour and had a chance to discuss all relevant issues among themselves.

Thus, the final data base[1] of these visitors comprised two fully completed survey questionnaires on largely similar issues, so that it could be tested whether real information (obtained through a guided tour and information exchange) really mattered for their perceptions on the Red Light District. This was essentially a panel study with two or three waves. We only used in our analysis the survey questionnaires from these visitors who had participated in all three stages.

It goes without saying that it is hardly possible to perform such a panel study in three layers over a time span of approx. a week for regular tourists. And therefore, we used a panel of recently arrived 29 students, mostly from foreign countries all over the world. This means of course a limitation of the class of tourists to students, but this option appeared to be the only realistic possibility to undertake this study on voyeurism in the tourist sector in Amsterdam.

The next section (Sect. 17.6) will be devoted to a descriptive statistical presentation of the main findings from our research.

## 17.6 Empirical Research

### *17.6.1 Descriptive Statistics of Empirical Findings*

The findings from our—prior and posterior—survey questionnaire regarding the 29 participants in our panel of students are now briefly presented and commented on. We will first offer some descriptive statistics in the form of frequency tables and histograms.

Table 17.1 presents some socio-demographic characteristics of the students concerned from all over the world. Most of the respondents examined in our research appear to be male (55 %) (the share of male students from European countries appeared to be 40 %, though).

In the pre-visit stage of our research, *Gender* and *Country* characteristics did not show significant differences in preferences for living in Amsterdam among males (μ: 4) and females (μ: 4), from European and Non-European countries (see Fig. 17.1). Next to *Gender* and *Countries* features, this study also shows that more than half of the respondents were between 19 and 21 years old.

In the survey questionnaire, the respondents were also asked to indicate on a Likert scale (1–5) how they perceived the overall image of Amsterdam as a living and tourism destination, before and after the guided tour in the city of Amsterdam. In the *pre-visit stage*, the majority of respondents in the categories *Gender* and *Countries* (90 %) expressed a strong positive perception (μ: 4) on the *overall image* of Amsterdam and of the importance of *cultural heritage* (CH) in the city of Amsterdam (see Table 17.2).

[1] The detailed data base is available from the authors on request.

**Table 17.1** Respondent profile

| Demographic characteristics | Percentage |
|---|---|
| *Gender* | |
| Female | 44.8 |
| Male | 55.2 |
| *Age* | |
| 19–21 | 51.7 |
| 22–24 | 41.4 |
| 25 and over | 6.9 |
| *Countries* | |
| Europe | 51.7 |
| Non-Europe | 48.3 |

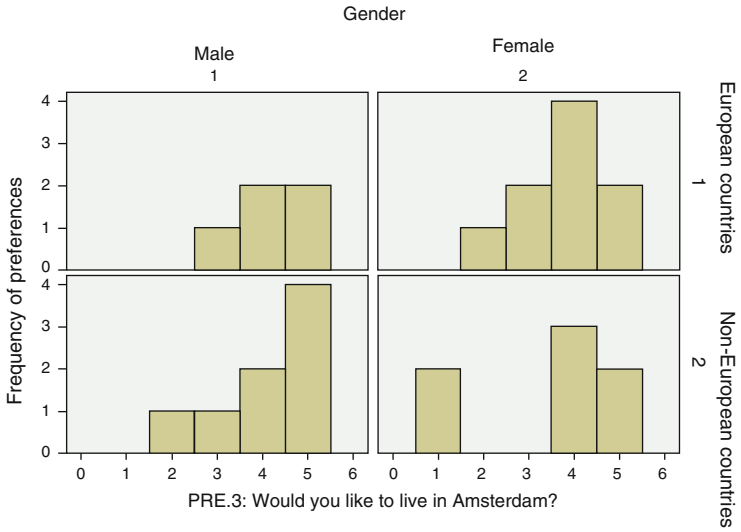


**Fig. 17.1** Frequency of preferences for living in Amsterdam among males and females from European and non-European countries

**Table 17.2** Pre-visit and post-visit perception on the importance of CH in the city of Amsterdam

| General observations: pre-visit and post-visit perception on the importance of CH in the city of Amsterdam | Average pre-visit | Average post-visit |
|---|---|---|
| *Gender and countries* | | |
| Female within EU | 3.83 | 3.83 |
| Female outside EU | 4.14 | 3.86 |
| Male within EU | 4.13 | 3.50 |
| Male outside EU | 4.00 | 4.25 |

**Table 17.3** General observations—pre-visit and post-visit perception on the general image of Amsterdam

| General observations: pre-visit image of Amsterdam and post-visit image of Amsterdam | Average pre-visit image of Amsterdam | Average level change post-visit image of Amsterdam |
|---|---|---|
| *Gender and countries* | | |
| Female within EU | 4.14 | 2.86[a] |
| Female outside EU | 4.17 | 3.00[a] |
| Male within EU | 4.00 | 3.00[a] |
| Male outside EU | 3.25 | 2.38[a] |

