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Innovative Business Development—A Global Perspective

25th International Economic Conference
of Sibiu (IECS 2018)



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New Globalization or... quite the Opposite



Lia-Alexandra Baltador

Abstract Globalization is a phenomena that has been around for the last 6–7 decades. Others would argue that there’s been millenniums since it first appeared, starting with the Roman Empire, or even before. Still, no one is debating its existence or the fact that it influences the way we conduct our activities, or, in a broader sense, our life. Economic development is today unthinkable outside this framework, as it is simultaneously cause and effect thereof. As a consequences, our world, increasingly “flat”, “hot” and “overcrowded” is facing major challenges, such as climate change, social exclusion, poverty, to name but a few. Still, not many have raised the question if this phenomena is reversible. Some did consider that the phenomena of globalization itself is being altered and modified, but what outcome might this bring for the future. This paper aims to indicate possible scenarios, by systemizing recent contributions on the “New globalization” and by analyzing one of the most used index for measuring this phenomena.

Keywords New globalization · Anti-globalization · Protectionism

1 Introduction

Globalization is a household concept, although it has many definitions and even scholars try hard to find a general accepted approach. According to Gerald Helleiner the word itself “has now become so slippery, so ambiguous, so subject to misunderstanding and political manipulation, that it should be banned from further use, at least until there is precise agreement as to its meaning” (Helleiner 2006). In the economic field, some consider it to be a process in which national economies have become increasingly integrated and interdependent. The United Nations and other international institutions considers that “the term is generally used to describe an increasing internationalization of markets for goods and services, the means of production,

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financial systems, competition, corporations, technology and industries” (UN 2002). Yet others “...a widening, deepening and speeding up of interconnectedness in all aspects of contemporary social life from the cultural to the criminal, the financial to the spiritual” (Held and McGrew 1999). So, “most—if not all—human activity happening around the world is interconnected and interdependent” (Edwards 2003). “Globalism means a complete revolution in the thought process, a kind of Copernican revolution in business thinking” which, assisted by innovations in telecommunication led to “the “death” of distances (Cairncross 1997).

Sure, it is a complex concept and there are many implications. There is not a general agreement even with regard of its predominant positive or negative effects. Is globalization the highway to heaven or the road to hell? The answer depends on how you define globalization, what aspects you consider (e.g., economics, human rights, communication), whether you view it as a top-down or bottom-up process. As with many things, the answer may also lie in the eye of the beholder. Most scientific research on the subject carried out by scholars from developed economies insist on the obvious link between globalization and the high economic growth and development in the “North”. “When trade barriers come down, the factory floor can span borders and oceans, enabling production to be organized in new and more efficient formats, leading to more value creation and greater wealth” (Cato Institute 2016).

Canadian economist Gerald Helleiner, cited by Noam Chomsky brings a different perspective

The poor complain; they always do
 But that’s just idle chatter
 Our system brings reward to all
 At least all those who matter. (Fox 2001)

Other prominent critics like Joseph Stiglitz consider that the problem is that globalization has not been pushed carefully, or fairly.” Liberalization policies have been implemented too fast, in the wrong order, and often using inadequate—or plainly wrong—economic analysis (Edwards 2003), much to the disadvantage of the “South”. As we will see further, one of the country most inclined to anti-globalization measures arouses surprise, as it doesn’t come from the South, but it’s the leader of the North.

2 The Evolution of Globalization

Such a large-scale phenomenon that has been around for many years is bound to be subject to change. Richard Baldwin considers that, during the history of mankind, there have been three main constraints that have imposed the separation between production and consumption: “The cost of moving goods, the cost of moving ideas and the cost of moving people” (Baldwin 2016). The first unbundling has started “when the dictatorship of distance was overthrown”, at the time of the steam revolution, which “eventually launched modern Globalization...and opened the door to

three interconnected phenomena—trade, agglomeration, and innovation.” (Baldwin 2016). The consequence was the big Divergence, between the pace and scale of economic development among the countries taking part and coordinating the Industrial Revolution and those who only suffered its effects. “Since know-how moved internationally with great difficulty, G7 productivity gains stayed national. This localization of newly created know-how yielded—in just a handful of decades—enormous gaps between incomes and wages in the North (mostly Western Europe, North America, and Japan) and the South (developing nations)” (Baldwin 2016).

The last century, even more so after the Second World War, brought an increase in Economic Globalization. The GATT, as well as the Bretton Woods Institutions aimed to reduce barriers on international trade in goods, services and capital markets.

This divergence has been further sustained by the “second unbundling”, through the cost reduction in moving ideas. This contributed to the creation of complex Global Value Chains by multinational companies, through relocation of production all around the world. The further “flattening” of the world economy, in Thomas Friedman’s words was possible through globalized trade, outsourcing, supply-chaining and political liberalization. The effects that this second unbundling brought about is more nuanced. Multinational companies relocate their production in prevalent low-wage countries, exploiting more relaxed fiscal, environmental and labor laws and conditions, to name but a few. There are voices who consider this practices as being unethical and, thus, unacceptable. But the answer might not be that simple and forward. The chances for the people in those region to find a workplace in the absence of the multinationals are limited. There are low-wage workplaces, but some argue that they are better than none at all. Additionally, some training and transfers of technology occurs as well, raising the level of the overall workforce performance. Still, it should not contribute to the environmental degradation and does not excuse child labor or inhumane labor conditions. This opportunity was given by the facile transfer of ideas, know-how and management practices, which the new ICT-innovations permitted. It also meant that “manufacturing stages that previously had to be done within walking distance could be dispersed internationally without colossal losses in efficiency or timeliness. Once the ICT revolution opened the door to off shoring, and the enormous wage gaps that arose during the Great Divergence pushed it over the threshold (Baldwin 2016).

The only restraint remaining is that regarding the cost of moving people. Nowadays, with the development of Artificial Intelligence this final constraint might be overcome as well, transforming much the way we work and live.

3 Measuring Globalization

The intricate ways in which most economies, companies and people are currently linked is very difficult to assess. On the one hand it’s the multiple domains in which relations may occur, so it is multifaceted, on the other, it may vary according to different circumstances.

The KOF Globalization Index, a composite indicator, measures the economic, social and political dimensions of globalization for almost every country, since 1970. According to the researcher of the KOF Swiss Economic Institute “globalization in the economic, social and political fields has been on the rise since the 1970s, receiving a particular boost after the end of the Cold War” (Dreher 2006).

In determining this index, used in more than 100 studies and considered to be the most used globalization index in literature (Potrafke 2015), globalization is defined as “the process of creating networks of connections among actors at multi-continental distances, mediated through a variety of flows, including people, information and ideas, capital and goods. It is a process that erodes national boundaries, integrates national economies, cultures, technologies and governance and produces complex relations of mutual interdependence (statista.com).

More economically globalized countries are those with low tariffs on imports, lower non-tariffs barriers, more free-trade agreements, as well as states with regulations that encourage foreign investments.

As these considerations leave out some other relevant aspects, the index includes also social and political aspects of Globalization. With regards to the latter, political globalization is also in debate. As some argue today’s political structure is borderless in nature, particularly in economic perspective and thus, the sovereignty of nation states is questionable. It refers to “the growing power of global governance (...), but it also refers to the spread and influence of international non-governmental organizations, social movement organizations and transnational advocacy networks, constituting a kind of global civil society for the promotion of democracy and human rights” (Delanty and Rumford 2007). The political index includes the numbers of embassies and high commissions, number of international organization to which a country is a member, number of UN peace missions and the number of treaties signed between a country and others.

Considering the third sub-indices, social globalization is determined by personal contacts of citizens with other nationals, information flows and cultural proximity.

After a revision in 2018 of the KOF Globalization Index (initially introduced by Dreher in 2006) some changes in constructing the Index will be put in place. This revision “introduces the differentiation between de facto and de jure measures along the different dimensions of globalization, the differentiation between trade and financial globalization within the economic dimension of globalization and time-varying weighting additional variable in the construction process” (Gygli et al. 2018). According to the most recent results of this Index, in 2015 the most globalized nations were Netherlands, Switzerland and Sweden. According to the same top, mostly was European and developed countries are leading, with few exceptions (United Arab Emirates 11th place and Canada 15th).

4 Free Trade Versus the New Current Protectionism

International trade represents a key aspect of economic globalization. For different reasons, foreign exchange of goods and services has been around for ages. Initially, the reason was to get some goods that were not around and that couldn't be produced locally. Later, the mercantilists considered exports to be more beneficial, as it would provide countries with much needed gold and other rare metals, they could use to gain or conquer more land. Nevertheless, modern understanding of international trade and the gains it brings to nation came with David Ricardo's theory on the "comparative advantage". More than a "zero sum" activity (meaning the gain of one part comes from the loss of the other), Ricardo coined the principle of "do what you do best and import the rest". The specialization of countries in producing the goods they are better at contributed to an increased efficiency of production, which, further led to falling trade costs and to more trade. "As history would have it, the Group of Seven (G7) nations specialized in manufacturing, which launched them on a happy helix. Industrial agglomeration fostered innovation, which boosted competitiveness, which in turn promoted further industrial agglomeration in G7 nations" (Baldwin 2016). Of course that, during these times, the leading countries would support and impose "free trade", which would provide them a major outlet.

But things change. This happy helix flipped in the 1990's and became a "hollowing helix." The Industrializing Six (I6) nations, namely China, Korea, India, Indonesia, Thailand, and Poland, industrialized swiftly while G7 nations saw their share of world manufacturing nosedive. So, in the next 20 or so years almost a fifth of the world's manufacturing shifted from the G7 to the I6 (Baldwin 2016).

This trend has been around for some years and the Great Convergence is unfolding before our eyes. Still, more so after the financial crises of 2008, many states, especially G7 nations, initiated different measures in order to combat this evolution. Some scholars consider that changes that occur in international trade after 2008 slowed down globalization and influenced the nature and structure thereof (Neuman 2016). According to the 2015 KOF Index, the level of globalization fell for the first time since 1975. "The fall was due to the decline in economic globalization, with social globalization stagnating and political globalization increasing slightly" (Gygli et al. 2018). Some recent events, such as the US decision to impose tariffs on imports of steel and aluminum and the subsequent retaliation measures announced by the most important trading partners might affect International trade. Another possible effect is with regard to the role and power of the WTO in encouraging free trade and in promoting that "the global economy should be governed by rules" (The Economist 2018). The drawback of the US from the Trans-Pacific Partnership is another argument in favor of the opinion that today's most powerful nation is reconsidering its support for free trade and globalization, on the basis of light slogans as "America first". According to Elvire Fabry, actions might evolve between "aggressive economic nationalism" and a "protectionist megaphone with limited disruption." (Fabry 2017). And this, while "a 2012 poll of 41 economists, including some of the field's most distinguished names, found not a single one willing to disagree with the statement

that U.S. citizens have, on average, been better off with NAFTA than with the trade rules that preceded it” (Grabow 2018).

5 Conclusions

Globalization is a complex phenomenon that has been around for some time. It has shaped the way the world looks today, and, it will continue to do so in the future. Some argue that globalization is like sunrise, like it or not, it will still happen every day. It influences not only what goods and services we use, but also what we consider to be good, true and beautiful. It is like two-faced Janus, and we can see either the positive, or the negative effects that globalization brings about.

Besides the unequal share of welfare between the North and South there are also other challenges that globalization made more obvious, being also part of the problem. Stiglitz considers that globalization today continues to be mismanaged, and now the harms have come home to roost in the United States and the rest of the developed world as well, reflected in growing political unrest (Stiglitz 2017). Climate Change due to intensive transport, environmental accidents due to different and ambiguous safety regulation, resource depletion due to over usage, to name some other few. As most of this problems are global, so were the answer. Furthermore, as evidence suggests that globalization “has spurred economic growth, promoted gender equality and improved human rights” (Potrafke 2015).

Nevertheless it is necessary to find a perspective which brings together good and bad, so that, as some would argue an “alter-globalization” could be established. New Globalization should operate with a “finer degree of resolution on national economies” (Baldwin 2016) and taking into consideration all of the implications that the process brings with it. And the background for this change is prepared by the innovations in technology and telecommunications, which might contribute to reduce and overcoming the last barrier, namely that of moving people.

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Future Research Directions on Web-Based Educational Systems



Ioana Andreea Bogoslov 

Abstract Over the last decade, following the rapid progress of Information and Communication Technology (ICT) and directly linked to the requirements of the Information Society, Web-based education has turned into an essential branch of educational technology. Although the traditional educational systems continue to improve, the gradual transition to Semantic Web, that is currently taking place, facilitates the emergence of new opportunities for improving the quality of educational processes. The distributed instruction, the explosive expansion of social networks and the significant increase in the number of mobile users represent phenomena that have led to new trends in the evolution of educational technology. Currently, the emphasis on content and collaboration increased, the aim being to provide the learners with the possibility to generate content and share it with each other. The aim of the present paper is to present an overview on the directions of educational systems development, guided by Semantic Web potential, standards and facilities.

Keywords Semantic web · Web-Based education · Virtual learning environment e-Learning perspectives

1 Introduction

Nowadays, we are witnessing a period in which almost all the spheres of our lives are becoming fully digitalized. Accessibility, connectivity and high quality of interaction with applications by anyone, anywhere and at any time, represents underlying requirements of the emerging Information Society. Aiming to fit the requirements of this technology-guided world, the educational environment has been subject to major changes, the traditional learning and teaching processes being transformed by implementing models and paradigms supported by modern means and devices.

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Over time (though with different approaches, methods and tools), the main objectives of integrating information technologies in the educational processes were as follows:

- To facilitate the development of new skills and competences of students/learners, enabling them to integrate into a society deeply influenced by information technologies;
- To support and enhance the use of modern methods, content and tools in order to transform and improve the teaching and learning processes of traditional programs.

However, it is important to note that, since the 1990s, Web-based instruction has turned into an essential branch of educational technology. The concept of Web-based education is nothing more than an excellent approach to the learning process, where ICT allows the use of a more flexible learning environment, access to information and evaluation, compared to the classical model. In regard to the steps that have taken place over time, online education has initially replaced the classical distance learning methodology, written materials being transcribed on electronic tools. Subsequently, Internet connectivity has opened up opportunities for collaborative environments to effectively replace classrooms, creating virtual classrooms. This is where Web-based education really takes place and starts to exert its potential benefits.

With reference to the contribution made to the educational environment, both the World Wide Web and its main service, the Internet, have favored the improvement of communication performance through intense collaboration, while also promoting active learning. For learners, this allows access to knowledge and information resources that are virtually limitless, offering a range of personalized learning opportunities, tele-learning, collaboration and distance learning, clear benefits given by platform independence (Brusilovsky 1999).

The existing Web-based educational systems are the result of the evolution of technologies that support these facilities, namely the progress of the World Wide Web in almost 28 years of existence. Nevertheless, with regard to technologies usage in educational systems, the current trend is to gradually incorporate semantic Web technologies that provide a personalized, adaptable and intelligent learning environment. However, the main issue is whether the educational environment, including its processes, paradigms and models, is ready to fully benefit from the Web 3.0 capabilities, considering that it still struggling with the implementation of foregoing generations.

Not all of today's Web-based education solutions manage to achieve the optimal mix of the facilities provided by Web or are not prepared enough to follow the transition from Web 2.0 to Web 3.0. Therefore, a clear understanding of the possibilities offered by the semantic Web is needed in order to be able to develop and implement educational solutions that can suit the information society needs.

The aim of this paper is to summarize the main findings regarding the evolution of the Web, from 1.0 to 2.0 standards and how 3.0 standards appeared, strengthening modern technologies capabilities. Also, a particular interest will be given to describe and analyze the parallel evolution of e-Learning systems. Subsequently, a deeper approach will be taken on how semantic Web and e-Learning 3.0 works, presenting

the main characteristics of each one. Ultimately, it is proposed that this paper will provide an overview insight into how e-Learning systems could benefit from 3.0 standards in the near future.

2 From Past to Present

2.1 Web Development Over Time

The progress of the World Wide Web has made it possible to distinguish between the three major generations of Web, differentiated by the way information is conceived and used. On the whole, it is believed that Web 1.0 means just providing the information, Web 2.0 is about overload of information, while the 3rd generation of Web is focused on controlling the information (Rego et al. 2010).

In fact, Web 1.0, proposed by Tim Berners-Lee in 1989 at the European Organization for Nuclear Research (CERN) in Geneva, Switzerland, was considered to be a collection of interconnected documents, being generally referred to as the *read-only Web*. Broadly speaking, Web 1.0 was focused on providing the content online for viewing. Authors were able to write and publish content online. On the other hand, the readers could visit the web sites where the content was published and could contact the publisher if contact information were available. As a matter of fact, Web 1.0 did not allow a direct link or communication between the two parties involved (author and reader), being considered a *static Web*. Clear examples of static web pages and web sites are those created using only HTML (Rubens et al. 2014).

The second Web generation, known as Web 2.0, was developed in 2000 and used until 2010, being considered the *dynamic Web*. Through this new context, the users have more opportunities, as reading, writing and collaborating to a certain extent. As part of the evolution, Web 2.0 increased the usage of new technologies, where we can mention PHP, Python, XML (Extensible markup language), Adobe Flash, Ajax (Asynchronous JavaScript), Flash and others, making possible the emergence of new online environments, like APIs, blogs and social networks.

Currently, there is progressive transition from Web 2.0 to Web 3.0, often referred to as the semantic Web, which brings significant improvements to the previous generation. By adding additional information (metadata) to the existing World Wide Web, Web 3.0 facilitates the automatic processing and interpretation of data by specialized software agents with at least five fundamental features: distributed computers, advanced smart mobile technology, collaborative tools, 3D viewing and interaction. Reshaping the technology by using Web 3.0 standards and tools will certainly transform the Internet, from a platform which provide global connectivity and multiple opportunities for sharing the information, to an intelligent and powerful tool able to manage the information.