[a]Level of overall image of Amsterdam as a tourism destination changed after the tour from 1 = not at all, to 5 = yes, strongly scale

Their general perception was expected to support mostly tangible CH, such as small charming 'grachten' houses, ancient and typical European architecture flavour of styles, historical canals, arts, museums, bridges, churches, buildings, parks, windmills, monuments, Dam square, etc. and to interfere with homogeneous modern socio-economic life, that creates harmony in the city. Their positive perception on the *overall image* of Amsterdam did not change dramatically after the guided tour. The positive imagination on the *overall image* of Amsterdam and the important role of CH was highly confirmed by the majority (60 %) in the *post-visit stage* (see Table 17.3).

In the *post-visit stage* the visitors demonstrated much respect and were interested in legendary, protected and isolated areas, downtown areas, the Red Light district, leisure activities or recreation, churches, legislation of drugs and prostitution, bikes, coffee shops, flowers, fishery, nature, parks, landscape, and canal and dike systems. Most of them were also attracted by intangible CH such as art and artists on the streets, diversity, languages, dynamic culture, fashion, freedom, social beliefs, people, vibrant nightlife, tolerance, religions, symbolisms, richness of lifestyles, food, beer, cheese, living, simplicity, and a mixed variety of classic and modern (hidden) architecture style (sometimes related to religious values) and atmosphere of the city of Amsterdam.

The majority of the respondents (69 %) strongly expressed their feeling that the guide did not influence strongly the level of their highly positive perception of the image and the CH in the city of Amsterdam in the *post-visit stage*, because most of them used various sources of information on Amsterdam in the *pre-visit stage*.

### *17.6.2 Pre-visit and Post-visit Stages: Two Attractiveness Vectors of Amsterdam and the Legal Framework*

In this subsection specific questions on the Red light District of Amsterdam, subdivided into items on prostitution and on soft drugs (including information on perceptions and rules of conduct in their country of origin) will be presented. The

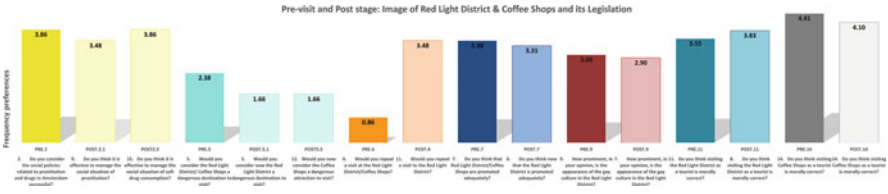


**Fig. 17.2** Pre-visit and post-visit stage: image of Red Light District and coffee shops and its legislation

questions used across all stages for different attractiveness vectors of Amsterdam were the same. This fabricated a framework approach which enabled us to combine and compare findings in our research. Table 17.3 presents the values and beliefs of voyeurists in the *pre-visit* and *post-visit* stage regarding their expectations and experience questions surrounding the two attractiveness elements of Amsterdam and its legislation.

- *Pre-visit* and *post-visit stages* comparison: Red Light District and Coffee Shops of Amsterdam

  *Pre-visit* and *post-visit* information appears to have a certain impact on the visitors' perceptions of the various items related to the Amsterdam Red Light District. From Fig. 17.2, it appears that the value and belief of voyeurists in the *pre-visit* and *post-visit stage* regarding an appropriate promotion of the Red Light District and Coffee Shops indicate an average perception and belief of $\mu = 3.00$ and $\mu = 3.67$ from a scale 1 to 5, respectively. The average score of the voyeurists indicates that the use of information and the role of tour guides in the two *stages* still shows more space for improvement to promote adequately the Red Light District and its surroundings. So, even though the tour guide was considered as an information-giver (Cohen 1985) or even a cultural broker (McKean 1976; Reisinger and Steiner 2008) in communicating different cultural systems to a heterogeneous group of tourists, in contradiction to Geva's and Goldman's research (1991), his mission to provide a deeper understanding was not fully satisfied. In the *pre-visit* stage, the majority of the voyeurists (55.5 %) imagined the place to exhibit a 'Las Vegas' happy-effect (a surrealistic weird place with prostitutes everywhere in Coffee Shops, pubs and bars and a happiness atmosphere, full of tourists, a night life with sexual and soft drugs-related activities in narrow streets).

  Clearly, in the *post-visit stage*, the value and belief system of voyeurists (62.1 %) regarding the image of the district and its activities regarded the Red Light district and Coffee Shops after the guided tour more as a safety and special open-minded atmosphere with a diversity in styles and themes, and sometimes confusing aspects. In particular, this is a crowded and enjoyable open place with a lot of large windows—where people respect people (high tolerance and freedom of choices) and a professionalism in prostitution (strict regulated by

the government)—and rather weird attractions (e.g. 'eye candies') and touristic expressions; a well-structured must-see controlled attraction of Amsterdam integrated with businesses, public institutions and surrounded by beautiful facades.

The value level of safety linked to dangerous images and negative expectations and experiences of voyeurists in the Red Light District and Coffee Shops, as expressed in our questionnaire, was mostly related to consequences for *health safety* (e.g., addictions) and less to danger (apart from pickpockets) in the area. Their perceptions of danger in the Red Light District and Coffee Shops were generally below average ($\mu = 2.0$), in both *stages* (*pre-visit*: 86.2 %; *post-visit*: 93.15 %) lower than their general imagination and reality experiences of the places and their knowledge of the history of Amsterdam. Therefore, considering the overall value of visiting the Red Light District and Coffee Shops, the majority (72 %) did not express a negative view on incorrect *morality* (*pre-visit* $\mu = 3.7$) for site-seeing. This clear preference (*post-visit* $\mu = 4.3$) was confirmed by the majority (74 %) in the *post-visit stage* due to the Dutch 'non-taboo' culture and the unique character, different atmosphere, new educational experiences, open-minded freedom of choice, high tolerance, safety (also in terms of knowledge of a quality product), and localized and controlled recognized profession and legalization.

- *Pre-visit* and *post-visit stages* comparison: policies on prostitution and soft drugs use

  As a final check on value and belief system, voyeurists were asked if the visit had met their expectations on the social situation of prostitution and soft drugs consumption. A total of 72 % considered the social policies and strictly management (i.e., rules and regulations) related to prostitution and drugs in Amsterdam effective and successful (*pre-visit* $\mu = 3.9$). This would mean a support for the city's policy on the new generation with transparency, better control and more possibilities to avoid crime and an illegal economy and the increase in safety and quality of local life and working conditions (i.e., hygiene and health, good image, free market, inclusive part of society) and services (i.e., customer protection). However, 48 % still believes, beside their optimism (*post-visit* $\mu = 3.7$), that the tour had exceeded their perception, that there is always space for improvement regarding diversity in entertainment, facilities, understanding and knowledge of the use effects and health regulations in the city centre of Amsterdam.

### 17.6.3 Content Cloud Analysis on Branding Words as Information Sources on the City

The results from Sects. 17.6.1 and 17.6.2 are further supported by a visualization tool based on a '*content cloud*' analysis of key elements of the city Amsterdam. A 'content cloud' offers a hierarchically decomposed and visualized presentation—often in a multi-colour format—of the most relevant terms used in a scientific text, based on the frequency of their use (see also Kourtit 2014: 177; 2015: 368). It is not a research tool in itself, but merely a visualization method of qualitative information contents. The 'content cloud' related to the overall unique selling points (USP) expressed in the *pre-visit* and *post-visit* stages promoting the city Amsterdam is presented in Fig. 17.3.

Figure 17.3 offers a content cloud mapping of important concepts from the survey questionnaires often used in the city marketing of Amsterdam, such as historical assets, architecture, museums, canals, liberal lifestyle, etc. They more or less confirm the prevailing international image to promote the city of Amsterdam among visitors.

Furthermore, various sources of information on the image of the city Amsterdam are used in the *pre-visit stage*. The 'content cloud' related to *information sources* regarding the image of the city Amsterdam is presented in Fig. 17.4.

Figure 17.4 demonstrates a variety in the use of *information sources*, in particular, *social networks* (e.g., friends, family), *professional networks* (e.g., international offices at universities, schools, (exchange) students, coordinators), *ICT-tools* (e.g., Internet, Google Search, Facebook, Twitter, Wikipedia, Youtube, Tripadvisor, Iamsterdam, Blogs, university websites, tourist websites), (national and international) *travel agencies and journals, books* (e.g., 'One Month Trip to Amsterdam', Petit futé Amsterdam (French)), followed by words-of-mouth. These

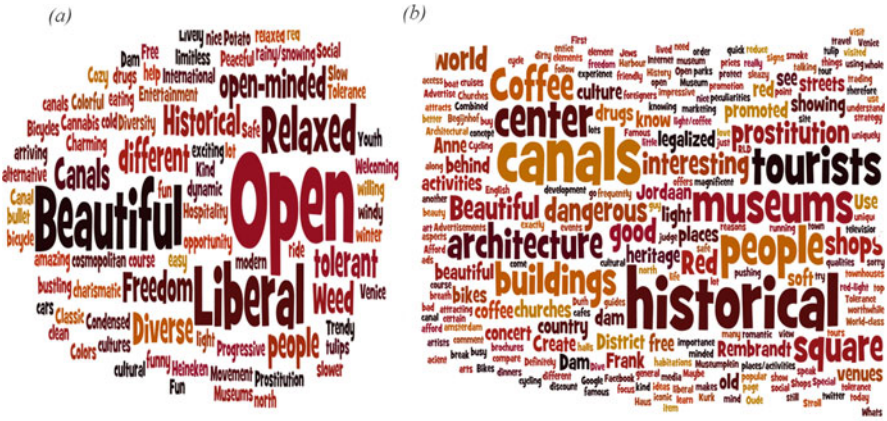


**Fig. 17.3** A 'content cloud' of the key words for the city of Amsterdam, in the (**a**) pre-visit and (**b**) post-visit stages