Even if Web 3.0 is usually considered related to the arrival of semantics, current trends associate it with the emergence of Web intelligence. This means that,

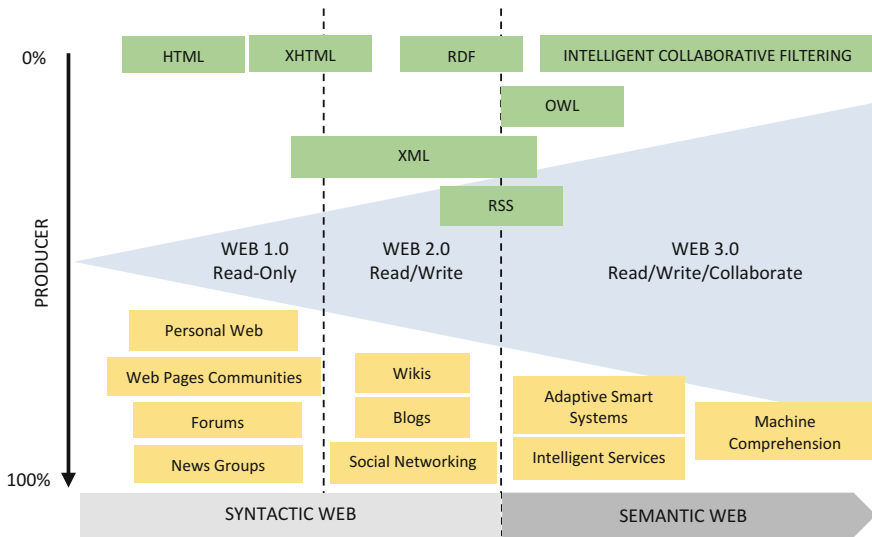


Fig. 1 Web Evolution—Personal sketching. Adapted from Magagnino (2007)

nowadays, technology is moving towards a pervasive and ubiquitous environment within which Artificial Intelligence (AI) is combined with an aggregation of data, and the semantics is just one tool among others. It is expected that collaborative intelligent filtering to be combined with smart tools in order to create personalized pathways for users within any online sphere, 3D visualization and interaction becoming a normal aspect of humanity.

In order to offer a better understanding regarding the Web evolution, Fig. 1 depicts the main characteristics of each Web generation, emphasizing the transition from Web 1.0 to Web 2.0 and, thereafter, to the semantic Web.

2.2 Parallel Evolution of e-Learning

Along with the evolution of World Wide Web, electronic learning, better known as e-Learning and, actually referring to all forms of web-based learning, has benefited from these new approaches. In simple terms, e-Learning can be defined as representing the interactive learning way in which educational materials are available online and through which feedback regarding learner's educational activities can be automatically obtained. In fact, it is similar to Computer-Aided Instruction (CAI), but it also involves an Internet connection. However, analyzing broadly than the basic definition, we can distinguish between three different e-Learning generations, incorporating one another, but providing distinct characteristics in accordance to Web development.

As result of emergence of the Web 1.0, considered the Read-Only Web, and recognized by its general characteristics like minimal interaction users and static information, e-Learning 1.0 evolved. The first generation of e-Learning was focused on content creation and distribution, with minor consideration for the learning process. As a consequence, there was little interest for interaction, communication and collaboration. In fact, e-Learning 1.0 provided various Learning management systems (LMS) with different aims, such as replicating the multiple aspects of traditional learning with databases, task solutions and tools that enhance communication (Dominic et al. 2014).

Web 2.0 has given birth to the second generation of electronic learning, incorporating a new series of practices and services, which can be collectively named as e-Learning 2.0. With the advent of e-Learning 2.0, the focus was moved on finding collaborative ways of learning where knowledge could be socially constructed, through multi-directional communication. Therefore, the traditional class room was transformed in terms of how it is not only socially but collaboratively constructed by using podcasts, blogs, wikis, and other social Web tools. The main requirement for such tools was the dynamic content generation which may involve conversation and reflections, subsequently requiring a high degree of interaction and collaboration Richardson (2006). Thereby, within the e-Learning 2.0 era, social software has clearly revolutionized Web-based learning.

The differences related to concepts and used technologies, existing between the first two generations of e-Learning are summarized in Table 1.

As the evolution of e-Learning systems accompanied the progress of the Web itself, Web 3.0 tools will also reshape these. The inception of cloud computing and the undeniable growth in terms of availability of new technologies and tools such as reliable data storage capacity, collaborative intelligent filtering, 3D user interface and multi gesture devices, determined the appearance of the next generation of online learning, e-Learning 3.0, tools that educational institutions are currently striving to adopt.

Table 1 The main characteristics of e-Learning generations

e-Learning		
Generation	Concepts	Tools
e-Learning 1.0	Content management, unidirectional activities	Computer based training, learning management systems, eBooks, virtual learning environment (VLEs)
e-Learning 2.0	Blended learning, content authoring, bidirectional activities, multimedia content	LCMS, social networks, video/audio conferences, mashups

3 Deepening the Aspects Related to Web 3.0 and the Next Generation of e-Learning

Although it passed through several evolutionary phases, e-Learning systems are still evolving alongside the impetus development in Web technologies. Within an environment considered to be created by the majority, where interaction and user engagement become a necessity, electronic learning is supposed to benefit from new approaches. However, without a clear understanding of issues regarding semantic Web and e-Learning 3.0 way of working, the implementation of modern educational tools it is practically unfeasible.

3.1 *Understanding the Semantic Web*

The term Web 3.0 was mentioned for the first time by John Markoff of the New York Times in 2006 and was further used significantly in a Blog article named “Critical of Web 2.0 and associated technologies such as Ajax”, written by Jeffrey Zeldman Rajiv and Lal (2011). Over time, numerous researchers in the field and IT experts supported various approaches to the future Web. Many authors considered that the term Web 3.0 is synonymous with semantic Web. Other researchers point out that the semantic Web does not represent a stage of the Web’s evolution, rather dealing with a succession of IT languages and applications that have improved the overall intelligence of the Web (Berners-Lee et al. 2001; Fumero et al. 2007; Hendler and Berners-Lee 2010).

As a general definition, Web 3.0 or semantic Web, represents an array of mixed applications, the core software technology of this Web generation is Artificial Intelligence (AI), endowed with the ability to learn and understand semantics. Accordingly, the implementation and use of Web 3.0 technology enables the Internet to be more personalized, accurate and intelligent Rajiv and Lal (2011) (Table 2).

The semantic Web is not based on documents, which are distinctive for previous generations, but on databases. Within this new medium, data is no longer associated to individual users, but it is shared among them. As a result, the concepts of minimal webpages or websites, will become outdated Naik and Shivalingaiah (2008). Certainly, this implies the adoption and use of new forms of programming and scripting, that evolution being possible with the increasing development of Resource Description Framework (RDF), the main language standard that will power the Web.

Moreover, collaborative intelligent filtering and interpretation requires machines to have the capacity to read, describe and organize information and content. Due to the fact that they are not endowed with human capacity for language, they will require metadata Nevile and Kelly (2008) and the markup of Web services in order to transform them into machine-readable and agent-ready objects McIlraith et al. (2001).

Table 2 Web 3.0 particularities—personal sketching adapted from Rajiv and Lal (2011) and Miranda et al. (2014a)

Web 3.0 particularities	Description
Personalization	Many activities carried out over the Internet, including search, information processing, creation of web portals, are based on individual or personal preferences, process within which semantic Web may be the main technology
Intelligence	The content created and distributed on the Web is described in a way that is computer/machines understandable and readable. In this way, machines are able to organize and filter the content in an intelligently manner, being also able to efficiently understand user's queries and searches
Organized Information	Along with the progress of Web 2.0, we have witnesses to an increase of interactivity, mainly due to the proliferation of social software. However, this led to an excess of information, followed by chaotic clusters of data. Using Web 3.0 standards, the information will be organized, determining the creation of more efficient tools
Interoperability	Web 3.0's aim is to offer an interactive environment, supporting information and knowledge creation and exchange. In simple terms, this means that when an individual or a software program creates content on the Web and this content is used by another, then a new form of knowledge or information will be created. In this context, the focus is on interoperability, collaboration and reusability, concepts which are basically interconnected and dependent on each other. Interoperability involve reuse, which is actually a form of collaboration
Openness	Web 3.0 provides an enhanced openness between users, personal data and personal information. On the other hand, this characteristic can also refer to greater openness concerning protocols, formats and Application Programming Interfaces (APIs)
Virtualization	Web 3.0 is considered to offer High-end 3D Graphics and high speed Internet bandwidths, these characteristics being extremely useful for the process of virtualization

Thus, semantic Web tools require appropriate languages that can help computers to understand which the user's needs and intentions are, by a clear comprehension of a search query. In this respect, ontologies are considered proper tools that can provide information in a computer-understandable way. An ontology could be defined as being a specification of a representational vocabulary for a shared domain of discourse, which includes definitions of classes, functions, relations and other specific objects (Gruber 1993).

3.2 *How e-Learning 3.0 Works*

The first step towards a successful implementation of Web 3.0 principles in the context of e-Learning is constituted by an examination of the main aspects that can affect this process. In this regard, researchers have already explored the possibilities,

suggesting a Critical Success Factors (CSFs) framework, that could be common to all forms of e-Learning in a 3.0 context.

As per Miranda et al. (2014b), the CSF framework for e-Learning 3.0 systems should encompass technology, content, students, teachers, and educational institutions. However, in a context of interoperability, we can consider that students, teachers, and educational institutions are at the same time the authors and beneficiaries of the distributed content.

Practically, these three categories are interconnected (Fig. 2), and communication between them is almost unlimited, facilitating knowledge creation and sharing. We can also reorganize the beneficiaries into just one category named actors, outlining how e-Learning 3.0 could run on an entirely peer-to-peer (P2P) basis. Web 3.0 actors create an interactive model, in which each party involved benefits from the same communications opportunities and are equally privileged, being equipotent participants. Peers, in our case students, teachers and educational institutions, are both suppliers and consumers of e-Learning resources, enhancing a collaborative work.

Of course, the proposed CSF framework provides more meaning when analyzed in more depth, but the main three dimensions, summarized as technology, content and actors, remain the core success factors. In fact, the proficiency of e-Learning 3.0 is intrinsically connected with Web 3.0's capabilities, principles and way of operating.

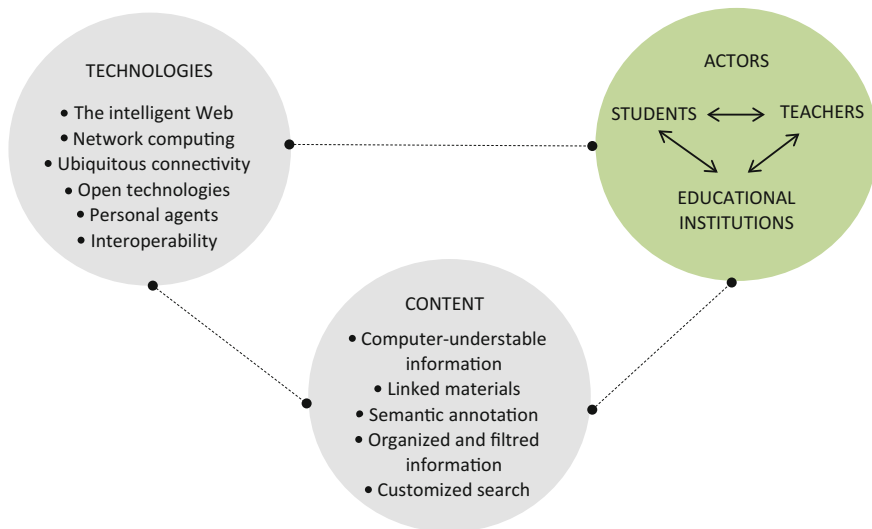


Fig. 2 Critical success factors (CSFs) framework adapted

4 Perspectives on e-Learning Systems Based on Web Capabilities

In accordance with the new possibilities offered by the Web and e-Learning 3.0 operating mode, it can be argued that the existing Web-based systems will be transposed in a much more revolutionary way. Diverse researchers have already been exploring the opportunities that could emerge for improving electronic learning, suggesting that the process will take place especially under the influence of powerful concepts such as collaborative intelligent filtering, distributed computing, Artificial Intelligence, Augmented Reality and extended smart mobile technology.

Since the beginning of the third generation of e-Learning, with a long-term vision, researchers in the field have stated that, with the use of mobile devices, the access to learning resources will be unlimited, users being able to virtually access anything, anytime and anywhere (Baird et al. 2007; Wheeler 2009). The constant evolution of smart mobile technology in the last decade cannot be denied and nowadays, without any doubt, our society is addicted to smart devices, such as smartphones, tablets and others. This tendency has also influenced the way in which modern technologies and platforms can be accessed. Thus, the release of more advanced mobile technology facilitates e-Learning 3.0's omni-presence and can be considered one of its main drivers.

Furthermore, it was considered that the principle of *anytime, anybody and anywhere* will be sustained by the *anyhow* concept which will be implemented through virtual 3D environments such as the use of personal avatars and Second Life. (Rego et al. 2010) Users will have the ability to interact with virtual spaces, being implied in a participative, engaging and stimulating educational environment. In this regard, progress has already been made and, in present, there is more and more discussion about *gamification* or *game-based learning* (integrating game elements into common learning contexts). Without any doubt, Augmented Reality/Virtual Reality (AR/VR) also provides considerable possibilities in this respect, being primarily focused in the gaming industry, at least at the moment. The ability to connect reality and digital content will open more options not just for electronic learning, but for the learning process itself. Among the existing learning applications that use AR that enable users to visualize 3D models in the real environment, in real time and at scale, we can mention Augment, developed by Jean-Francois Chianetta, Mickaël Jordan and Cyril Champier.

Augmented reality can also be effectively used to make lessons more informative. A lot of historical websites and museums have already added AR features to their content in order to attract visitors that are dependent on technology for information. In that way, students and other visitors can now obtain additional information and customize their informing experiences.

Going further, it is important to note that, with well-established Web 2.0 principles, tools and technologies, and shifting to Web 3.0, the personal learning environments (PLEs) receive increased attention. In this respect, according to Ebner, personalization is considered as being the key approach to handle the plethora of information

Table 3 The main characteristics of e-Learning 3.0

e-Learning 3.0	
Concepts	Tools
Learner-Centered, M-Learning, Ubiquitous Learning, Knowledge Representation, Collaborative Intelligent Filtering, Augmented Reality, Artificial Intelligence	PLEs, Social Semantic Web, Second Life, Personal Agents, Big Data, Linked Data, 3D Educational Environments

in the knowledge-based society (Ebner et al. 2011). e-Learning 3.0 technologies and tools are expected to better suit the specific needs of individual users, ontologies allowing the customization of their searches and queries for educational resources. In this way, learners will be surely helped to learn.

On the other hand, recent research suggests that the creation of e-Learning 3.0 systems, based on using Artificial Intelligence and data mining, technologies which are able to analyze and sort big data, in turn offer to the learner a better and deeper understanding of the learning process (Rubens et al. 2014). Those two identified elements, i.e. AI and data mining, could be considered significant tools that not only improve electronic learning, but significantly contribute to the development of PLEs.

Considering all the aspects approached before, we can complete Table 1, by adding the main identified aspects regarding e-Learning 3.0 (Table 3).

All the mentioned tools and technologies represent examples of the potentials of Web 3.0 related to the improvement of electronic learning. However, with the tremendous and fast advance of Web, we can expect that new trends and perspectives regarding e-Learning to emerge.

5 Conclusion

If Web 1.0 was considered the Read-Only Web and Web 2.0 the Read/Write Web, Web 3.0 works on the principle Read/Write/Collaborate. As discussed in the present paper, semantic Web not only promotes collaborative learning, but it provides smart solutions to search on the Web, information management, and content organization, which facilitates the implementation of an effective learning process.

e-Learning has accompanied the changes occurred in Web evolution, every upcoming e-Learning generation providing all earlier generations capabilities improved with the Web technologies. Currently, along with the increasing popularity of semantic Web in almost every domain, there is a significant focus on upgrading electronic learning with systems that follow Web 3.0 standards, principles and technologies.

Multiple research on Web 3.0 and education have already suggest some of the features and capabilities expected to be integrated in the following generation of le-Learning. As resulted from the analysis conducted through this paper, such features

may include: modern forms of learning which enhance an intensive collaboration with peers; an adaptive learning environment focused on personalization; more efficient information creation, sharing, storage, retrieval and reuse; and numerous other characteristics that follow the principle of the three A—AAAL, i.e. *Anytime, Anywhere, Anybody Learning*.

Moreover, being supported by databases rather than documents and with an exclusive focus on semantic organization of content, intelligent agents and 3D visualization, Web 3.0 provide the necessary tools for transforming the existing Web-Based educational systems into smart spaces. Within this environment, learners will be active users, closely interacting with peers and with learning materials, rather than just receiving resources comprising specific information to memorize.

Whilst the use of the presented principles and tools is still in its infancy, not being yet widespread, increasing studies in the field of e-Learning 3.0 showed that it could become inevitable. Even if, to some extent, e-Learning has already changed, to continuously investigate Web breakthroughs in order to keep up with it, become a compulsory requirement.

To conclude, it can be strongly stated that the opportunities provided by semantic Web, directly aligned to the existing landscape of e-Learning, will lead to a more efficient and authenticated educational environment, but only if they benefit from in-depth analysis and understanding.

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Evaluation of Banking Digitization Policy of Romanian Commercial Banks



Renate Bratu and Nicolae Petria

Abstract Nowadays, even in Romania, we faced with process of digitalization of financial system, especially of banking system. Natural person—banks relationships are more and more distant as location, but more and faster as financial transaction results, because of banking digitalization process based on performance of internet era. The paper's aims are to answer to questions like: Are Romanian past, actual and future generations prepared to be fully integrated in banking digitalization process? Do Romanian natural person understands the usefulness and benefits of digital banking services/? Or, how benefits of Romanian commercial banks are changing? The methodological support includes analyzing empirical data, based on statistical and financial instruments. Our preliminary results suggest that in Romania the digitalization of banking services is quite low, being in direct correlation with low level of financial education of Romanian people.

Keywords Digital banking · Retail banking · Financial education
Generational cohorts

1 Introduction

Contemporary society is changing fast, and one of the most important driver here is technological development. Thus, if we remind just to how it was running our or parents life 20–30 years ago we can mention some of the main changes, like: from usage of black and white TV set with 2 or 3 programs la using, in some cases, digital TV set with dozens programs and maybe with some computer functions included as well; from usage of simple text message phone at high level of smartphones with multiple functions and apps; from paper old books from the library to eReaders with

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ebooks and special programs for IT distance learning and research; and also from traditional banking operations of “bricks” units of banks to online banking everywhere where is internet connection. Considering those huge development occurred (and they are still changes every day) in our lives, we have to assess if those developments also occurred in countries like Romania, at least in European context. For this our main aim, the paper is constructed based on several questions: (1) Are Romanian past, actual and future generations prepared to be fully integrated in banking digitalization process? (2) Do Romanian natural person understands the usefulness and benefits of digital banking services/? (3) Or, how benefits of Romanian commercial banks are changing?