**Fig. 17.4** A 'content cloud' of the key sources of information on the city of Amsterdam, in the pre-visit stage

sources help the majority (i) to receive reliable and specific information, and (ii) to get a broad understanding and perception on the city and its hidden treasuries, daily liveability and local legislations. A small group did not search for any information in the *pre-visit stage*, but wanted to experience it all by themselves.

## 17.7 Statistical-Econometric Analysis

### *17.7.1 Multivariate Analysis*

The focus of our survey questionnaire was to understand the value system of *tourist voyeurism* from different cultural contexts regarding the general image of the city of Amsterdam and its information sources on the city in different *time-stages*. Tourists are not only standard visitors of important or popular places of interest. In making their decisions what or where to visit, they are also influenced by the expected or realized behaviour of others and the use of information sources on the issue. Despite the relatively small sample in our research, it is interesting to try out some further statistical analysis on the critical importance of various types of social externalities that influence the motives and behaviours of the voyeurism phenomenon in the city of Amsterdam, with an emphasis on two well-known characteristic phenomena in this area, viz. prostitution and soft drugs. Tools used to analyse the voyeurism phenomenon—based on a before and after experiment—are multivariate analysis and regression techniques. Given the small sample size of 29 visitors, our results are to be seen as purely indicative.

**Table 17.4** Factor analysis of image of Amsterdam

| Pre-visit | | | Post-visit | | |
|---|---|---|---|---|---|
| Factor 1 Pre-TandEA | Factor 2 Pre-SHandT | Factor/item | Factor/item | Factor 1 Post-SHandT | Factor 2 Post-TandEA |
| | .731 | Promoting the Red Light District adequately (PRE.7) | Safety and attractiveness of coffee shops (POST5.5) | −.869 | |
| | .637 | Morality visiting the Red Light District (PRE.11) | Morality visiting the Red Light District (POST11.11) | .661 | |
| | .705 | Social situation of soft drugs consumption (PRE.2) | Social situation of soft drugs consumption (POST2.2) | .744 | |
| .690 | | Repeat visits to the red light district/coffee shops (PRE.6) | Repeat visits to the red light district/coffee shops (POST.6) | | .866 |
| .638 | | Appearance of the gay culture in the Red Light District (PRE.9) | Appearance of the gay culture in the Red Light District (POST.9) | | .797 |
| .739 | | Morality visiting coffee shops (PRE.14) | Morality visiting coffee shops (POST.11) | | .599 |
| | .601 | Agreement local residents with legalized consumption of soft drugs (PRE.13) | | | |

A Principal Component Analysis (henceforth, PCA) approach was employed on the various types of social externalities variables, in order to identify important elements in the value system that cause changes in tourist voyeurism perceptions using a 1–5-item scale and open questions, after they have been exposed to real-world and site-specific information on the *heterotopia's* of Amsterdam.

First, normality was verified through a Kolmogorov–Smirnov test, as was the quality of the factor analysis through a Barlett's test and Kaiser-Meyer-Olkin (above 0.5). These tests all yielded satisfactory results. The factor analysis of the image of Amsterdam in the *pre-visit* and *post-visit stages* yielded two factors, with an eigenvalue higher than one, explaining 50 % of the variance of the destination image scale, as depicted in Table 17.4.[2] A Varimax rotation was applied, to secure a less ambiguous condition between factors and variables (Hair et al. 1998; De Waal and Kourtit 2013). Communalities reproduced the stated variance in the variable through the number of factors in the factor solution. Several variables with a communality lower than 0.4 were removed from the dataset (see also De Waal and Kourtit 2013).

[2] The detailed PCA output results are available from the authors on request.

Table 17.4 allows us to identify the applied varimax-rotated first important factor pattern for the *pre-visit stage* which may be interpreted as "*Governance and Ethical Aspects*" (TandEA) (three items) regarding the Red Light District and the use of soft drugs. The second important factor refers to a factor, which may be interpreted as *Safety-Health* and *Tolerance* (SHandT) (four items). In the *post-visit*, the results show an opposite pattern in priority of the main factors. In the *post-visit*, *Safety-Health* and *Tolerance* (SHandT) (three items) is now considered as the most important factor regarding the Red Light District and the use of soft drugs followed by "*Governance and Ethical Aspects*" (three items).

### *17.7.2 An Econometric Experiment*

In this section, we analyse the *change* in the general pre-visit and post-visit value system (a person's mental imagery of knowledge and overall feeling and perception (see Crompton 1979; Fakeye and Crompton 1991) of voyeurists based on the absorbed selective information regarding the attractiveness vectors in the city of Amsterdam, by using a regression model framework. We aim to test the hypothesis *whether generally the beliefs and perceptions of the voyeurists from different cultural contexts in the pre-visit and pro-visit stage tend to attain a positive higher value level of the general city's image, after participation in a guided and informed tour on the attractiveness (and its legislation) of the city of Amsterdam.*

The framing of the '*pre-visit and post-visit value system'* is related to the general destination image. Accordingly, we consider two distinct indices to test the pre-visit value system regarding the general city image of Amsterdam. These are included in a simple regression model estimated by means of ordinary least squares (OLS) using the database described above, with the original variables measured on a Likert scale. The main—mutually independent—factors from the PCA (see Table 17.4) were used as measurable transformed explanatory variables in our regression model:

$$g_{i,\text{post}} = f\left(Z_{1i,\text{post}}, Z_{2i,\text{post}}, \ldots\right),$$

where $g_{i,\text{post}}$ is value of a posterior perception of the city image of Amsterdam by respondent $i$, and where $Z_{ji,\text{post}}$ is the posterior value of the explanatory variable $j$ ($j = 1,2$) extracted from the multivariate analysis (see also particular the definitions provided in Sect. 17.5). Given the insights obtained from the PCA analysis (see right-hand column of Table 17.4), we included the two prominent post-visit stage measures; these appeared to show clearly a significant and positive relationship regarding the general image of the city Amsterdam.[3] The econometric results for our sample are shown in Fig. 17.5.

[3] We estimated also various alternative models in the pre-visit and post visit stages with other indices, but the results did not change dramatically. The results are available from the authors on request.

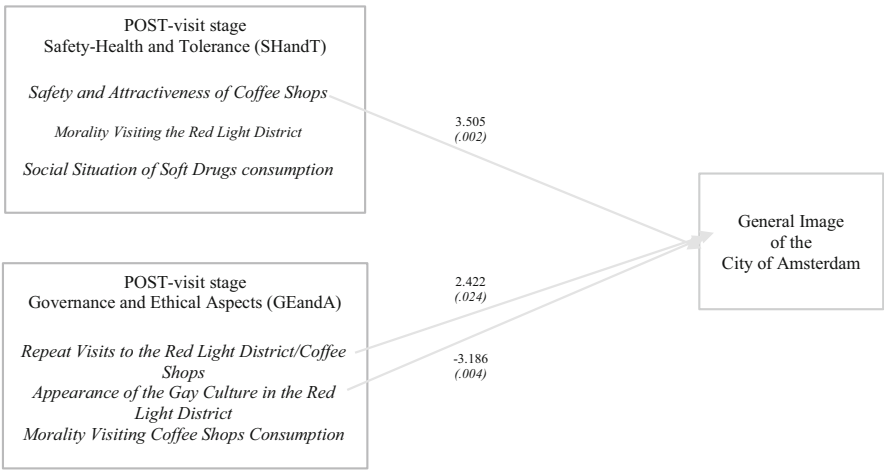


**Fig. 17.5** Multivariate econometric modelling results

Figure 17.5 shows that the *t*-values for *Morality visiting the Red Light District* and *Repeat visits to the Red Light District/Coffee Shops* were found to be significant (on the basis of a significance level of p:.005) regarding the general image of the city of Amsterdam, while also the *t*-value for *Appearance of the Gay Culture in the Red Light District* was found to be also significant (p:.005). We will now offer an interpretation for these indicative findings.

In the *post-visit stage*, the voyeurists were exposed to—and were well informed on—the attractiveness of the Amsterdam heterotopia's, viz. the Red Light District and the Coffeeshop District, and the legislation of the city of Amsterdam. These items are described here as *Safety-Health and Tolerance* (SHandT) and *Governance and Ethical Aspects* (GEandA), but these are to be understood in a broader context of history and policy. The Red Light District and the CoffeeShop District have their own historical positioning story to tell, with their open culture, arts, architecture, fashion, tolerance and open mindedness towards prostitution, drugs, open sexuality, etc. So there is a maintained long history with an intangible cultural heritage in each heterotopia in the city which reflects the image of Amsterdam, that is also well protected through long-standing policies by the local government. This means that each district with its own identity and characteristics ('brand') is unique, as the director of the Rijksmuseum, Wim Pijbes, mentioned in an interview on a blog[4] "*the Red Light District is RED and not PINK!*", because of its codification in the sub-historical en cultural system of the city Amsterdam.[5]

[4] http://behindtheredlightdistrict.blogspot.nl/2014/08/amsterdam-and-tourisms.html

[5] Pijbes warned not to confuse "*the minors present at the Gay Pride with the girls behind the windows in red light*", as more physical appearance of the gay culture in the Red Light District or the opposite in the oldest and traditional gay areas will confuse the voyourist's perception of the general image of the city of Amsterdam.