Romania, as country, was faced extreme political, economic and social transformation during the history, mainly in the last 100 years. Though, we mention 1918—The Great Union for Romania as country; 1918–1943 a period of development as market economy and as monarchy; after that, followed, almost 45 years of communism political system; and the 1990s transformed Romania in transition economy, followed by changing European statute as EU member state from 2007. Today, United Nation classify Romania into developed countries group among other EU member state (United Nation 2018). That mean Romania is closer, at least from economic point of view, to the historically developed European countries. Despite all this, the statute as developed country in EU, is relative to every aspect of the society. Even in the case of digitization process of different fields, like banking services. For instance, in 2016, Romania was ranked 28th among EU member state by the DESI indicator (Digital Economy and Society Index), with mentions that our country is in chaching up process, with a higher rate of progress than EU average, in this matter (European Commission 2016). In 2016, from 19.7 million of romanian residents, 11.1 million had mobile phone subscriptions, 4.3 million internet connection at fixed point (28% rural and 72% urban); in the same time in that concern informational society 89% of romanian households had fixed broadband internet connectivity, 45% had 4G coverage; 72% had access to NGA (New Generation Access), 28% had base digital skills; and just 8% residents (that access internet at least once in 3 months) used online banking services, and in the same time 18% of those who are active on internet made online shopping (MCSI 2016).

At international level does not exist a uniform and widely accepted methodology for measuring digitalization of countries. Most indices have focused on metrics such as infrastructure and access indicators but the most complex ones are starting to consider other components and dimensions regarding the use of digital technologies and digital skills (Mărginean and Orăștean 2017).

Digitization of banking services is based at least several factors like: technologies development, human capital with digital skills, available information about internet banking and also residents openness to transact money through modern banking ways. In this context we want to assess the potential development of online banking environment based on the potential of customers that can use online banking service.

2 Literature Review

2.1 Internet Banking

Internet banking, or online banking, or web banking, or e-banking represents an electronic platform where several banking services are transacted by retail or companies' customers. The development of e-banking was stimulated by advanced technologies innovations and thus by expansion of e-business and e-services which sustain what we called e-commerce platforms. In this environment, having in business strategies e-banking means for banks more operational benefits, more cost savings, an increased efficiency and customer benefits in terms of convenience, functionality, speed and 24/7 availability. E-banking is now considered to be a standard requirement (Tassabehji 2012).

Putting simply, internet banking represents an easier way to distribute banking products and services (mostly services) using internet connection. Using electronic devices (computers, laptops, tablets, smartphones), banking customers could open accounts, transfer funds among them or partners accounts, initiate payment bills, and constitute saving accounts, as well as checking statement transactions. The main advantages for both banks and customers are lower costs and higher comfort in transacting process (for example clients can have almost instant money from one account to another), thus saving money and time.

It is also well known that high returns are always accompanied by high risks. This is available for distance online banking distribution, lower cost of distribution (which means a higher return for banks) are generated in the higher risks context mostly transaction security risk and privacy risk. For instance, Luo (2010) mentioned a multi-faced risk perception as performance risk, financial risk like "card-not-present-attacks" conducted by criminal hackers, time risk, psychological risk, social risk, privacy risk, physical risk and overall risk. Referring to the most visible risk, bank card fraud, for the UK was estimated to be over £35 million for the period 2010–2011. For that it is very important the development of e-banking systems in order to remain secure for the benefits of both banks reputation and trust of clients—users. In this context Tassabehji (2012) purpose a secure, functional, and effective alternative for traditional e-banking system, and that is the use of biometrics to verify and authenticate a user remotely, which means the way of recognising an individual based on personal behavioral and physical features (voiceprints, fingerprints, iris recognition, or gait and handwriting recognition).

In time, banking service distribution passed from traditional "bricks" branch selling to services available through ATMs, POSs, telephone banking and internet banking (home banking and mobile banking). That means in traditional times, some banking services could be bought in a week specific program (for instance, Monday to Saturday from 9 am to 5 pm), and nowadays those services can be accessed 24 h per day. The phenomenon of including e-commerce in banking field was progressively made by each individual bank or by holding banks. One study of 121 US banks reflect that, in the context where firms interact in a geographic environment, the adoption

of online banking occurs simultaneously across all markets where the bank operates, and main determinants of the adoption of internet banking decision are bank-specific features like standard measures of financial health and bank size. Moreover, the speed of implementation of online banking it is also influences by the structure membership of bank holding firm (Hernandez-Murillo et al. 2010) (Table 1).

Despite all that, here are limits in terms of approval requirements for some types of payments or applications. And for that we can conclude the fact that, internet banking has limits of types of services delivered (for natural persons and companies and organizations), have limits of time for completion of transaction (in terms of types of payment orders—amount, beneficiary part, day of order), and also limits of internet connection (speed, signal, device performance).

The existing literature has suggested that majority of internet banking non-user that banks provide enough information and guidance in order to understand how to use internet banking platforms, and the fact that some people don't use the internet banking services because of dissatisfaction with the information and guidance offered by banks and also the psychological barriers (Laukkanen 2009).

Even we face well internet developed connection and usage, we still observe a degree of reluctance from customers' part in using electronic channels. Usually, purchasing different goods and services that involves potential financial loses, like online banking generates a higher level o perceived risks that in other types of transactions. Sanchez-Franco (2009) developed a satisfaction-trust-commitment model in e-banking by studying interaction effects of customer involvement. Evidence shows that online satisfaction and trust lead the customer into developing a high commitment to the e-banking service. And also the fact that generated relationships are influenced by knowledge (familiarity and expertise) and searching, information processing and decision-making.

The rise of e-commerce determined, in some way, the development internet banking industry (Ho 2009). Nowadays, banks have at least three types of clients: (i) those who prefer traditional way to acquire banking products and services, from a bank branch office; (ii) those who prefers both traditional and online banking services, named "click-and-mortar" clients; and (iii) those, fewer, who prefer exclusive online transaction of banking services. For the third category of customers, the good news is the existence of banks based on the Pure-Play-Internet bank (PPI) strategy, were a bank is virtual and branchless. The main advantages of PPI banks are low costs, high-interest financial services, and easy scalability which allows them to capture market share fast. PPI banking is considered as a hybrid business model, mostly oriented on

Table 1 The evolution of banking services distribution and technology development

From Banking "bricks" branch distribution → ATMs → POSs → Telephone banking → Home banking → Different devices and mobile banking	From ATMs + Cards (1960s) → Early broadband internet (1980s) → Online banking (1990s) → Modern broadband + Ecommerce systems (2000s) → Modern Digital Banking + Smartphones (actual times)
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retail customers and less on companies clients, due to the quality information base level not to the quality information level (Arnold 2011).

Using a revised technology acceptance model (TAM) in order to test clients's acceptance of Internet banking, named the Internet Banking Acceptance Model (IBAM) and based on data collected from 618 university students (in UK and Saudi Arabia) (Alsajian 2010) found that intentions toward internet banking adopton are attitudinal. Thus, this inductive research approach suggest the importance of attitude and behavioral intentions labelled AI—"Attitudinal Intentions". Furthermore, there are research evidences (based on assessment of online banking in China) that reveal that design, speed, security, information content, and customer support service have a significant influence on customer satisfaction, and ease of use have less influence in that customer satisfaction (Yoon 2010).

Even we pointed out the more benefits that risks in adoption and using of online banking, data reflect that the process is not so fast that specialists thought. There are not so many people that acquired an internet banking service as expected. In this sense, Yoon (2013) pointed out that we have to understand how customers; personalities and perceptions influence internet banking use. Using a quantitative model of Internet banking constructed on four parts as: (i) openness toward advanced technology; (ii) website usability; (iii) perceived security concern; (iv) green concern for conserving nature resources as the social influence part.

Development of internet banking create opportunities to set up new business companies like Fintech companies which design that Fintech ecosystem based on the latest technologies used in digital banking environment, in order to improve the customers' online banking experience, accelerate growth, optimize costs and also manage risks. Here we point the well known Fintech companies like Avoka, Stripe, Ayden, Lending Club, Commonbond, Kabbage, Wealthfront, Billguard, etc.

2.2 Mobile Banking

Internet banking, or online baking, or web banking, or e-banking represents an electronic platform were several banking services are transacted by retail or companies Mobile banking platforms enables users to have access to different types of information or services as account balance, pay bills, transfer funds among different account, and create saving accounts. That means banking services are delivered beyond "bricks" wall, everywhere and every time.

Many researchers have used Technology Acceptance Model (TAM) designed in 1989, to assess the determinants of users' intention to use mobile banking. They suggest that the key significant to behavioural intention are the following: (1) self-efficiency influence perceived ease-to-use which influence perceived usefulness and finally behavioural intention; (2) in the same time structural assurances determine trust and, after that, behavioural intention of mobile banking (Gu 2009). Luo (2010) consider that consumers' trust and risk perception could determine the using of mobile banking services, as innovative technologies acceptance. Based on a theory

model, Luo (2010) included multidimensional trust, multi-faceted risk perception, self-efficacy, and technology acceptance in order to assess the acceptance of mobile banking services. Thus, there is a potential influence and appropriateness of employing personal trait factors in analysing emerging mobile banking acceptance. In the case of mobile banking (m-banking) there are 3 factors that influence customers to use it. Here we mention usefulness (the ability of users to access banking services anytime and anywhere), trust (directly derived from security—confidentiality, integrity, authentication, and non-repudiation) and perceived ease of use (generated by the specific m-banking application implementation). Besides all this is m-banking has some application and devices limits as unreliability of the gateway in WAP—enable devices, continuous network connection and battery consumption (Cano 2011). The results of a survey of 368 participants applied in Taiwan—2009 (from which 191 were repeat customers and other 177 were potential customers), suggested that perceived relative advantages, ease of use, compatibility, competence and integrity significantly influence attitude, and this influence behavioral intention to adopt (or continue-to-use) m-banking. The mentioned survey was constructed on perceived innovation attributes and knowledge-based trust as main variables for attitude and behavioral intention, in that analysed context (Lin 2011). In the same line, Zhou (2012), based on the elaboration likelihood model (ELM), analyzed user's initial trust in mobile banking, and the results reveal that initial trust develops along a dual route (the central route and peripheral route). Central route includes information quality, service quality, system quality, reputation, structural assurance, whereas peripheral routes includes system quality, structural assurance and reputation. Considering those two types of routes banks need to employ differentiated strategies to build users' initial trust in m-banking.

2.3 *Generational Cohorts*

Developing society during the years after 1900s, reveal precious information about us as a human being, what is our general behavior and why we act as we do daily. It seems that those way of acting and interacting and live has main explanation in human society developing in time along with innovation process that pushes society further. In this context there are several studies that analyzed generational cohorts as different groups with different social behavior as well as the determinants that influences, in some ways those behaviors (Table 2).

The *GI Generation* is highly oriented on economical behaviour, they think often in black and white or right and wrong terms, respect authorities, they are loyal, hard workers, sacrifice for common good, respect the rules and usual have a linear way of thinking. It seems that those characteristics of GI Generation were influenced by major events that occurred in those times such as World War I and II, Pearl harbour, the atomic bomb, The Great Depression, Korean War, the polio epidemic, Racial segregation, and also use of telephone, advent of television, mass production of

Table 2 Evolution of generational cohorts

Name of generation	Period of birth (Griffiths 2015)	Name of generation	Period of birth (The University of Iowa School of Social Work 2009)
GI Generation (Veterans/Traditionalists)	1925–1945	Silent generation	1922–1945
Boomers	1946–1964	Baby boomers	1946–1964
Generation X	1965–1979	Generation X	1965–1980
Generation Y (Millennials/Net Generation)	1980–1994	Millennial Generation (Hawkins 2015)	1981–2000
Generation Z (the new kids on the block)	Mid 1990s–early 2000s		

automobiles, kitchen appliances, photographs, etc. Furthermore, they earned to use computer from their grandchildren.

The following cohort—*Boomers*—believed in personal and group security (for that sometimes goes out on streets for exploration and protest). Most of them grew up with both mum and dad home (mostly with stay-at-home mums), they were more consensual, challengers, team-oriented, horizontal thinkers, self-oriented, very creative, optimistic, and the women were encouraged to attend college and build their own careers. They live in times of the Cold War, Civil Rights legislation, Black Civil Rights, post-World War II, the Kennedy assassination, the Vietnam War, Woodstock, Stonewall Riots, sexual revolution, “free love”, birth control pills, The Energy Crisis, Watergate, the first man on the moon, and also experienced both black and white and colour TV, calculators, first types of computers, rotary to touch tone phones.

Generation X developed his experience in the context of Clinton Administration times, Vietnam, the fall of the Berlin Wall, first post-Civil Rights Act of 1964 generation, Americas with Disabilities Act adopted in 1991, AIDS, the Gulf War, advent of MTV, computer technology explosion and corporate downsizing. From the social point of view, kids of Gen X have a memory of two working parents (phenomenon that still continues today) and for that reason kids faced latchkey experiences. Some of them had a single parent household because of high divorce rates (about 40%). Those facts determine Gen X to become more independent, with desire for risks, motivated by money, open to diversity, valuing free time and having fun, and desire for balance in their lives. Moreover, this is the cohort that embrace own computer and internet connection and want instant Facebook, send emails, use cell phones and VHS tapes.

After that came into world pictures’ Generation Y or Millennials, those who are the most globally oriented, interested in own and relatives health and sports activities. They are digital natives, have change expectation, were overscheduled as a child (most educated generation), and most of them have parents who choose to have children later, they are confident and tolerant with many versions of families.

Moreover, Millennials are more group-oriented, they like to entertain using computer and consider natural to send text messages, and they grew up with over 200 channels on TV and could consider that everything is online (including educational programs). They faced some key events as Oklahoma bombings, World Trade Centre terrorism, Columbine shootings, Iraq War and Hurricane Katrina. Like social behaviour, Gen Y are more realistic, confident and very social, entrepreneurial, more outcome-oriented, loyalty with peers and family. They developed with many versions of online communication such as Facebook, MySpace, Twitter, and they use Wii, iPod and PDA/Smartphones.

The latest generation, “Gen Z”, our 19–21 students, seems to be highly to take chance of their own futures, they are pluralistic and entrepreneurial. They were influenced by Great Recession finances and they grew up only in digital world. They expect challenges and most of them are self-finance their higher education (loans or part time/full time work income), and some of them hope their parents will cover the bulk of college costs. They have awareness of the fact that a good-paying job begins with a college degree. They seem to search for mentors who encourages and engages them and to offer them emotional reinforcements. And in addition, it seems that Gen Z teens are constantly scrolling social media looking for the “validation they need and want” (University of Iowa School of Social Work 2009; Griffiths 2015; Hawkins 2015).

There are studies who approach the debate on the digital divide considering differences in Internet access and uses associated with social and economic conditions. They bring into attention the concept of the second digital divide which comprises inequalities in internet usage like equipment, autonomy, skills, support and purposes. This “digital inequality” generates unequal opportunities to each the benefits of the internet (Dimaggio 2004). Furthermore is seems that teens from high education families are more likely to access the internet with a high-speed broadband connection. In contrast, teens from low education families are more likely to access the Internet from school or somewhere else using a low-speed dialup modem (Zhao 2009).

3 Methodology

This research was developed based on empirical data and information published by specialized financial and non-financial providers. Firstly, we made a critical analysis of literature in order to find out the main questions discussed by some other academics in this field. Secondly, we made a research about evolution of: (i) Romania’s digitization process; (ii) Romania’s online banking developments; and (iii) Romania’s generational cohorts. Thirdly, we present the data about some relevant Financial Inclusion Indicators published by World Bank, in order to have an overall picture of the discussed topics. Finally, we purpose a theoretical framework in order to be taken into consideration by online banking service providers when they analyze the performance of digital banking among its users—spatial and temporal.

4 Data and Facts

4.1 Romania’s Digitization Process

Romania has experimented the implementation of the first limited national computer network named RENAC/RENOD (between 3 counties’—Bucharest, Cluj and Bacau). Despite this, in the period 1980–1989, Romania was completely isolated from academic information exchange process the point of view, at international level. Thus, development of research activity (including in this field of computer network) was stopped. Only in 1993 was implemented the first internet network in schools and universities and was adopted the field “.ro”. Also, in 1990 was created the Ministry of Communication and Information Technology, renamed in 2009 The Ministry of Communication and Informational Society. The development of internet network in Romania was sustained by the development of cable TV (CATV—Community Access Television/Community Antenna Television), first provided by RNC company (Pantazi 2013). In 1990’s in Romania was a high expansion of cable TV, and nowadays most of national cable TV companies’ offer: TV cable services, Phone services and Internet services (with speed between 20 and 1000 Mbps). Considering internet speed criteria, Romania is among first places at the global level, after medium speed internet connection. Because of later introduction of Internet, Romania had opportunity to implement among the best networks, equipment and fibre optic connections (Biszok 2012).

As we notice from the data reported in World Bank Database, in period after 2002, Romania faced a highly increase of fixed broadband subscription to near 25 from 100 Romanians (Fig. 1).

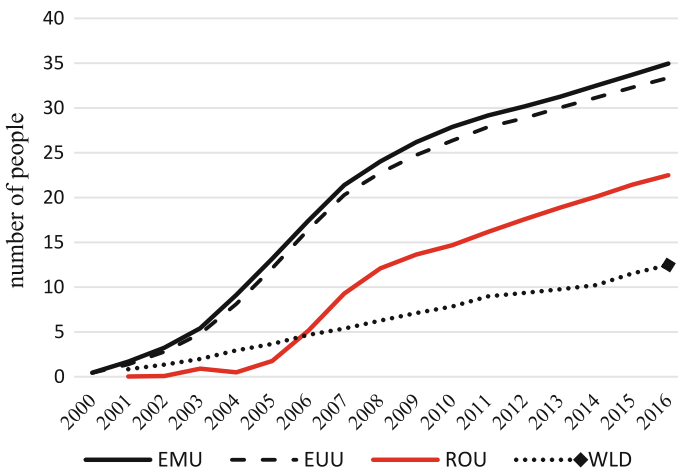


Fig. 1 Fixed broadband subscriptions (per 100 people). Source Data World Bank 2018, <https://data.worldbank.org/indicator/>

In the same time, starting with the latest 1990s, was launched the first mobile phone services and the first mobile phone provided by well-known companies like Nokia, Alcatel, Siemens, Ericson, Motorola, Panasonic and so on. Referring to that period, one of the mobile phone service industry employee remembered that “at that time, in Romania, only the wealthier people had mobile phone, for which they paid a high mobile phone monthly subscription services”.

For instance in 1997, around 200 thousands Romanians were mobile phone subscribers. In 1998–1999, mobile phone service providers offered also internet services. In 2002, the first 4 mobile phone companies managed 4.5 million of subscribers (Tomck@t 2014) (Arsene-Bărbulescu 2010). In this area, Romania, had a very high development. Around 2008, Romania had comparable number of mobile cellar subscribers as number of subscribers reported in Euro Area and European Union (Fig. 2).