Tourists do not always share the same values and preferences of what is happening in the practice of legalized prostitution or drugs (even sometimes not in their home country). However, through fairly strict regulations regarding *safety, health* and *ethical* aspects in combination with an unique history behind these places and their surrounding inimitable streets, canals, recreational places, churches, tolerance, markets, safety, good opportunities and quality of life, and creative and cultural ambiance in the city of Amsterdam, the majority of the visitors may find it *morally correct* and may encourage *repeat visits* to learn and find more in these extraordinary places in a broader context. These factors act as important drivers to stimulate tourists to look at other places and strengthen their thoughts in a broader sense regarding the identity and the general image of the city of Amsterdam: '*a place 4 all*'(see also Nijkamp and Kourtit 2013).

## 17.8 Epilogue

Tourist destinations have often a branding that emphasizes unique and attractive features of a city. As a consequence, millions of visitors are pulled into these destinations, but in various cases many visitors are not only attracted by the touristic specificities of a given destination, but also by the presence of a great many other visitors. Watching each other—especially in an unconventional or folerant setting—is a common characteristic of a heterotopia. The inner city of Amsterdam—with a diversified culture and a variety of gazing areas—is a glaring example of a heterotopia that attracts millions of tourists. This forms the basis for the phenomenon of voyeurism analysed in the present study.

Our study has examined various aspects of voyeurism among tourists who do not wish to consume the tourist services, but to experience opposite interpretations of reality as tourist attractions, in particular, legalized forms of prostitution and soft drugs consumption in the Red Light District of Amsterdam. In our field work, we had to resort to a limited sample of recently arrived students, who participated in a pre- and post-visit survey questionnaire experiment, complemented with a full-information professional guided tour. The main focus of our research was on the intriguing question whether objective information on seemingly illegal activities of visitors would change the perceptions—and the underlying value systems—of visitors, based on a pre- and post-survey stage. It turned out that the place perception of voyeurists was influenced by professional information, but that their value systems appeared to be rather robust. It seems that tour guides may act as filters so a to inform visitors on factual conditions (and hence, are abe to influence their perceptions of tourist sites), but they are unable to change the visitors' value systems. It goes without saying that in a city branding the role of tour guides in shaping images of the city ought to receive due attention.

Particularly, we show evidence that the positive perception of Amsterdam's image and its cultural heritage does not change much after the tour, highlighting that the informational sources they used before visiting the city, like social and

professional networks, had a higher influence than the tour guide himself. Thus, the importance of the guide in the tour product in the influence of existing tourist perception (Geva and Goldman 1991) is in jeopardy in comparison to the rest of the sources that tourists use in order to get information on a destination (Buultjens et al. 2013). Nonetheless, regarding the particular issues of Red Light District and Coffee Shops, participants notice the transition from a "Las Vegas" happy setting (pre-visit) to a more safe and open-minded atmosphere, with respect and professionalism on prostitution and soft drugs consumption, while indicating a need for improvement of the actual promotion of the Red Light District in general and within the tour setting in particular. On a value level, whether before of after the tour, the grand majority did not connect immorality with site-seeing. All these factors support their claim to wish to repeat a visit to Amsterdam.

Considering the limited number of participants in this research, the basic objective was to put into question the effectiveness of a tour as an educational tool in tourism, after choosing delicate social issues of voyeurism, where the tour guide's interpretation is fundamental for the comprehension of these heterotopia's. Further investigation should be conducted so as to demonstrate up to which level the touristic service of a tour needs improvement in order to promote adequately—and add new information about—a touristic destination.

## References

Aalbers BM, Deinema M (2012) Placing prostitution. City: Analysis of Urban Trends, Culture, Theory, Policy, Action 16(1–2):129–145

Aalbers BM, Sabat M (2012) Re-making a landscape of prostitution: the Amsterdam Red Light District. City: Analysis of Urban Trends, Culture, Theory, Policy, Action 16(1-2):112–128

Amsterdam Tourist Information (2007) Are Amsterdam's coffee shops about to disappear? Available via http://www.dutchamsterdam.nl/183-are-amsterdams-coffeeshops-about-to-disappear

Andriotis K (2010) Heterotopic erotic oasis: the public nude beach experience. Ann Tourism Res 37(4):1076–1096

Arnould E, Price L, Moisio R (2006) Making contexts matter: selecting research for theoretical insights. In: Handbook of qualitative research: methods in marketing. Edward Elgar, Cheltenham, pp 106–128

Ashworth GJ, White PE, Winchester HPM (1988) The Red-Light District in the West European City: a neglected aspect of the urban landscape. Geoforum 19(2):201–212

Barker M, Page SJ, Meyer D (2002) Modelling tourism crime; the 2000 America's Cup. Ann Tourism Res 29(3):762–782

Beedie P (2008) The adventure of urban tourism. J Travel Tourism Market 18(3):37–48

Bieleman B, Beelen A, Nijkamp R, de Bie E (2009) Coffeeshops in Nederland 2007. Intraval, Groningen-Rotterdam. Available via http://www.intraval.nl/pdf/MCN07_b74_sum.pdf

Bieleman B, Nijkamp R, Bak T (2012) Coffeeshops in Nederland 2011, Summary. Groningen: Intraval, Groningen-Rotterdam. Available via https://english.wodc.nl/images/2021a-summary_tcm45-450185.pdf

Blazer SM (2006) Rear window ethics: domestic privacy versus public responsibility in the evolution of voyeurism. Midwest Quart 47:379–392

Boorstin DJ (1961) The image. Weidenfeld and Nicolson, London

Boutellier JCJ (2008) 'Lútopie de la sécurité; Ambivalences Contemporaines sur la Crime et la Peine. De Boeck Larcier, Bruxelles
Brants C (1998) The fine art of regulated tolerance: prostitution in Amsterdam. J Law Soc 25 (4):621–635
Brunt P, Mawby R, Hambly Z (2000) Tourist victimisation and the fear of crime on holiday. Tour Manage 21(4):417–424
Burges EW (1928) The growth of the city. In: Park RE, Burges EW, McKenzie RD (eds) The city. University of Chicago Press, Chicago, IL
Buultjens J, Neale K, Lamont M (2013) Hosts, guests and a drug culture in a destination: a case study of Nimbin, Australia. J Destination Market Manage 2:185–195
Carvert C (2000) Voyeur nation: media, privacy, and peering in modern culture. Westview Press, Boulder, CO
Cohen E (1985) The tourist guide: the origins, structure and dynamics of a role. Ann Tourism Res 12:5–29
Crompton JL (1979) Motivations for pleasure vacations. Ann Tour Res 6(4):408–424
Dahles H (1998) Redefining Amsterdam as a tourist destination. Ann Tourism Res 25(1):55–69
de Waal A, Kourtit K (2013) Performance measurement and management in practice: advantages, disadvantages and reasons for use. Int J Product Perform Manag 62(5):446–473
EFTGA (1998) European federation of tour guides association – Information brochure. Unpublished
Fakaye PC, Crompton JL (1991) Image differences between prospective, first-time and repeat visitors to the lower Rio Grande valley. J Travel Res 30(2):10–16
Foucault M (1984) Of other spaces: Utopias and Heterotopias. Architecture, Movement, Continuité. Available via http://web.mit.edu/allanmc/www/foucault1.pdf
Foucault M (1986) Of other spaces. Diacritics 16(1):22–27
Geva A, Goldman A (1991) Satisfaction measurement in guided tours. Ann Tourism Res 18:177–185
Goffman E (1959) Presentation of self in everyday life. Doubleday Anchor, New York, NY
Gupta A, Ferguson J (1997) Beyond culture: space identity and the politics of difference. In: Watson S, Gibson K (eds) Postmodern cities and spaces. Blackwell, Oxford
Hair J, Anderson R, Tatham R, Black W (1998) Multivariate data analysis, 5th edn. Prentice Hall, Englewood Cliffs, NJ
Hannerz U (1992) Cultural complexity: studies in the social organization of meaning. Columbia University Press, New York, NY
Holloway JC (1981) The guided tour: a sociological approach. Ann Tourism Res 8(3):377–402
Hubbard P (1998) Sexuality, immorality and the city: red-light districts and the marginalisation of the female street prostitutes. Gender Place Cult 5(1):55–72
Hubbard P (2004) Revenge and injustice in the revanchist city: uncovering masculinist agendas. Antipode 36:665–686
Hubbard P, Whowell M (2008) Revisiting and Red-light district: still neglected, immoral and marginal? Goeforum 39:1743–1755
Kavaratzis M, Ashworth G (2007) Partners in coffeeshops, canals and commerce: marketing the city of Amsterdam. Cities 24:16–25
Korf DJ (2002) Dutch coffee shops and trends in cannabis use. Addict Behav 27:851–866
Kourtit K (2014) Competitiveness in urban systems – studies on the 'Urban Century'. VU University, Amsterdam
Kourtit K (2015) The 'New Urban World' – economic-geographical studies on the performance of urban systems. Adam Mickiewicz University, Poznan, Poland
Landwehr MJ (2011) Voyeurism, violence, and the power of the media: the reader's/spectator's complicity in Jelinek's The Piano Teacher and Haneke's La Pianiste, Caché, The White Ribbon. Int J Appl Psychological Stud 8:117–132
Leclerc D, Martin NJ (2004) Tour guide communication competence: French, German and American tourists' perceptions. Int J Intercult Rel 28:181–200