Despite all that, analysing the Digital Economy and Society Index (DESI INDEX) 2018, Romania is places on 28th place among EU-28 countries with a 37.5 score to 54.0 EU score.¹ Only, considering connectivity policy, Romania is places on 22th place, and for year 2017, along Sweden, Belgium, Portugal and Latvia, Romania has 15% of homes subscribed to ultrafast broadband connectivity (European Commission 2018a, b). For indicator 1c2 Fast Broadband Take-up and 1d2 Ultrafast Broadband take-up, and for 3b2 Social Networks, Romania is placed on the 5th, 2nd and 4th place among EU-28 members. For the rest of reposted indicators, Romania is placed at last places (European Commission 2018a, b).

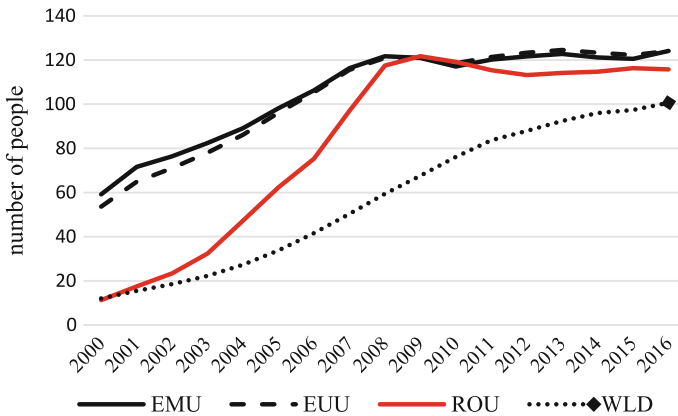


Fig. 2 Mobile cellular subscription (per 100 people). *Source* Data World Bank 2018, <https://data.worldbank.org/indicator/>

¹DESI INDEX is published by European Commission, and comprises 31 indicators grouped considering five different policy areas like: connectivity (fixed broadband, mobile broadband, broadband speed and prices), human capital (basic skills and internet use, advanced skills and development), use of internet (citizens’ use of content, communication and online transactions), integration of digital technology (business digitization and e-commerce) and digital public services (eGovernment).

4.2 Romania's Internet Banking Development

In Romania, the presence of mobile technologies and devices has expanded very fast, considering the socio-economic development fluctuation of this country. Thus, at 25 September 2003 was introduced, for the first time, mobile banking services along with other sophisticated mobile services. In the same time, in 2003–2004 were adopted different legislative documents based on which Romania's Communication and Information Technology Ministry allowed Romanian commercial banks to offer internet banking to their customers (Golosoiu n.d.).

The latest data reveal the fact that only 11% individuals who used internet in the last 3 months used online banking services in 2017 (European Commission 2018a, b), compared with 7% in 2016, and only 2% in 2007. 51% of the Europeans with age 16–74 years used internet banking, most of them being those with higher education (77%) and those with secondary education (24%) (Banking News 2018). Moreover, some G20—Financial inclusion indicators, reported for Romania only for 2014, mentioned that only 2.6% of Romanians aged 15+ made payment using a mobile phone, and among those individuals 43.3% made or received digital payments (G20—Financial Inclusion Indicators 2018).

From the supply of internet banking services, every Romanian commercial bank offers online banking services (Internet banking and Mobile banking, and also SMS Banking, Call Centre Banking, Chatbot and Video banking) to their customers, which are designed to effectively respond to the demand of their users. Each of this digital banking is in alignment with the international theory and practices in this field, with the mention that the only main difference is the marketing which they are provided on the market.

In order to increase the degree of using internet banking services, Romanian credit institutions should limit or not charge fees for eBanking, or to promote this kind of service in public institutions. In the same time, Romanian government should implement a national strategy using awareness-raising campaign in favour of online services, including online banking (European Commission 2018a, b).

4.3 Romania's Generational Cohorts

Does Romania's generational cohorts suit on general model of generational cohorts? Considering the fact that Romania was a well economical developed country before World War II, we can consider that Romania's GI Generation (Veterans or Traditionalists)—about 9.5% of population, have quite the same behaviour as US GI Generational cohort, but manifested in different context (at least another space and environment). After that, Boomers (22.7% of population) along with Generation X (22.3% of population) and the majority of Generation Y (near to 20% of population) lived their lives in times of communism regime (from 1945 to 1990), that mean that near to 65% of Romanians (almost 13 million of individuals) build their behaviours

and attitudes into communism regime (with his limits—economic, social, cultural, politic) (Tables 3 and 4).

Table 3 Evolution of Romania's generational cohorts

Name of generation	Period of birth	Age interval	Male	Female	Total	Male (%)	Female (%)	Total (%)
GI generation	1925–1945	>73	693,898	1,165,786	1,859,684	7.2	11.6	9.5
Boomers	1946–1964	54–72	2,057,686	2,398,041	4,455,727	21.5	23.8	22.7
Generation X	1965–1979	39–53	2,240,193	2,140,497	4,380,690	23.4	21.3	22.3
Generation Y	1980–1994	24–38	2,041,312	1,932,407	3,973,719	21.3	19.2	20.2
Generation Z	1995–2010	8–23	1,737,071	1,654,478	3,391,549	18.1	16.5	17.3
Generation <8 y	2011–ian.2017	0–7	809,013	767,927	1,576,940	8.5	7.6	8
Total			9,579,173	10,059,136	19,638,309	100	100	100

Source author's calculation based on National Institute of Statistics Data, <http://www.insse.ro/cms/ro/tags/comunicat-populatia-rezidenta-si-migratia-internationala>, accessed in 2018

Table 4 Main events for Romania's generational cohorts

Name of generation	Period of birth	Important events in Romania
GI Generation (Veterans/Traditionalists)	1925–1945	1925–1945 Monarchy political regime WORLD WAR II
Boomers	1946–1964	1945–1989 Communist regime in action 1989—adoption of democratic political structure 1993—first internet network in schools and universities 2003–2004—first internet and mobile banking were introduced
Generation X	1965–1979	
Generation Y (Millennials/Net Generation)	1980–1994	
Generation Z (the New Kids on the Block)	Mid 1990s–early 2000s	2007 Romania's EU accession; 2% of Romanians used internet baking services 2017–2018—first Chabot adopted in Romanian digital banking 2018—11% of Romanians used internet baking services

If we make a comparison with US Generational Cohorts characteristics mentioned above in Sect. 2.3, we notice that it can be done any relevant comparison. Some of US Generation X had computers, thing that were experienced only by the last part of Romanian Millennial Cohort.

From the Romanian digitization process, we can say that just Romanian Generation Z Cohort were born in families with home computer and later with internet connection. They are individuals used with different electronic devices like: computers, laptops, tablets, smartphones, iPods, and so on.

Even if we cannot put a strict limit among generational cohorts specific characteristics, from our point of view, Romania face a “back generational development”. For instance, we consider that, Romanian Generation Z are most suitable, in the main aspects, with US Millennials.

4.4 Romania’s Generational Cohorts and Digital Banking

And here is the question: in this context, with whom do their online banking Romania’s credit institution? An intuitive answer could be (at potential level): Generation Z (3.4 million people—17% of individuals) at which we can added parts of individuals who have basic digital skills and use basic banking service (those who has basic financial education). Here we add that only 29% of Romanian individuals have basic digital skills (near to 5.7 millions of people), and near to 22% of Romanians (almost 4.3 million of people) have basic financial education—the last place in Europe (based on a 2015 Standard and Poor’s Global Financial Education report). Moreover, we notice that only 11% of individuals who use internet with frequency use also internet banking services. Thus, considering those data, the actual potential of the whole demand for digital banking is near to 22–25% of Romania’s population. In our opinion, to improve that level there is need for different programs (both government and private) in education: general education (increase the level on secondary and high education), digital education (more and more individuals from all Generation Cohorts) and financial education (more and more individuals from all Generation Cohorts).

Those facts are not important only for increasing the demand for distance banking services, but also for future employers who will create digital banking instruments for individuals, and those need to be well digital educated and also to have high understanding of financial industry. The data reveal the fact that, in 2016, only 2% of total employment are ICT Specialists (Appendix). In this context, have Romanian banks or other FinTech firms, the labour market opportunities for attract well prepared specialist in developing digital banking business?

5 Theoretical Framework

In order to design their policy for digitization, Romanian commercial banks should assess the potential of efficiency and effectiveness of that policy in the context potential users' attitudes (both as consumers and financial employees) toward digitization banking sector.

For this reason, we propose a following qualitative framework based on which financial companies build and offer online financial services.

$$DB = f\left(\sum X_i\right) \quad (1)$$

where: DB = Digital Banking; X_i = different necessary variable

$$DB = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7) \quad (2)$$

For previous mathematical expression we consider that:

- X_1 represents generational cohorts that need to take into consideration, precisely the type—dimension—general behavior of that generation. We sustain that this factor could be very important for the success of any banks policy (from the potential of financial performance);
- X_2 represents Education (knowledge and skills), and here we refer at three dimensions as following:
 - Standard education—secondary (at least) and high education. It is proven that only those individuals who have education could acquire additional specialized knowledge and skills. Otherwise, any educational specialized program will have a low rate of success.
 - Digital education (skills). Those could be created during the standard education or in parallel with it, through short formal educational projects or informal by learning from those who know of by self-education.
 - Financial education. Here is needed lots of public and private actions in order to increase the awareness of the importance of basic economical/financial literacy. Nowadays, we live in times were financial system is hanging fast and is constantly interact with us throughout different transactions. For that reason, along with families (who are the most important provider of financial literacy to its kids), schools and financial firms to intensify their efforts in this field.
- X_3 represents Possessions, like those digital devices (smartphone, laptops, computers, tablets) which sustain the use of digital financial services.
- X_4 represents financial assets. Here we think at those financial assets most transacted through online banking (current account with positive cash flows, savings accounts, deposit accounts, money market funds, and so on). Without financial assets, digital banking will be cost generator for customers and useless for bank.

- X_5 represents Connectivity and Energy. Every online platform is based on internet connection and also on energy power. Those are basic physical condition to access internet/mobile banking anytime from anywhere.
- X_6 represents Attitude, mostly in the case of potential and actual client. Is needed of positive attitude towards using distance banking service, mostly trust. In general, any kind of transaction is based on trust, and here is no exception. Customers need to have secure online platform to protect their financial assets.
- X_7 represents Digital Banking Investments. There are studies that suggest that banks do not invest sufficiently in specific online banking platforms as they should do. In addition, other specialists consider that the future of banking business success will be based on online banking strategies, and that need to be sustained with important investments.

The mentioned framework needs to be more profoundly analyzed (both qualitative and quantitative) through additionally research paper. Our intention is to collect data specific for each variable mentioned in theoretical framework, and using econometrical instruments to test the robustness of proposed model.

6 Conclusions

Nowadays we notice that almost every individual has a smartphone, and for sure a computer. Based on that image, intuitively we think that we all know how to use properly those electronic devices, and for sure we think that we all use specific services like internet banking.

Analysing the available data, we observe that our intuitive impression is quite an illusion. Only a part of us have basic digital skills and from those only few use digital financial services like online banking. It seems that the principal vector is education. Those who have education (mostly high education) are using digital banking, and this is because they understand financial system (they have a certain degree of financial education), and, in addition, they are individuals who possess electronic devices, they are individuals who manage a financial assets portfolio (even if that portfolio are formed by money market financial assets), and also they are individuals who have positive attitudes toward using digital banking services. Moreover, they are individuals who are included in one type of Generational Cohorts.

Our research results suggest that is important to take into consideration every type of generational cohorts, when a institution design a business policy. This is suitable for banking industry too. In order to evaluate the “click-and-mortar” business model or “digital banking” business strategy, financial institution should assess the main characteristics of running generational cohorts along with other important vectors (that we mentioned in theoretical framework).

This is needed for Romania’s banking industry, were only 11% from those who access internet at least once in the last 3 months and were financial education degree is the lowest among all EU member states, and were standard education is decreasing.

Appendix

Digital Society degree of Romania.

RO DESI indicators, 2018	Value of 2017	Rank	EU DESI 2018 value of 2017
<i>Connectivity</i>			
1a1 Fixed Broadband Coverage (% households)	88%	27	97%
1a2 Fixed Broadband Take-up (% households)	67%	22	75%
1b1 4G Coverage (% households—average of operators)	72%	27	91%
1b2 Mobile Broadband Take-up Subscriptions per 100 people	82	19	90
1c1 Fast Broadband (NGA) Coverage (% households covered by VDSL, FTTP or Docsis 3.0)	74%	24	80%
1c2 Fast Broadband Take-up (% homes subscribing to ≥ 30 Mbps)	53%	5	33%
1d1 Ultrafast Broadband Coverage (% households covered by FTTP or Docsis 3.0)	73%	15	58%
1d2 Ultrafast Broadband take-up (% homes subscribing to ≥ 100 Mbps)	43.8%	2	15.4%
1e1 Broadband price index (score 0–100)	87	12	87
<i>Human capital</i>			
2a1 Internet users (% individuals)	61%	28	81%
2a2 At Least basic digital skills (% individuals)	29%	28	57%
2b1 ICT specialists (% total employment)	2.0% (2016)	27	3.7% (2016)
2b2 STEM graduates (per 1000 individuals, aged 20–29)	14.4 (2016)	20	19.1 (2015)
Use of internet (% individuals who used internet in the last 3 months)			
3a1 News	69%	24	72%
3a2 Music, video and games	67% (2016)	27	78% (2016)
3a3 Video on demand	6% (2016)	27	21% (2016)
3b1 Video calls	53%	13	46%
3b2 Social networks	82%	4	65%

(continued)

(continued)

RO DESI indicators, 2018	Value of 2017	Rank	EU DESI 2018 value of 2017
3c1 Banking	11%	27	61%
3c2 Shopping (% internet users, last year)	23%	28	68%
<i>Integration of digital technology (% enterprises)</i>			
4a1 Electronic information sharing	17%	27	34%
4a2 RFID	2.4%	24	4.2%
4a3 Social media	9%	27	21%
4a4 eInvoices	10.9%	24	NA
4a5 Cloud	6.0%	26	NA
4b1 SMEs selling online (% SME)	7.7%	27	17.2%
4b2 e-commerce Turnover (% SME Turnover)	5.2%	25	10.3%
4b3 Selling Online Cross-border (% SMEs)	1.8%	28	8.4%
<i>Digital public services</i>			
5a1 eGovernment Users (% internet users needing to submit forms)	80%	7	58%
5a2 Pre-filled forms (Score 0–100)	12	28	53
5a3 Online Service Completion (Score 0–100)	61	28	84
5a4 Digital Public Services for Businesses (score 0–100)—including domestic and cross-border	51	28	83
5a5 Open data (% of maximum score)	79%	10	73%
5b1 eHealth services (% of individuals)	11%	21	18%

Source European Commission—Digital Single Market, Romania, <https://ec.europa.eu/digital-single-market/en/scoreboard/romania>, 2018

Bold reflect the level of digitalization of Romanian society, in the sense of European Commission—Digital Single Market approach

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Transatlantic Trade Wars: The United States and the European Union in Endless Confrontation



Sorin Burnete and Daniel Nagel

Abstract Considering two highly interlinked economies of such tremendous size as the United States (US) respectively the European Union (EU), it does not come as a surprise that these circumstances inevitably provide fertile soil for transatlantic trade disputes to thrive. In spite of their decisive contribution to the postwar trade liberalization process, the two giants never quit being protectionist in certain particular domains considered sensitive for one part or the other. Sensitive domains are those in which nations fear competition from abroad, in apprehension of being disruptive to their own economy. Usually sectors that are incapable of withstanding foreign competition, most often agricultural products and processed food, enjoy protection from their own governments through production subsidies, tariffs, quotas, minimum import prices, variable import levies etc.

Keywords Trade war · Protectionism · Tariffs · Preferential treatment

1 Introduction

Following a four decades period in which international trade liberalization scored unprecedented progress, beginning with the second half of the 1980s, the trading relations between the US and the EU became increasingly affected by confrontation, which at times would turn into overt enmity. Discontents multiplied over a number of products and services which, though important for one partner's exports, would fall under the other's protective tariffs or other types of non-tariff barriers. Disagreements turned into clashes and even rows, which eventually degenerated into trade wars.

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The confrontation between the US and the EU over mutual trade issues reached its climax in 1988, when the EU banned the use of hormonal substances in the process of fattening animals intended for slaughter and human consumption (Hoekman and Kostecki 2002). The measure was based on ostensible public health grounds. Naturally, the measure angered Washington authorities, which argued that the ban had no scientific foundation and as a consequence, brought the case to the GATT, invoking the procedures of the TBT agreement. “The EU considered that because the ban was aimed at protecting health and concerned production and processing methods—which were not covered by the Technical Barriers to Trade (TBT) agreement—the US did not have a case” (Hoekman and Kostecki 2002). Since the dispute could not be settled under the GATT authority, the US retaliated by imposing tariffs on a number of products imported from the EU (pork, fruit juices, wine, etc.). As the EU deemed the US’s response too drastic, it threatened in return with retaliatory bans on imports from the US (honey, canned meat, instant coffee, etc.) worth \$140 million. In reply, the US threatened they would institute a full ban on meat imports from the EU, worth \$500 million. The war between the two trade powers thwarted nations’ efforts to finalize the Uruguay Round of trade negotiations that was concurrently under way. Although the Round ended in 1994 with the adoption of the Final Act whereby the long-awaited World Trade Organization (WTO) was finally set up, this did not mean the end of trade quarrels between the US and the EU, which have continued unabatedly until the present day despite WTO’s attempts to appease it. We shall expand on the beef hormone dispute in the third chapter.

Transatlantic disputes currently affect 2% of overall EU-US trade (WTO 2017j). From its foundation in 1995 onwards, Washington and Brussels have already resorted to the WTO’s dispute settlement body (DSB) in 19 and 33 documented bilateral cases in the role of complainant, respectively (WTO 2017a). A considerable fraction of those have in fact according to WTO (2017i) remained unresolved as the EU embodies the defendant in five actual cases (GMOs, hormones, bananas, poultry and aircraft) and the claimant in six ongoing transatlantic disputes (DS217, DS160, DS176, DS353, DS487 and DS320). In this sense, we shall dwell upon some of the most prominent transatlantic altercations.

In the particular case of the trade relations between the US and the EU, the desperate mutual attempts to protect their own markets from the competitive pressure exerted by the other is compounded by commensurate endeavors by both to obtain access on the partner’s market. In such circumstances, clashes are inevitable. The problem is worsened by the fact that the existing international judicial system has but limited power to settle commercial conflicts in a satisfactory manner for everyone, let alone to enforce definitive decisions.

2 The Bananas War: Heated Argument Over Privileged Regime Granted to Former Colonies

The “mini trade war” over the EU’s banana regime even pre-dates the WTO. Spurred by its movement towards a single market, the EU adopted in 1993 with Council Reg. No. 404/93 a common regime for the importation, sale and distribution of bananas (Breuss 2005). Most importantly, its complex tariff-quota system granted a competitive edge to European banana producers and their counterparts in ACP (African, Caribbean and Pacific Group of States) countries at the expense of traditional bananas supplier from Latin America and the USA (Breuss et al. 2003). This understandably evoked critical scrutiny, being internationally perceived as a preferential treatment of former EU colonies (Grossman 1998). Encouraged by the US, Latin American exporters (Venezuela, Costa Rica, Columbia, Nicaragua and Guatemala) challenged the burdensome banana regime at the GATT in 1994 even though its panel ruling of incompliance with Article 24 was not enforced because the EU had tapped into its veto right (Salas and Jackson 2000). Coinciding with the final stages of the Uruguay Round Nonetheless, the EU nonetheless succeeded in appeasing their plaintiffs in form of the Framework Agreement on Bananas (BFA). The BFA envisaged an enhanced tariff quota for non-ACP banana imports on a country-by-country basis in conjunction with a system of import licenses which they themselves could then specifically issue to suppliers at their own discretion (Salas and Jackson 2000; Stevens 2000). Crucially, it altogether improved the position of Latin American companies to the North American ones such as Chiquita and Hawaii Banana. Not just merely the distributional concerns grounded on economic interests alarmed the US but also its geo-political-economic implications (Kaya 2006). Since the EU succeeded to incorporate Latin Americans into its banana regime through the BFA, the US perceived the old continent to infiltrate the Western Hemisphere markets which had traditionally been under the US’s sphere of influence. In this context, the chronologically close emergence of the WTO offered the US accompanied Guatemala, Mexico, Honduras and Venezuela a strengthened dispute settlement mechanism to contest the EU’s banana regime whose verdicts could no longer be blocked by a single member states veto power either. They accused the EU of violating WTO provisions through favoring its former ACP colonies and European producers at the detriment of Latin American bananas exported by American companies.

In essence, the corresponding panel (WT/DS27) condemned its licensing system as well as ACP country-specific quotas in May 1997 whose judgment of incompliance was despite of the EU’s following appeal ultimately upheld by the WTO’s Appellate Body in September of the very same year (Raynolds 2003). Subsequent mainly cosmetic adjustments of the regime failed to comply with the WTO demands either. Upon exceeding the arbitrator’s deadline in January 1999, the US formally sought to proceed with retaliatory duties against the EU totaling USD 520 million annually (Pauku 2000). The US moreover raised the stakes by turning the dispute into a struggle of “good” (defender of multilateralism) versus “bad” (violator of multilateralism) and putting the credibility of the infantine WTO on the table (Kaya

2006). The DSB (Dispute Settlement Body) eventually succumbed to this political campaign and authorized in April 1999 the US's imposition of retaliatory sanctions of USD 191.4 million per year (WTO 1999c). This suspension of concessions targeting distinctive European sectors through 100% customs duties further heightened the pressure on the EU to resolve the conflict. A mutual agreement on an adequately revised quota system in July 2001 preceded the US's instant suspension of its two years lasting sanctions (Breuss 2004). As a second step, a flat tariff-only import regime was scheduled to take effect no later than January 2006 whilst Article XIII of the GATT. It intrinsically permitted the EU to still reserve an exclusive quota for ACP bananas upon having obtained the legitimatizing associated WTO waiver (WTO 2001). The seemingly settled dispute was reawakened however in mid-2007 when the US and Ecuador challenged the preferential duty free TRQ (tariff-rate quota) granted to ACP banana imports (WTO 2017i). As the EU again had failed with its appeal to the panel report's confirmatory findings in 2008, the clash was notwithstanding lastly resolved by the 2009 Geneva Agreement on trade in Bananas (Skoba 2013).

3 The Hormone Beef Case: Beyond the TBT Agreement

As emphasized earlier, a highly contentious dispute relating agricultural products was ignited when the US took the EU to task for its ban on hormone-enhanced beef imports (Cooper 2009). WTO panels (WT/DS26 and WT/DS48) were set up upon the request of the US and Canada in 1996 in order to evaluate the EU's prohibition of meat products derived from cattle to which 17 β -oestradiol, progesterone, testosterone, zeranol, trenbolone or melengestrol acetate which had been administered for growth purposes (Breuss 2004). The embargo was declared to nonconform with the SPS Agreement only one year later due to its sanitary measures being derived from neither risk assessment nor scientific principles or any existing international standards (WTO 1998). The panel additionally denounced the EU's adoption of "arbitrary or unjustifiable distinctions in the levels of sanitary protection it considers to be appropriate in different situations", which thus violated the non-discrimination principle of the WTO by erecting hidden trade barriers. In spite of the EU's prompt objections, the Appellate Body upheld this verdict in February 1998. Its attendant report concluded that the EU had failed to provide scientifically sound evidence that the contended hormones purportedly pose a cancer risk to consumers (WTO 1998). Albeit the Appellate Body principally acknowledged a government's adoption of more stringent standards where supported by an adequate risk assessment. The EU then exceeded the WTO's 15 months deadline for rendering its measures in compliance with its corresponding obligations under the SPS Agreement (Skoba 2013). This eventually entailed the WTO arbitrator to award the US and Canada with the authorization to suspend concessions to the EU totaling USD 116 million (WTO 1999b) and CND 11.3 million (WTO 1999a), respectively, in order to compensate for the incurred losses of North American beef producers. Analogous to the "bananas case", it signified one of the few occasion out of the large number of DS cases where

the DSB actually granted a complainant party the implementation of retaliatory measures (tantamount to 0.11% of EU agricultural exports to the US per year at that point of time) against another WTO member (Ortino and Petersmann 2004). Nevertheless, the EU sustained its ban on hormones which was deemed as a perspicuous indication that the suspension of North American concessions mattered less to European legislators when weighed against potential health effects and damage to consumer confidence (Kaya 2006). Renewed European studies triggered an amendment of the “hormones directive” in 2003. It implicated a permanent ban of 17 β oestradiol whose carcinogenic and genotoxic effects had been clearly demonstrated while the other five hormones were only prohibited provisionally (WTO 2017i). Since the new legislation emerged from a thorough risk assessment, the EU henceforth asserted consistency with its WTO obligations. Notwithstanding, the plaintiffs doubted the validity of the corresponding studies and consequently perpetuated their sanctions. As they also refused any European endeavors for mediation, the EC demanded DSB consultations with the US against their sustained imposition of countermeasures whereupon a new panel (WT/DS320) was installed in 2005 (WTO 2005). Additionally, the EC challenged the Americans’ unilateral judgment on retained WTO-nonconformity of the revised regulations instead of having had recourse to dispute settlement proceedings (obligatory by DSU Article 21.5) in order to resolve the disagreement. Intriguingly, both peers lodged an appeal against different aspects of the 2008 panel findings which were indeed eventually reversed by the Appellate Body. The associated report recommended all parties involved to initiate compliance review proceedings under Article 21.5 of the DSU (WTO 2008). The imminent American threat of applying “Carousel sanctions” presumably expedited the consequential negotiations to finally engender a Memorandum of Understanding in May 2009 (WTO 2017b) which conceptualized three phases for the accomplishment of a definite resolution. Phase 1 scheduled the EU to implement a tariff rate quota covering 20,000 tons of hormone-free beef at zero import duty (WTO 2009b). The US was in return compelled to curtail its level of retaliatory sanctions from USD 116 million to USD 38 million as well as to abandon the anticipated imposition of the menacing rotating sanctions. Both continents advanced to phase 2 owing to the US’s repeal of the remaining sanctions on EU agricultural produce whereat the EU incremented the tariff rate quota for high quality beef to 45,000 tons in 2012 (Laurence 2012). The Memorandum also provided a roadmap for the attainment of a definitive resolution (including the possibility to render the latest arrangement permanent) of the dispute to be laid down under phase 3. However, phase 2 still persists as the status quo since both parties have failed to clarify the steps to be taken for the final settlement under phase 3 as well as the management of the tariff quota rate (WTO 2017i). Circumstances hit another rock bottom on 28 December 2016 when the US announced its hitherto ongoing review concerning a reinstatement of trade sanctions.

4 Genetically Modified Organisms (GMOs): Genuine Scientific Evidence or Disguised Protectionism?

The confrontation over GMOs (Genetically Modified Organisms) marks yet another prime example of the two power's divergent understanding of food and environmental safety as well as the accompanying methodology of evaluation in this regard (CEPII 2013). By pursuing the "precautionary principle" in analogy to the "Beef Hormones" case, the EU significantly deviates from the American's balance between scientific and societal factors concerning assessing risk (Wiener and Rogers 2002). In their endeavor to pinpoint underlying causes for this phenomenon, (Pollack and Shaffer 2001) suggest that "...the US system is characterized by strong central institutions such as the FDA, heavy reliance on science in decision making, and considerable independence of regulators from political pressures—all of which stand in stark contrast to the relatively decentralized and politicized food safety systems of the [EU]". Unlike the homogenous American two-party system, strong national green parties besides acted in the multifaceted European Parliament as an additional institutionalized voice to address concerns associated with the environmental repercussions of GMOs (Kaya 2006). Consequentially, an EU Directive stipulated the mandatory labelling of GMOs in 1998, whereupon five member states (Denmark, France, Italy, Greece, and Luxemburg) implemented a de facto moratorium on their approval per se (Shaffer and Pollack 2004). The new continent was in turn steered amongst other supplementary drivers by substantial economic interests to promote the global acceptance of GMOs since its business landscape boasts the world-leaders of this technology, though. It finally provoked the Bush administration (followed by Canada and Argentina) to file suit against the EU at the WTO (WT/DS291) in May 2003 (Meunier 2004). American legislators essentially alleged that the European's "slow and opaque" authorization procedure on GMOs connotes "disguised protectionism" and falls short of scientific rigor (Young 2003). The resulting panel report which was adopted by the DSB in November 2006 concluded that (WTO 2006): (a) by applying a general de facto moratorium on the approval of GMOs, the EU had failed to comply with Annex C(1)(a) first clause and Article 8 of the SPS Agreement (i.e. obligation to process approval procedures without "undue delays"); (b) The EU specifically violated the above-mentioned SPS provisions in the authorization procedures concerning 24 (out of the charged 27) GM products; (c) nine national safeguard measures introduced by Austria, Greece, France, Germany, Italy and Luxemburg were inconsistent with Article 2.2 and 5.1 of the SPS Agreement since they were not risk assessment based and therefore could be presumed to lack scientific evidence. In this context, (Motaal 2005) asserts that the SPS Agreement undeniably reflects the most compelling WTO demand for a profound scientific assessment when proving that health and safety apprehensions vindicate the interruption of trade. Already at the DSB meeting on 19 December 2006, the EU proclaimed its intent to comply with the recommendations and rulings of the panel even though sought for a reasonable period of time (RPT) to do so (WTO 2017c). In June 2007, the conflicting parties informed the DSB of their arrangement on a RPT until 21 November 2007 which

was then prolonged until 11 January 2008 (WTO 2017i). On 14 January 2008, the EU and US notified the DSB that they had reached an agreement on procedures under Articles 21 and 22 of the DSU whereby the latter submitted a general retaliation request to the DSB on 17 January 2008 referring to the expired RPT (WTO 2017c). An instant objection by the EU induced the DSB to consign the matter to arbitration under Article 22.6 DSU whose proceedings were soon suspended pursuant to the sequencing agreement attained by both parties and will only be resumed after completion of Article 21.5 DSU compliance procedures (WTO 2017i). While related DSB disputes with Canada and Argentina have been terminated subsequent to the notification of a mutually agreed solution, the latest round of joint technical discussions with the US occurred in March 2017.

The continuing poultry dispute shall serve in this sense on top of the earlier discords over beef and GMOs as our third demonstration to point out the discrepant transatlantic conceptions of scientific evidence and the precautionary principle (Skoba 2013). The quarrel was ignited by the EC's 1997 prohibition on the use of any substance other than water for the treatment of poultry carcasses. This effectively denied the shipment of virtually all US poultry since it is commonly processed with chemicals (chlorine dioxide, acidified sodium chlorite, trisodium phosphate and peroxyacids), designed to reduce the amount of microbes on the meat surface (WTO 2017i). The US approached the EC for having deliberately neglected the approval of these four pathogen reduction treatments despite of scientific reports which cumulatively rejected their harm to human health and had been even issued by the EU itself (WTO 2017g). In summary, the US accused the European measures to be inconsistent with the SPS Agreement (Articles 2.2, 5, 8, and Annex C (1)); the GATT (Articles X and XI:1), Article 4.2 of the Agreement on Agriculture and Article 2 of the TBT Agreement (WTO 2017i). These consolidated charges elicited the establishment of a DSB panel (WT/DS389) in 2009 (WTO 2009a), which has not yielded any noteworthy outcome yet.

5 Reigniting Older Hostilities: Subsidies for Aircraft Production

Mutual suspicions of state funded competitive distortion have sparked a figuratively interminable transatlantic contention over large civil aircraft. The US and the EU are startlingly still struggling to conciliate two parallel clashes regarding subsidies for Airbus and its American rival Boeing which have not only materialized into one of the vastest but also longest-raging disputes under the WTO's auspices. It all started on 6 October 2004 when the US purported to abrogate the bilateral Agreement on Trade in Large Civil Aircraft which has regulated direct and indirect government support to aircraft industry since 1992 (EC 2007). In this course, the US filed for WTO consultations as it criticizes the EC and its Member States for providing subsidies to Airbus that are not only incompatible with Articles 3, 5 and 6 of the SCM Agree-

ment but also Article XVI of the GATT (WTO 2017d). The EU was quick to respond by mirroring the US's steps on the very same day as it denounced diverse government agencies' (NASA, the Department of Defense, the Department of Commerce, etc.) persistent subsidization of Boeing through covering research and development costs. WTO panels DS316 and DS317 were swiftly set up in order to simultaneously process both causes whereas DS317 became DS353 in 2006 upon the EU's request of a second panel for reasons of absolute legal certainty (WTO 2017e). A consecutive second complaint of the Americans was merely reciprocally initiated in form of WTO panel DS347, albeit terminated soon after (WTO 2017f). DS316 though pursued its activities as its final panel report vindicated many of the EU's long held positions after all in 2011 (EC 2017a). The EU submitted its compliance report in December of the very same year, connoting full compliance with the DSB recommendations and rulings. Compliance consultations were established thereafter under Article 21.5 of the DSU since the US stated that the Europeans had yet failed to withdraw the subsidies or remove their adverse effects (WTO 2017d). Moreover, they asked the WTO to authorize sanctions of an amount ranging up to USD 10 billion per year. The case is still forging ahead as both parties appealed against the 2016 report of the compliance panel which indicated that the Airbus Reimbursable Launch Investment continues to impair the US in the single aisle, twin aisle and very large aircraft markets as "actionable subsidies" (WTO 2017i). On the other hand, it rejected specific US claims that the repayable support for the Airbus models A350 XWB and A380 qualified as "prohibited subsidies". The beacon of hope to remedy the parallel dispute DS353 receded into further distance as well. The latest 2012 Appellate Body report confirmed virtually all key judgments of the preceding panel report by insinuating that US Federal and State subsidies to Boeing caused significant lost sales, price suppression and an impedance of exports in the 100–200 seat as well as the Large Carrier Aircraft market (WTO 2017k). Legal wrangling about the US compliance with the DSB rulings and the associated European application for the WTO's endorsement of retaliatory measures at the annual amount of USD 12 billion is still pressing on (EC 2017b). On top of it, another WTO panel (DS487) was erected in 2015 whose recent findings condemned the Washington State's flagrant decision to extend its massive illegal subsidies to Boeing (accounting for an estimated 9 USD billion) until 2040 which DS353 had already been declared incompatible with WTO rules back in 2012 (WTO 2017h).

6 Harder Times Are Looming

A new transatlantic trade wars appears on the horizon should Donald Trump's government indeed materialize its plans to drastically increase tariffs on imported steel for national security reasons. The billionaire tycoon himself signed an executive order in April 2017 in order to investigate the decline of America's steel industry which is allegedly in particular reinforced by China's policy of illegal price dumping (Gutteridge 2017). The consequential emerging US reliance on cheap steel imports

supposedly poses a national security threat in the long run as it renders the country's vital infrastructure including its military vulnerable to foreign influences. According to (Gutteridge 2017) "(his) critics have claimed that the national security argument is a smokescreen and that the President is actually trying to justify protectionist measures to fulfil his election campaign pledge to bring heavy manufacturing back to the US". Any hike in tariffs might not only shut out explicitly Chinese but also EU imports, though. An isolated US market would moreover implicate the diversion of Chinese exports to Europe, heaping additional pressure on the continent's already strained steel industry. It sparks the prospect of an imminent tit-for-tat trade war as assertive EU diplomats, energized by their recent accomplishment of a comprehensive trade pact with Japan are presently gearing up for a retaliatory response (Cao 2017). They are alluding to trade defenses which have already proved successful when US President George W. Bush announced excessively protective tariffs against steel imports from the EU and other countries formerly in 2002 (Senti 2002). These so-called "safeguarding measures" would subject a range of US imports to hefty punitive tariffs in weeks rather than months due to not being premised on lengthy EC investigations and proof of damages (Tovey 2017). These may otherwise be introduced too late to salvage EU businesses from collapse. Incidentally, the EC considers to strike back on precisely the very same kind of farm goods in resemblance to their victorious 2002 showdown with the US (Burchard and Hanke 2017).

Anderson (2002) would most certainly advise diplomats on both ends to strike a more conciliatory tone because typically both complainant and respondent suffer a welfare loss from retaliation. A retaliatory measure such as an appalling raise of import tariffs by 100% on arbitrarily selected products not only harms the accused by impeding its exports but also the litigant's consumers. Mavroidis (2001) therefore alludes to a situation of "shooting oneself in the foot". The defendant often intuitively responds by implementing non-cooperative tariffs itself in an endeavor to induce favorable terms of trade as well as profit shifting effects (Ossa 2014). This resembles a mercantilist style scenario where plummeting trade volumes leave all parties worse off. Breuss (2005) underlines this assertion in his CGE (computable general equilibrium) model aided empirical analysis of several prominent "mini trade wars". The rivalry between the American and European industry is truly deeply rooted (Pfaff 1998). As elucidated earlier, differing GMO policy regimes serve hereby as a practical example. While the US for instance neither requires any labeling nor has specific coexistence rules, the EU pursues strict regulations on these issues (Shao et al. 2015). Hence, the TTIP offers in this sense a unique opportunity to resolve the GMO dispute for good through regulatory coherence.

7 Concluding Remarks

The confrontational state between the US and the EU stems from profound long standing frictions and standoffs. Mutual disputes and accusations over trade practices, industrial subsidies, scientific principles and divergent cultural perceptions

seem endless. The dire need for a transatlantic trade pact to finally harmonize regulatory policies with respect to competition, technical standards, investment, IPR, government, procurement rules of origin as well as labor and environmental provisions is obvious.