MacCoun RJ (2011) What can we learn from the Dutch cannabis coffeeshop system? Addiction 106(11):899–910
Maoz D (2006) The mutual gaze. Ann Tourism Manage 33(1):221–239
Matias Á, Nijkamp P, Sarmento M (eds) (2013) Quantitative methods in tourism economics. Physica-Verlag, Berlin Heidelberg
McKean PF (1976) An anthropological analysis of theculture brokers of Bali: guides, tourists and Balinese. In: Paper, Joint UNESCO/IBDR seminar on the social and cultural impact of tourism, Washington, 8–10 December 1976
Meschkank J (2011) Investigations into slum tourism in Mumbai: poverty tourism and the tensions between different constructions of reality. Geojournal 76:47–62
Monshouwer K, van Laar M, Vollebergh WA (2011) Buying cannabis in 'coffee shops'. Drug Alcohol Rev 30:148–156
Moscardo G, Wood B, Saltzer R (2004) The role of interpretation in wildlife tourism. In: Higginbottom K (ed) Wildlife tourism: impacts, planning and management. Common Ground Publishing, Victoria, pp 231–252
Mura P (2010) Scary . . . But I like it! Young tourists' perceptions of fear on holiday. J Tourism Cult Change 8(1–2):30–49
Neuts B, Devos T, Dirckx T (2013) Turning off the red lights: entrepreneurial urban strategies in De Wallen Amsterdam. Appl Geogr 49:39–44
Neuts B (2016) An econometric approach to crowding in touristic cities: evaluating the utility effect on local residents. Tour Econ (Forthcoming)
Nijkamp P, Kourtit K (2013) The 'New Urban Europe': global challenges and local responses in the urban century. Eur Plann Stud 21(3):291–315
Oxford (1933) Oxford English Dictionary, IV. Clarendon, Oxford
Pearce LP (1984) Tourist' guide interaction. Ann Tourism Res 11:129–146
Pelfrey VW (1998) Tourism and crime: a preliminary assessment of the relationship of crime to the number of visitors at selected sites. Int J Comp Appl Crim Justice 22(2):293–304
Pine J, Gilmore J (1999) The experience economy. Harvard Business School Press, Boston, MA
Pizam A, Jeong G (1996) Cross-cultural tourist behavior: perceptions of Korean tour-guides. Tourism Manage 17(4):277–286
Pizam A, Sussman J (1995) Does nationality affect tourist behavior? Ann Tourism Res 22 (2):901–917
Pond K (1993) The professional guide: dynamics of tour guiding. Van Nostrand Reinhold, New York, NY
Reisinger Y, Steiner C (2008) Reconceptualising interpretation the role of tour guides in authentic tourism. Curr Issues Tourism 9(6):481–498
Roberts N (1992) Whores in history. Grafton, London
Robertson R (1994) Globalization or glocalization. J Int Commun 1:33–52
Rojek C (2000) Leisure and culture. St. Martin's Press, New York, NY
Ryan C, Martin A (2001) Tourists and strippers: liminal theater. Ann Tourism Res 28(1):140–163
Salazar BN (2005) Tourism and glocalization: "local" tour guiding. Ann Tourism Res 32 (3):628–646
Sharp LA (2000) The commodification of the body and its parts. Annu Rev Anthropol 29:287–328
Thurnell-Read PT (2009) Engaging Auschwitz: an analysis of young travellers' experiences of Holocaust Tourism. J Tourism Consumption Pract 1(1):26–52
Topinka JR (2010) Foucault, Borges, Heterotopia: producing knowledge in other spaces. Foucault Stud 9:54–70
Tulloch S (ed) (1991) The Oxford Dictionary of new words: a popular guide to words in the news. Oxford University Press, Oxford
Uriely N, Belhassen Y (2006) Drugs and risk-taking in tourism. Ann Tourism Res 33(2):339–359
Valdez A, Sifaneck S (1997) Drug tourists and drug policy on the U.S.-Mexican border: an ethnographic investigation. J Drug Issues 27:879–898

Van der Veen HT (2009) Regulation in spite of prostitution: the control of cannabis distribution in Amsterdam. Cult Critique 71:129–147
Van Straaten S (2000) De Walletjes als themapark voor volwassenen. Rooilijn 33:438–443
Walker L, Page SJ (2008) The visitor experience of crime: the case of Central Scotland. Curr Issues Tourism 10(6):505–542
Wonders N, Michalowski R (2001) Bodies, borders, and sex tourism in a globalized world: a tale of two cities – Amsterdam and Havana. Soc Probl 48:545–571
Zerva K (2013) Crime and tourism: organizational opportunities and social marketing in LA gang tours. J Tourism Cult Change 11:92–108