Unfortunately, the US-EU trade clashes have proved pernicious not only for the two economic powers of the Western Hemisphere but for the world economy as a whole. Among other things, it is one of the reasons for which multilateral trade talks have come to a grinding halt lately. Trans-Atlantic integration could certainly be a way to restore normality in trans-Atlantic commercial relations, i.e. to avert future trade wars and replace confrontation with partnership.

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Coordinates of the Relationship Between Taxation and Competitiveness in the European Union



Carmen Comaniciu

Abstract Through specialized studies and research, from the analysis of the specific fiscal indicators is demonstrated the role of taxation for growth and economic development. Since the progress and development of a country is closely related to the level of competitiveness, through this article we will identify the main coordinates of the relationship between taxation and competitiveness. Starting from the structure of the Global Competitiveness Index pillars we will identify the fiscal and budgetary components found directly or indirectly in the construction of the index. Without claiming an exhaustive approach, taking into account the specificity of the fiscal policy of the European Union, we will establish the correlations that exist between the level of this index and the main fiscal indicators, respectively: corporate tax rate, personal income tax rate, indirect tax rate, economic freedom level, fiscal freedom level, ease of tax payment. Only a correct identification of the factors that influence the competitiveness of a country can be set measures aiming at improvement in the fiscal area, so that taxation can be considered at the level of each EU Member State a stimulating factor.

Keywords Taxation · Competitiveness · Tax burden

1 Introduction

As the tax area is an essential component in the life of any nation, through studies and research conducted, specialists have highlighted the impact of taxation on growth and economic development, on the sustainability of public finances. Thus, relying on fiscal coordination and tax harmonization, the EU's fiscal policy takes into account fairness in tax setting, better functioning of the internal market, promotion of economic growth, cooperation and exchange of information to combat tax evasion.

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Without claiming an exhaustive list, we believe that level and action of taxation in each country can be analyzed by: the structure of the tax system and the functions that each tax fulfills (Leroy 2008); the action of each tax as an economic and financial leverage (Cope 1988); forms of taxation; the application of fundamental principles of taxation (Smith 1965); mission, vision, values, objectives and actions of the institutions with attributions in the field of taxation; taxing costs and administrative burden; the level of fiscal pressure; the level of fiscal freedom; the situation of fiscal transparency; the degree of voluntary compliance for the declaration and the payment of taxes; level and spread of tax evasion.

The importance of taxation for the European Union is visible through the four pillars of progress and development, namely: a true Economic Union, which will allow to each Member State to have the structural characteristics for prosperity in the Monetary Union; a Financial Union, which guarantees the integrity of the unique currency and through which a fair risk distribution takes place; a Fiscal Union that would lead to fiscal stability and fiscal sustainability; a Political Union based on responsibility, legitimacy and consolidation (Juncker et al. 2015).

At present, progress or regression recorded by a country from the productivity perspective is identified by the index that measures the micro and macroeconomic fundamentals of national competitiveness, namely the Global Competitiveness Index (GCI) of the World Economic Forum (Pérez-Moreno et al. 2016).

Through this article we will identify the main fiscal indicators taken into account in determining the GCI through the 12 pillars (Institutions, Infrastructure; Macroeconomic environment; Health and primary education; Higher education and training; Goods market efficiency; Labor market efficiency; Financial market development; Technological readiness; Market size; Business sophistication; Innovation), so that to highlight the main coordinates of the relation taxation—national competitiveness at the level of the EU member states (World Economic Forum 2018).

2 The Fiscal Components of the Global Competitiveness Index

Taking into account the institutions, policies and factors that can measure the level of productivity, The World Economic Forum annually determines the Global Competitiveness Index. According to data presented in the last report for the Global Competitiveness Index (2017–2018 Edition), for EU Member States is seen following (World Economic Forum 2018):

- of the 137 countries included in the ranking, with values between 5.7 and 5.2, Netherlands, Germany, Sweden, United Kingdom, Finland, Denmark, Austria, Luxembourg and Belgium are in the top 20 countries, at the opposite end being Greece, Croatia and Romania;

- the highest values were recorded for the 4th pillar (Health and primary education), the EU average being 6.3, and the lowest values were recorded for the 12th pillar (Innovation), with the EU average of 4.2;
- the evolution of the GCI for the period 2012–2018 demonstrates the concern of each country to increase productivity, thus, with the exception of Austria, Belgium, Cyprus, Finland, Hungary, Italy and Sweden, where the values have not changed, the improvement in the Global Competitiveness Index 2017–2018 versus the 2012–2013 edition is noticed in the other Member States, with the highest increases being in the Czech Republic (from 4.5 to 4.8) and Ireland (from 4.9 to 5.2).

The first aspect of the link between taxation and competitiveness is given by the fiscal and budget indicators taken into account in the GCI structure through the 12 pillars, namely:

- Efficiency of government spending—the economic, functional and financial structure of public spending; the level and dynamics of public spending, share of government expenditure in GDP; total public expenditure incumbent on average per inhabitant; frontloading factor in GDP growth by public spending; the elasticity of public expenditure versus GDP;
- Burden of government regulation—costs for taxpayers to comply with tax laws; government costs for tax regulation; government costs for managing taxpayers and fiscal obligation;
- Transparency of government policymaking—structure and presentation of budget reports; presenting specific information, such as economic assumptions, tax expenditures, financial liabilities, financial assets, non-financial assets; fiscal and budgetary control; fiscal and budgetary responsibility;
- Ethical behavior of firms: tax compliance: voluntary compliance for fiscal declaration and tax payment; acts of tax evasion;
- Government budget balance—budget surplus/deficit; primary budget balance; structural budget balance; the impact of fiscal revenues on the budget balance; government budget balance as a percentage of GDP;
- Government debt—the evolution and structure of public debt; government debt servicing; state guarantees; the ratio of government debt to GDP; numerical fiscal rules;
- Quality of the education system—the level of fiscal education;
- Extent of staff training—structure and training of staff with fiscal and budgetary responsibilities; credibility and professionalism of fiscal inspectors; the quality of services provided by fiscal inspectors; integrity, objectivity and competence of fiscal inspectors; behavior of fiscal inspectors; the responsibility of fiscal inspectors;
- Effect of taxation on incentives to invest—corporate tax rate; tax exemptions for reinvested profit; tax incentives for research and development; the ratio of the volume of investments and tax incentives;
- Total tax rate on profits—accounting profit versus fiscal profit, non-taxable income; deductible expenses; non-deductible expenses; fiscal loss; tax rate;

- Degree of customer orientation—taxpayer orientation; establishing and assessing taxpayers' requirements; the quality of fiscal services; ease of declaring and paying taxes; informing taxpayers; taxpayer assistance; solving fiscal problems;
- Effect of taxation on incentives to work—labor tax rate; taxable income; non-taxable income; deductible expenses; non-deductible expenses; tax incentives; tax deductions; the size of undeclared work;
- Internet users—the system of electronic tax declarations; transmission of fiscal information; solving fiscal problems;
- Market size—the ratio between tax revenues and GDP; the structure of the internal market; the structure of the foreign market; specific tax regimes; tax incentives for import and/or export activity;
- Company spending on R & D—tax incentives for research, development and innovation activity.

According to the survey conducted by the World Economic Forum, in the EU Member States, the factors that negatively influence the conduct of a business, in descending order of the score obtained are: tax rates; inefficient government bureaucracy; restrictive labor regulations; tax regulations; inadequately educated workforce; access to financing; policy instability; insufficient capacity to innovate; corruption; inadequate supply of infrastructure; poor work ethic in national labor force; government instability/coups; inflation; poor public health; crime and theft; foreign currency regulations (World Economic Forum 2018). As can be seen from Fig. 1, fiscal issues such as tax rates and tax regulations are among the most problematic factors for the business world, the highest score being in Belgium for tax rates (23.7) and in the Czech Republic, France and Poland for tax regulations (17.6).

3 Correlations Between Fiscal Indicators and the Global Competitiveness Index

Taking into account the fiscal components of the Global Competitiveness Index, we will surprise some correlations to highlight the fiscal-competitiveness relationship.

From the perspective of the tax rate, we have analyzed indicators such as: corporate tax rates, individual income tax rates and indirect tax rates.

According to data provided by KPM in 2018 compared to the situation in 2013 may notice the following:

- (i) the corporate tax rate remained unchanged in Austria, Bulgaria, Cyprus, Czech Republic, France, Germany, Ireland, Lithuania, Malta, Netherlands, Poland, Romania and Sweden; in Belgium, Croatia, Denmark, Estonia, Finland, Hungary, Italy, Luxembourg, Portugal, Slovak Republic, Spain and United Kingdom was a reduction for the corporate tax rate, the largest decrease being in Hungary, from 19% to 10%; an increase for corporate tax rates was made in Greece (+3 pp), Latvia (+5 pp) and Slovenia (+2 pp); the average EU corporate tax rate decreased from 22.75 to 21.29%; the highest rate of tax on profits

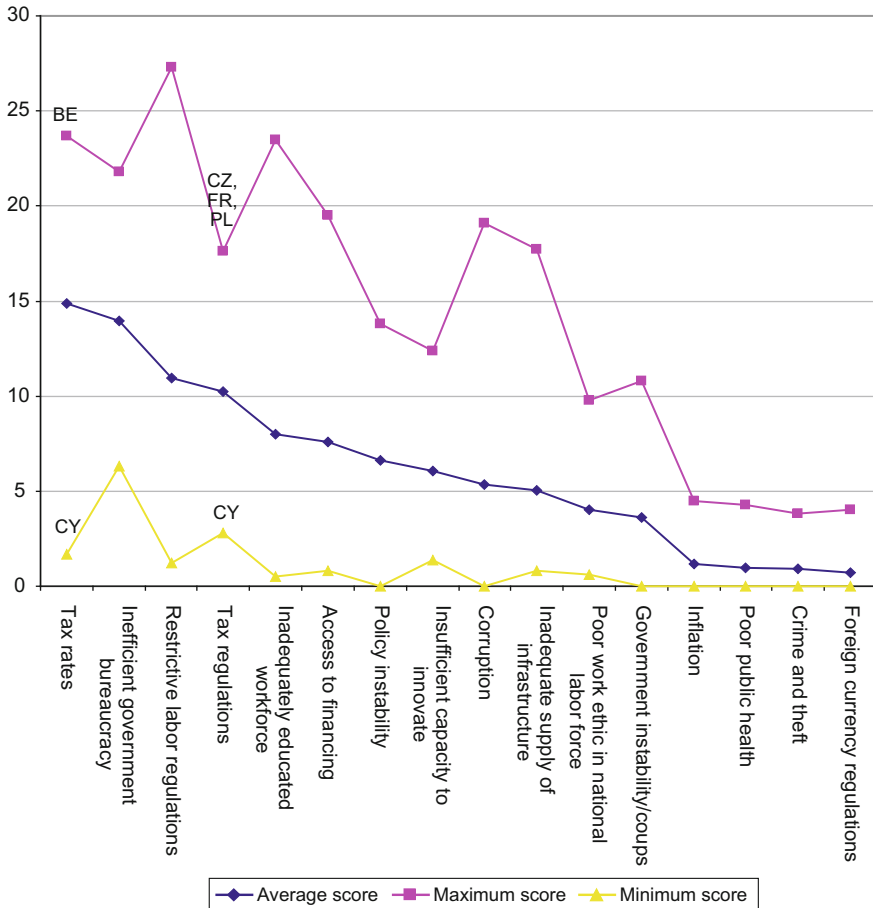


Fig. 1 Score for the most problematic factors for doing business in EU. *Source* World Economic Forum, The Global Competitiveness Report 2017–2018

was and remained the same in Malta (35%); the lowest tax rates for profits were in 2013 in Bulgaria (10%) and in 2018 in Hungary (9%) (KPMG Home-page 2018). Between the corporate tax rate and GCI, there is a direct but weak correlation with a Pearson coefficient of 0,382 in 2018, as can be seen from Fig. 2.

- (ii) individual income tax rate was increased in Austria, Finland, France, Greece, Latvia and Luxembourg, the highest growth being in Latvia, from 24 to 31.4%; in Croatia, Estonia, Hungary, Romania and Spain there was a reduction for the individual income tax rate, the largest being in Spain (from 52 to 45%); in the other EU Member States, the individual income tax rate remained unchanged; Sweden has the highest individual income tax rate (57%); in 2013, the lowest individual income tax rate was in Bulgaria (10%) and in 2018 Bulgaria and

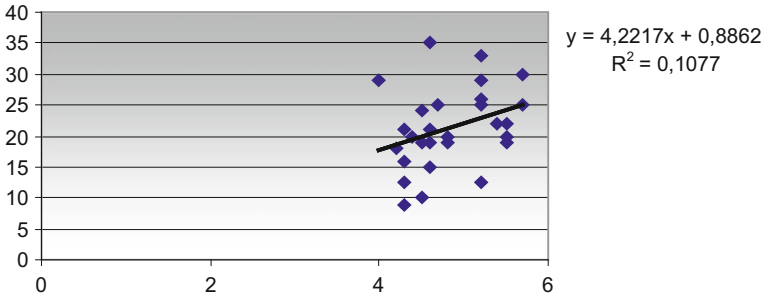


Fig. 2 The correlation between corporate tax rates and the global competitiveness index in the EU member states, in 2018. *Source* KPMG, Corporate tax rates table; World Economic Forum, The Global Competitiveness Index

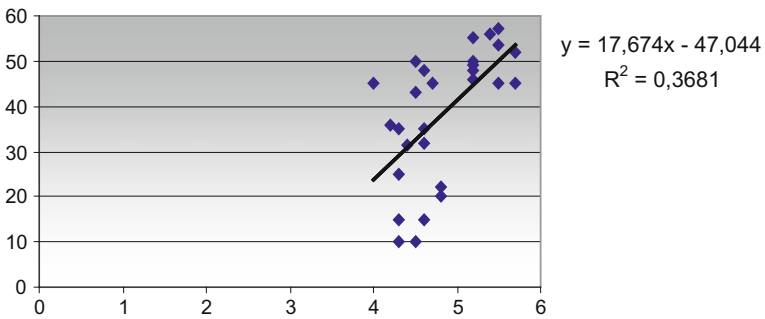


Fig. 3 The correlation between individual income tax rates and the global competitiveness index in the EU member states, in 2018. *Source* KPMG, Individual income tax rates table; World Economic Forum, The Global Competitiveness Index

Romania recorded the smallest rate (10%) (KPMG Home page 2018). The Pearson coefficient of 0.6067 for 2018 indicates a direct and high correlation between the individual income tax rate and GCI, as can be seen in Fig. 3.

(iii) the only state that reduced indirect taxation was Romania, from 24 to 19%; in Cyprus, Greece, Italy and Luxembourg was made an increase for indirect tax rates, by 1–2% points; the rest of the EU Member States did not change the indirect tax rates; the highest value for indirect tax rates was and is in Hungary (27%); the lowest value for indirect tax rates is in Luxemburg (15% in 2013 and 17% in 2018) (Homepage et al. 2018). Based on negative Pearson coefficients (−0.0934 for 2018), there is an inverse correlation between indirect tax rates and GCI, respectively the increase in the tax rate leads to a reduction in the global competitiveness index, as can be seen in Fig. 4.

Since the impact of taxation on each entrepreneur is very high, we believe that through an appropriate fiscal policy, with well-defined tax deductions, companies will focus on creating greater economic value through research, development and

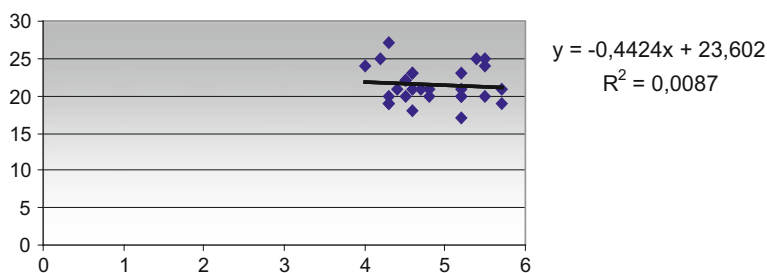


Fig. 4 The correlation between indirect tax rates and the global competitiveness index in the EU member states, in 2018. *Source* KPMG, Indirect tax rates table; World Economic Forum, The Global Competitiveness Index

innovation activities (Rumina et al. 2015) and by increasing social responsibility as an integral part of sustainable development (Sava 2013).

According to the world ranking of economic freedom conducted by The Heritage Foundation, in partnership with The Wall Street Journal (Heritage Foundation Homepage 2018), for 2018, most EU Member States recorded for the overall score values falling within category moderately free and mostly free, except for Ireland (80.4—free) and Greece (57.3—mostly un free). Also in this ranking are elements of the fiscal and budgetary domain. As can be seen from Table 1, the highest values are for fiscal health, and the lowest for government spending.

The relationships between the global competitiveness index and the economic freedom/fiscal freedom for 2018 in EU Member States are determined on the basis of the Pearson coefficient, as shown in Table 2.

A particularly important role in tax administration it has the ease to pay them. For this reason, PwC and the World Bank Group annually monitor worldwide the manner of payment of taxes, the number of payments, communication of the tax administration with taxpayers and the degree of voluntary compliance for the declaration and payment of taxes.

According to the report Paying taxes 2018 (PwC Homepage, Paying taxes 2018), Member States have made progress in terms of ease of paying taxes, but the indicators considered show that there are many differences, respectively:

- (i) in 190 economies analyzed, based on overall score on paying taxes, seven EU member states are in the top 20 (Ireland—rank 4/94.46; Denmark—rank 8/91.22; Finland—rank 12/90.14; Latvia—rank 13/89.79; Estonia—rank 14/89.56; Lithuania—rank 18/87.81; Netherlands—rank 20/87.59), the lowest values being in Italy (rank 112/68.29), Croatia (rank 95/70.90), Hungary (rank 93/71.49) and Bulgaria (rank 90/71.78);
- (ii) from the perspective of the total tax and contribution rate, the EU average is 40.56, very close to the world average (40.50), the highest rate being in France (62.2%) and the lowest in Luxembourg (20.5%);

Table 1 The 2018 index of economic freedom in EU member state

EU member state	2018 index of economic freedom				
	Overall score	Government integrity	Tax burden	Government spending	Fiscal health
Austria	71.8	73.5	49.9	19.4	81.1
Belgium	67.5	70.9	44	12.1	67.9
Bulgaria	68.3	38.2	90.9	60.5	94.3
Croatia	61	40.5	66	32.5	67.2
Cyprus	67.8	41.3	75.2	52.9	79.3
Czech Republic	74.2	51.1	82.9	48.6	96.2
Denmark	76.6	84.1	41.4	10.6	96.7
Estonia	78.8	75.7	80.7	52.6	99.8
Finland	74.1	89.8	66.5	2.3	81.1
France	63.9	65.1	47.3	2.7	60.8
Germany	74.2	75.3	61.3	41.3	90.8
Greece	57.3	37.9	60.4	20.9	70.5
Hungary	66.7	36.4	78.6	29.4	82.4
Ireland	80.4	79	76.1	69.6	80.8
Italy	62.5	40.1	55.2	24.1	68.2
Latvia	73.6	45.4	84	59	95.3
Lithuania	75.3	50.9	86.4	63.9	96.7
Luxembourg	76.4	79	65.1	48.5	99
Malta	68.5	49.9	64.7	51	90
Netherlands	76.2	86	52.5	39.1	88.2
Poland	68.5	50.9	75.9	47.8	81.5
Portugal	63.4	56.8	59.8	29.8	46
Romania	69.4	40	87.3	66.9	91.1
Slovakia	65.3	38.2	78.9	44.3	84.9
Slovenia	64.8	52.1	58.7	31.2	66.3
Spain	65.1	51.5	62	42.8	36.1
Sweden	76.3	92.9	43.9	23.2	96.1
United kingdom	78	79	65.2	44.4	53.5

Repressed	Mostly un free	Moderately free	Mostly free	Free
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Source The Heritage Foundation (2018)

- (iii) the EU average for time to comply-number of hours is 173 h, below the world average (240 h), but the differences are significant among Member States, the standard deviation being 80.19, the shortest time being in Estonia (50 h) and the highest in Bulgaria (453 h);
- (iv) in terms of number of payments, the EU average is well below the world average (11 payments versus 24 payments), most Member States recorded values below the world average, with the exception of Cyprus (28 payments) and Croatia (35

Table 2 The correlation of economic freedom/fiscal freedom and global competitiveness index, in the EU member state in 2018

Indicators	y	R square	R	Correlation
Index of Economic Freedom versus GCI	$y = 8.0926 x + 31.106$	0.4514	0.6719	A strong uphill (positive) linear relationship
Government integrity versus GCI	$y = 34.51 x - 107.06$	0.8695	0.9325	A very strong uphill (positive) linear relationship
Tax burden versus GCI	$y = -15.128 x + 139.56$	0.2803	0.52943	A moderate uphill (positive) relationship
Government spending versus GCI	$y = -11.722 x + 94.908$	0.0966	-0.3109	A weak downhill (negative) linear relationship
Fiscal health versus GCI	$y = 3.7549 x + 61.92$	0.0127	0.1125	A very weak uphill (positive) linear relationship

Source Author processing, based on World Economic Forum—The Global Competitiveness Report 2017–2018 and Heritage Foundation—The 2018 Index of Economic Freedom

payments), while the lowest number of payments is in Sweden (6 payments), Latvia and Poland (7 payments);

- (v) in terms of the Post-filing index, Member States record values between 99.38 (Estonia) and 52.39 (Italy), with standard deviation of 14.20.

As can be seen from Fig. 5, there are different correlations between the Global Competitiveness Index and the components for ease of tax payments, both positive and negative.

4 Conclusions

Even if, from the perspective of EU tax policy are established elements of fiscal harmonization and tax coordination, through general and special directives, there are significant differences in the values of fiscal indicators in the Member States. This aspect is also visible in the correlations established through this article. Because in the business environment complaints often concern fiscal matters, we believe that tax administrations in the Member States must take into account the following: the establishment of a tax system with strict respect of the principles of taxation; establishing tax rates taking into account the principles of horizontal and vertical equity and international aspects, so as to combat tax evasion and to allow free movement of

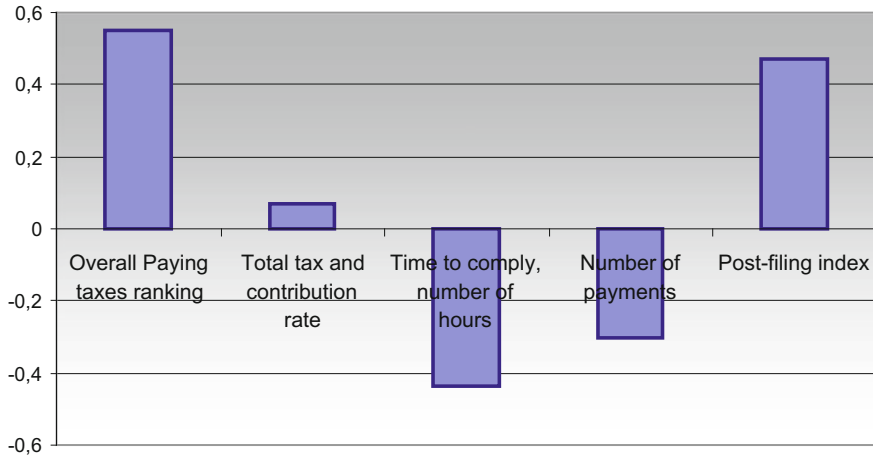


Fig. 5 The correlation between the global competitiveness index and paying taxes in the EU member states, in 2018. *Source* World Economic Forum, The Global Competitiveness Index 2017–2018; PwC, Paying taxes 2018

goods and people, without hindering competitiveness; the existence of fiscal stability, so that the business environment can produce pertinent forecasts; improving communication with taxpayers, so that the goal and role of taxation can be understood, which will lead to an increase in voluntary compliance.

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IT Solutions for Business Process Management



Marian Pompiliu Cristescu

Abstract In the paper are listed the main types of architectures of systems for business process management. Thus, we can identify several categories of such architectures, namely architectures of workflow management systems, flexible workflow management architectures, service-oriented architecture, advanced service composition, and data-driven approaches. As such, there are two of the five categories, namely architectures of workflow management systems and architectures of flexible workflow management systems, and a methodology is proposed for developing solutions for business process management.

Keywords Business processes management · Software architectures · Workflow Software solutions

1 Introduction

Business Process Management includes concepts, methods, and techniques that support the design, administration, configuration, adoption, and process analysis. Business process management is based on explicit representation, with their activities and execution constraints between them. Once business processes are defined, they can be the subject of an analysis, can be improved and implemented. Traditionally, business processes were implemented manually, with the support of the staff of the organization and the regulations and procedures in place. A company can get a competitive edge if it uses software systems to coordinate the activities involved in the implemented processes. These systems are called business process management systems.

Such a system can be defined as “a generic software product that is run by explicit representations to coordinate the adoption of business processes”.

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2 Architectures of BPM Solutions

In the literature several definitions of a business process appear. Among these, we mention the Business Process Management Initiative accepted by B.P.M.I. that a business process is a “set of tasks and activities coordinated by both individuals and equipment that lead to a particular organizational goal” (WKP 2018). Another widely accepted definition says that “a business process or business method is a collection of logically related activities or tasks that produce a particular service or product (serve a particular purpose) for a particular customer, or customers” (Vatuiu 2006). With this definition, Davenport identifies and emphasizes the existing execution constraints between the activities that make up the process and the ordering of the component activities. In (Weske 2007), is given a more complex definition that “a business process consists of a set of activities that are conducted in a coordinated manner in an organizational and technical environment. These activities share a business objective. Each business process is carried out by a single organization, but it can interact with business processes conducted by other organizations.”

2.1 Architectures of Workflow Management Systems

A workflow is a structured activity template through a systematic organization of resources, predefined roles and information flows in a process that can be documented and learned. Workflow management systems are a defining component in the development of process management and coordination systems.

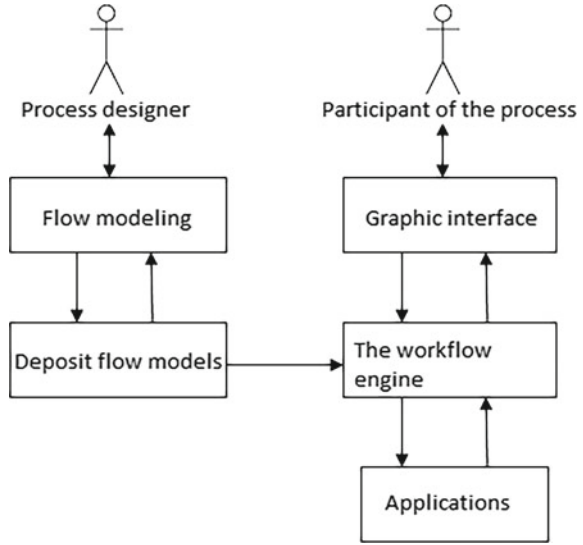
These architectures illustrate how subsystems involved in designing and managing both workflows of the system and flows that illustrate human interactions. Figure 1 presents a generic architecture of a workflow management system. This architecture is made up of five subsystems, each with a well-defined role.

A first subsystem is the one that performs workflow modeling. It provides the tools to model the technical aspects of the implemented business processes. For each activity in the Business Process Operational Model, which is performed by the system, a detailed specification of the execution environment is made, and in the end, workflow patterns are obtained. All workflow patterns created with the modeling subsystem are then stored in a subsystem that plays the role of “repository.”

If we have a system stream, the engine uses the stream model to invoke the applications defined for that instance and is responsible for the data transfer between applications. If an instance of a flow that illustrates human interactions has been created, they are executed using a graphical interface.

As we have seen, Fig. 1 shows a generic architecture of a workflow management system that identifies the elements that occur when we discuss typical scenarios. This representation is useful to see what the components of such a system are, but it does not provide a unified vision of the architecture of workflow management systems.

Fig. 1 The overall architectural scheme for a system that coordinates workflows. *Source* Adaptation after Weske (2007)



The Workflow Coalition (WfMC), a stakeholder group consisting of suppliers and users of stream management systems, provided such a unitary vision. They developed the “Workflow Reference Architecture” (WfMC), represented in Fig. 2.

As can be seen, the central element of this architecture is the workflow adoption service, all the other elements included in the architecture being connected to it through different interfaces.

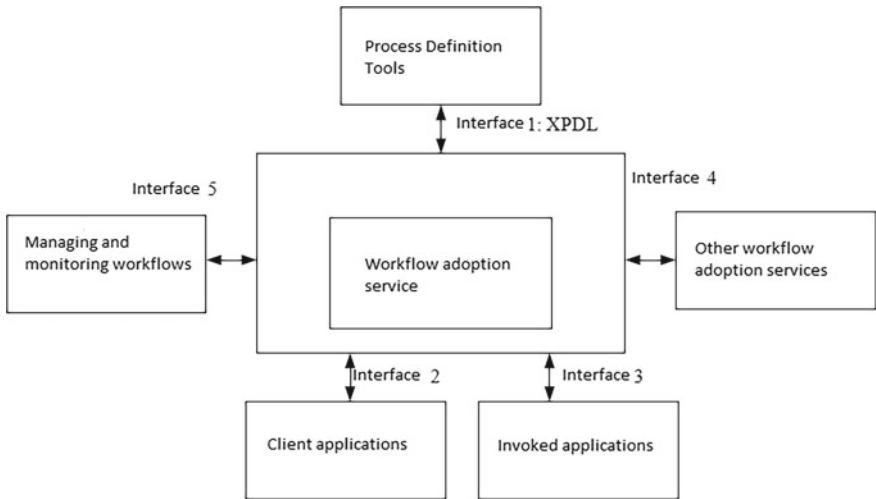


Fig. 2 WfMC architecture. *Source* Adaptation after Weske (2007)

From workflow modeling, tools are used to define processes, communicating with the central service via Interface 1. This is specified using the XML Process Definition Language (XPDL) language, also formalized by WfMC. The purpose of this interface is to allow the tools developed by different flow management systems to work in a standardized business process representation framework.

When a workflow involving human interactions occurs, the data subjects are informed of the activities to be performed by client applications. These are linked to the central service via Interface 2. Similarly, when a system-based workflow has to be performed, it is executed by a series of interfaces related to the central service through Interface 3.

3 Flexible Workflow Management

In the traditional way, workflow management involves controlling the execution of business processes according to predefined flow patterns. Due to the fact that the first wave of workflow management systems is based on a clear bounding of execution compilation, once an instance of a process has been executed, there can be no link to the model of the processes from which it is part of it. In the current business environment, new requirements have emerged with regard to the flexibility of workflow management systems, these requirements addressing the need for systems to adapt to unforeseen situations at times before execution.

In order to achieve these requirements, it is necessary to modify the structure of the instances of the processes under execution, which is called the dynamic adaptation. The term reflects the changes made, the instances of the processes being executed being dynamically adapted to new process models, models that meet the market requirements.

One way to solve the problem of adaptability is suggested by (Weske 2007), which proposes designing a flow management system that allows a dynamically controlled adaptation of instantiated workflows to new stream models. For this purpose, object modeling techniques are used to develop a metamodel in which relevant entities are represented by system objects. Among the main objects that make up this metamodel are objects flow patterns, stream instantiable, and objects that describe both technical and organizational environments.

Figure 3 presents the proposed metamodel. The primary class is the stream class and contains objects that are either patterns or instances of workflows.

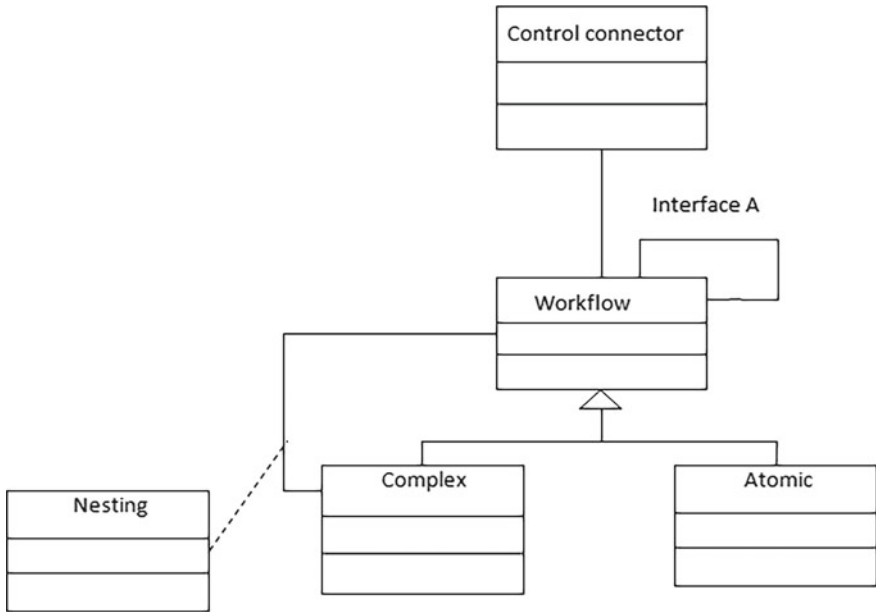


Fig. 3 Metamodel of a flexible workflow management system. Source Weske (2007)

3.1 Methodology for Developing Solutions for Business Process Management

In order to keep up with the frequent changes that take place in the business environment and to maintain a competitive advantage over competition, businesses are trying to increase their productivity as quickly as possible. This brings about a frequent change and improvement of business processes. According to (Miers 2006), it is good practice to achieve four, five cycles of process optimization in one year.

This information indicates that we cannot discuss a finite business process. Multiple iterations are required to produce an efficient solution, and it is highly probable that an existing process is changed repeatedly, so that its development can be viewed as a continuous process that takes place in a loop without approaching final state.

In the literature (Perkonigg 2006) it is stated that a process goes through five distinct stages, during the life cycle. These are: modeling, implementation, execution, analysis and optimization, phases presented in Fig. 4.

The modeling phase is intended to design new processes. Here too, those that have already been developed and implemented are being used, making changes to them according to the new requirements. At this stage, analysts perform specific activities involving process managers. As a result of these activities and the involvement of the specialized personnel, the tasks set up to be executed are described using extremely intuitive graphs.

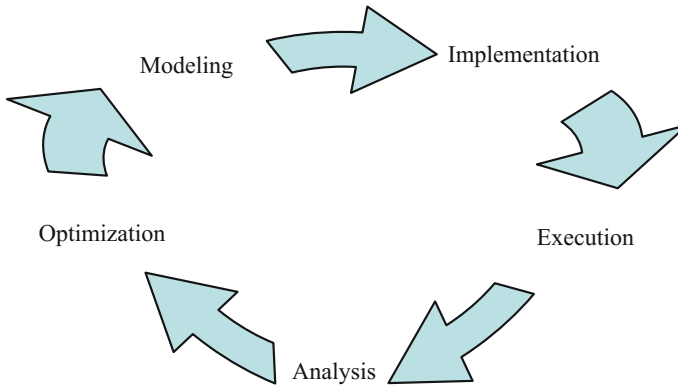


Fig. 4 The life cycle of a business process. *Source* Adaptation after Perkonigg (2006)

The objective pursued during the implementation phase is to obtain a final model, oriented towards the execution of processes, which has as a reference the abstract models that have already been developed and implemented. In practice, the adaptation of the theoretical model developed in the previous stages takes place, focusing on its use under the conditions existing within the organizations, taking into account the restrictions on the necessary resources and the categories of users involved in these activities.

Within the process life cycle, the stage takes place in taking over the outcome of the previous phase and continuing the process execution (implementation of the new, directly executable model in production processes). This stage has the purpose, in certain situations, to obtain additional benefits for the organization, in terms of the value of the model, which produces a substantial increase in the satisfaction of the clients. Following the progress of the stages, we observe a close monitoring of the processes that have already been launched and as a result of the analysis of the data obtained from this activity, we can take corrective actions aimed at optimizing the performance of the developed model by redesigning or eliminating the parties less performing. This can result in a process with much higher performance.

Other authors (Weske 2007), start from the premise that within the life cycle of a process there is a repetitive structure in which are identified four stages: analysis and design, configuration, implementation and evaluation. They are in a relationship of logical dependence, but they cannot be easily and precisely assessed the time needed for their development (Fig. 5).

The analysis and design phase represent the start-up phase of a process's life cycle. In order to establish the activities that are taking place at this stage, the logic of their deployment and to highlight their significance, a multi-criteria analysis and an evaluation of the company are recommended. The organizational environment and the technical conditions in which it takes place influence all of these activities. As a result of the completion of the multi-criteria analysis, processes are identified and subsequently reviewed, and if they are found to meet the requirements initially set,

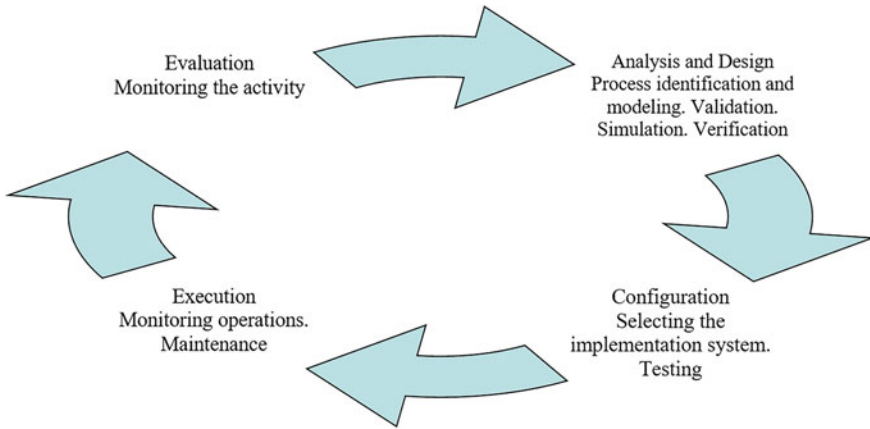


Fig. 5 The logical sequence of the stages of a business process. *Source* Adaptation after Weske (2007)

validation and graphical tools are used to represent them. All of this will ultimately lead to models for business process management.

The configuration stage follows, within the process life cycle, after the business processes models have been achieved and implemented. Older models are subject to the implementation process, which is done in two ways. These modalities involve, on the one hand, the support and use of a set of procedures and policies that become mandatory for employees, a situation that does not imply the existence of a computer system that supports the process. On the other hand, it is imperative for business processes deployment to use highly specialized software systems.

The start-up phase is represented by the success of the business processes that are actually being launched. The execution of each process, in accordance with the developed and implemented model specifications, is coordinated by the process management system. Furthermore, the execution of the processes is monitored with great care, ensuring that the activities, which are the main components of the processes, are carried out in accordance with the restrictions on their execution, described and implemented within the model.

In the assessment phase, business process information is used, and attention is focused on actions aimed at evaluating and increasing the performance of models developed and implemented for business process management. An important aspect is the assessment of the level of quality achieved by business process models as well as how they fit on the specific conditions existing within the organizations where the processes take place. To that end, implementation logs are drawn up, listing information from actions aimed at supervising the activities.

In Florea (2011b), is presented another way of structuring the stages within the process life cycle, the structure represented in Fig. 6.

According to Florea (2011b), in the life cycle of a business process, we find six phases; disposed according to the execution cycle and which are in a logical interde-



Fig. 6 Another approach to the stages of the life cycle of business processes. *Source* Adaptation after Florea (2011b)

pendence. The starting point of the life cycle is the company's investigation phase. At this stage, the strategic goals of the organization are correlated with short-term business goals, aiming at identifying and understanding in detail the size of business processes, with all the implications for companies. The relationship of interdependence between business process management and strategic objectives of the organization directly influences this first phase. The transition to the modeling stage, which is the second phase of the life cycle, takes place only after the identification of business processes. In this stage, the processes are graphical represented, and as a result of this activity, the new model of business processes is generated.

The simulation and implementation phase, starts only after the business process has been designed. As a result of the involvement of the technical information, referring to the process execution environment, the initial process model is developed. In practice, activities are being carried out to improve the performance of the model obtained in the first stages, through the transition to the execution phase, which is the fourth stage of the life cycle of business processes. Subsequently, the implementation of business processes in production takes place.

The monitoring phase is intended for tracking processes, which are already under way, focusing on the quantification of indicators that allow the estimation of the

performance level and the establishment of significant metrics. At the end of the process life cycle is the evaluation and optimization phase. Following the monitoring step, some information is obtained that undergoes an intensive evaluation process, based on previously established criteria, or with specialized simulation tools, aiming at obtaining significant results with regard to methods to improve the processes business by using data from the actual execution environment.

In Florea (2011a), it starts from the analysis and evaluation of the actions undertaken and a method is developed for structuring and organizing the stages of the life cycle that are planned to be undertaken in order to obtain a solution for the efficient management of the processes Business. The stages of the life cycle described above represent the premise from which we start with the proposed method in Florea (2011a). The method uses a set of informal notations, aiming to obtain a set of useful rules for the staff who has responsibilities in the field of planning and execution of projects aimed at the coordination of business processes (Fig. 7).

The proposed methodology implies the existence of seven stages. The first phase aims at setting the strategic and operational objectives of the company, imposed by the interdependence between the company strategy and the business processes. Business processes directly influence the company's long-term objectives, and it is therefore objectively necessary to identify and formulate them precisely. The achievement of the strategies is decisively influenced by the way the business objectives are achieved, and the processes contributes decisively to this.

After setting the strategic objectives of the company, the business process analysis and evaluation process is underway, as well as the identification of what needs to be implemented. At the Investigation stage, it is intended to collect and organize data that covers all aspects of business process management. These activities provide a complete picture of the processes in the organization, which is, in fact, the overall objective of the stage.

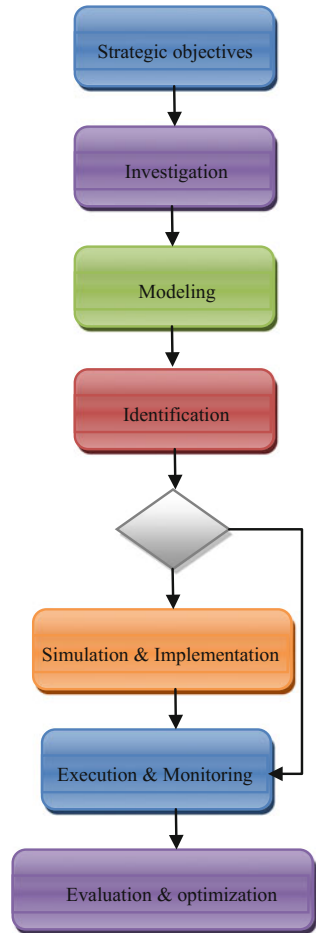
In the modeling phase, the design of the theoretical model of business processes takes place. This is obtained as a result of organizing, structuring, analyzing and representing the information from the previous step.

The choice of the technology with which the model obtained in the previous phase will be implemented is the activity that follows the theoretical model of the business processes. In this situation, there is the possibility of choosing technical or non-technical support. If you opt for a technical platform, the choice focuses on those that can be used to implement business processes. This includes automated platforms, such as software systems used to develop enterprise-integrated applications, or workflow management systems, which are a support for flows including human interaction.

At the end of this stage, known as the identification phase, a very complex decision-making process takes place. Depending on the decision made, different actions will be taken. Thus, if it is decided to use a non-technical platform, the direct transition to the execution and monitoring phase will follow. In case of technical support, the transition to the simulation and implementation phase.

The activity of adjusting the business process model, depending on the chosen platform, as well as the development of prototypes of the model that allow for

Fig. 7 Methodology for developing a BPM system. Source adaptation after Florea (2011a)



real-time checking of the correctness and efficiency of the developed model is an activity that will generate the information needed to improve the model, in the simulation and implementation phase.

At the end of the simulation and implementation phase, the implementation and monitoring phase follows, in which data on the effective operation time of the business processes under modeling is collected. At this stage, the status of ongoing processes is inspected by a process supervisor component, in parallel with the actual execution of business processes. These activities allow the collection of historical information that is stored in log files to be used as support for the evaluation and optimization stage.

4 Conclusions

The use of Business Process Management solutions has proven to be a certified way to improve performance, increase productivity and reduce processing time by automating and optimizing high complexity processes, thereby ensuring management of the flow of the entire business companies.

The development of a structure that allows users to interconnect with IT systems can be achieved by using BPM solutions. They are easy to put into practice, they can easily adapt to the needs of users, and due to their flexible and personalized standards, and they are designed for a large area of applicability.

BPM solutions help transform business performance into a competitive edge by:

- increasing agility and accelerating business responses and transactional events;
- optimizing operational efficiency and resource use;
- imposing organizational standards and improving process stability;
- reducing working time, making it easier to make optimal decisions;
- reducing the difficulty of integrating people, processes and systems already in place.

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Corporate Diplomacy as a Management Decision



Ioana Gutu and Maria Viorica Bedrule Grigoruță

Abstract Corporate diplomacy is a concept that became familiar to corporations once they transformed into the main actors of the international markets. The article highlights the evolution of the specialized behavior of companies interacting with stakeholders, introducing managers to a new type of diplomacy, corporate diplomacy, which demand global but also industry specific diplomatic practices, activities undertaken until not long ago, by national representatives, the commercial and economic diplomats. Specifically, the article analyses the behavioral foundations of global managers when they have to adapt corporate strategies to new markets and international standards. Showing an increased number of business perspectives and practices, managers as the corporate diplomats follow common patterns when acting international and representing the entire company. Results show that after taking into consideration the process of companies when deciding to implement corporate diplomacy within their managerial framework, Romania exists as a potential market for global investors, still fragile but proactive.

Keywords Management decisions · Corporate diplomacy · Globalization

1 Introduction

Starting as an indirect consequence of the globalization process over companies and their emergence on international markets, the corporate diplomacy elapsed management behaviors and created business and industry-specific actions that resulted into a new general management decision pattern.

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The research begins with an analysis of the global companies' behavior, by resuming the main factors that prioritized the corporate emergence on new markets. On a second part, an extensive analysis of the concept of corporate diplomacy but also of the corporate diplomats' actions reveals that in the center of the action can be found the external stakeholders, their interests and reputation, while corporate managers must perform diplomatic activities designed to develop smart-strategies for companies that will ultimately increase their market share.

The article ends with a case study that regards the multinational environment of Romania, where results show an increase on international interest over the national market, a situation that is not considered to be sustainable for the practice of corporate diplomacy, since this concept is in its early days in Romania and substituted more frequently with the practice of business diplomacy, as it will further be explained.

2 Factors Considered for the Evolution of Global Companies

Globalization is considered to be a phenomena which is currently measured by Foreign Direct Investment (FDI) flows, having as effects the transnationalization of companies activities. The new industrialized economies, emerging markets and also financial crisis are the main drivers for the new global corporations that must adapt to unique national work values, different institutional frameworks and also different manners of organizing personal and institutional relations.

As Saner, Yiu and Sondergaard (Bouchard 2006) claim, global managers try to avoid making mistakes that are a result of cultural myopia, since the current perspective over the global corporations regards the diplomatic recipes of doing business in different cultural environments. It is important to also mention the development of a large variety of standards adopted through bilateral or multilateral trade agreements, factors that will define industry standards, mandatory for global businesses.

Since the technical evolution radically changed the business communication, the power balance between nonbusiness stakeholders and corporations is subject to various speedy changes. Along with civil society, the nongovernmental organizations (NGOs) set specific requirements concerning the corporate activities worldwide, using IT to influence the company's structures.

It appears that every action on a global scale resonates with diplomatic changes specific for the business world, civil society needs leading to the initiation of NGO diplomacy, a new type of behavior that protects national individual interests and restricts corporate activities for the benefit of general environment.

The result of these global processes among companies is that global managers may find difficult to manage external stakeholders, the skills and appropriateness of corporate diplomat's actions creating a double win recipe for the practice of corporate diplomacy.

3 Corporate Diplomacy—A New Managerial Working Environment

Corporate diplomacy is an emerging management topic within specific literature. The scholars use the expressions corporate or business diplomacy when they refer to political and social roles of corporations in economy.

Along with business and NGO diplomacy, corporate diplomacy is, as M. K. Behaylo et al. (Daffy 2009) say, an emerging concept within the management literature. Within a more political driven business environment across the Globe, and in the presence of more pregnant social reactions and initiatives, the corporate diplomacy comes in order to better describe the companies' (re)actions in the international arena.

There are only few references in literature that use with a distinct sense the terms of business and corporate diplomacy, as most of the authors use both expressions when referring to social and political roles of Multinational Enterprises (MNEs) in the global economic arena.

The earliest and clearest distinction in regard with the true meaning of business and corporate diplomacy belongs to Saner and Yiu (Bouchard 2006) that surprise the need for redefining diplomacy according to the professional identity of diplomats. According to the two authors, the diplomatic roles respond to the needs of the international arena subjects—state and non-state actors. Encompassing commercial and economic diplomacy, the corporate diplomat is presented as accomplishing two possible roles: first, the culture of a manager who develops actions in two cultures—the one specific to the location of the business unit, seconded by the corporate culture whose specificity best describes the culture of the home country. As a second role, the corporate diplomat performs actions that are highly specific to the corporate culture, most similar to the political ambassadors—multilingual, highly trained and used with living across a variety of cultures.

On the opposite side, the business diplomat covers the actions of MNEs in relation with its non-business counterparts, by mastering negotiations with stakeholders, defining business strategies, coordinating public campaigns and ensuring interface with the increasing presence of the NGOs within the international business environment.

Without recognizing the peculiarities of this view, most of the authors write about corporate diplomacy as a new set of actions on a multinational level, with the role of dealing with all global corporate stakeholders (Eřco et al. 2013).

Wilfried Bolewski (Falcone 2016) sees corporate diplomacy as a management practice of influence, explaining that it is a mix where the political, economic, social and cultural dynamics must dissolve and result into a singular management action, designed for the benefit of the company.

M. D. Watkins (Gisberto et al. 2013) writes about corporate diplomacy as the activity of senior executives in advancing the interests of the corporation, by performing specific actions with relation with external players, a classic example of mixing the meaning of business and corporate diplomats, since the author does not

make a clear difference in regard with the nature of the corporation relations with external stakeholders.

Focusing on the role of markets for companies, Ulrich Steger (Holt and Holt 2010) analyses corporate diplomacy as a behavioral pattern of companies that act within the diffuse international environment, by surprising accurately that the strategies of corporate diplomats are highly-contextual, being entirely specific for the industry and the company itself. Since the principle of company's internationalization assumes looking for growth and revenue opportunities globally, especially targeting the emerging markets, corporate diplomacy is defined by Withold Henisz (Kotter 2009) as a senior level capability of building relationships that will ultimately result into shareholder value.

Despite the many views and definitions, used expressions and an increasingly variety of terminology that became specific for corporate diplomacy, there is a specific area where all the authors agree: the management competencies of corporate diplomats, as part of the international business management. We count international law, international economics, knowledge of supranational organizations, negotiation skills, interaction with media and diplomatic behavior. Corporate diplomacy becomes a flow of interaction sequences between MNEs and public institutions, whose main added value is, as Ordeix-Rigo and Duarte (Lefter et al. 2008) claims, results into license-to-operate for the companies that will have an increased power in the context of the civil society.

After an extended literature analysis in regard with corporate diplomacy, it is important to better clarify the new-entry management concept, by highlighting the six elements of corporate diplomacy, as introduced by Withold Henisz (Kotter 2009) in 2017, an analysis that surprises three different perspectives: analytical, behavioral-internal and behavioral-external (Fig. 1).

Being a smart-strategy of companies for stakeholders' engagement, the first element of corporate diplomacy takes into consideration the stakeholders interests (where the manager-diplomat performs actions like identifying the stakeholders, the resources they control, as well as the reasons for their interest in the company).

The second element in integration of shareholder data into the companies' business departments. On a personal level, the corporate diplomat uses interpersonal skills, ensuring the stakeholders in regard with the transparency of the internal processes of the company they represent. The fourth element—learning—suggests that corporate diplomats adapt and change their actions according to the feedback received from the stakeholders, by removing the well-known expression DAD (decide-announce-defend). The openness of corporate diplomacy emphasis perceptions of stakeholders in regard with the company they showed interest for, while the mindset, as the last element of corporate diplomacy catches the need for a new way of thinking among the corporate managers, only acquired with the help of ongoing training and corporate communication.

It is important for practitioners to understand that corporate diplomacy does not need corporate departments designed for special practitioners, special trainings along with results analysis, as numbers that describe the success or failure of this type of behavior. The opinions above-mentioned only capture a new type of behavior specific

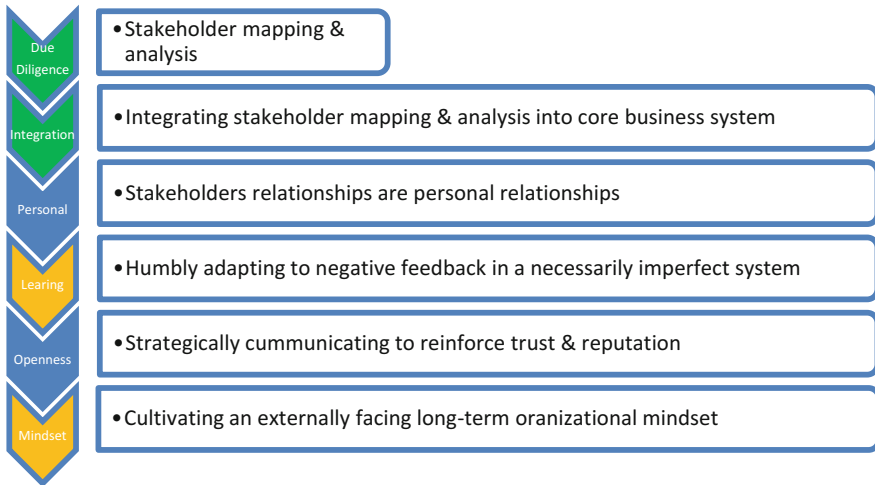


Fig. 1 Corporate diplomacy perspectives. *Source* adapted after Heinsiz, Witold. Corporate Diplomacy. Building reputations and relationships with external stakeholders (Kotter 2009)

for the companies and their corporate managers, similar diplomatic actions but with a different nature and results, specific for each industry and economic sector.

Corporate diplomacy though, illustrates the positive aspects of corporate interests, with managers’ interference when negotiating or creating alliances with external players.

The drawbacks of corporate diplomacy are not absent; a key aspect arises when corporate diplomats need to compete for scarce resources (money or personnel) from companies they represent, since they are unable to accurately justify their expenses. Another corporate diplomacy liability arises in the cases when companies need image and/or reputation carving; considered in most of the cases as being a philanthropic action, companies expenses when practicing corporate diplomacy may cause large costs, since managers will never be able to decide as W. Heinsiz (Kotter 2009) claims, how much is enough.

Another drawback for corporate diplomacy is inertia, coming from corporate internal policies and different perspectives, a behavior that in many cases does not properly consider opportunities coming from external stakeholders, resulting in a lack of benefit for the company (Fig. 2).

The corporate diplomacy practices were best illustrated by Witold Heinsiz, an author that directly connects the success for the practice of business diplomacy with the stakeholders review and the corporate transparency.

Considered to have analytical, internal or external behavior features, this type of behavior is not industry or economy sector specific but can be applied globally for the companies acting on external markets.

Taking into consideration the identity of potential stakeholders, the first feature primarily regards their interests and strengths that may be used to benefit the com-



Fig. 2 Drawbacks for the corporate diplomacy practices. *Source* adapted after Wharton University of Pennsylvania (Maravelias and Holmqvist 2016) (2014)

pany. When integrating data specific to each of the stakeholders, mainly implies to assess the impact of strategies on the financial and performance of a company. The stakeholder trust is mainly cultivated by showing understanding, express clear and fair initiatives and also efficiently solve disputes within the given environment. When necessary, a company must adapt to negative feedback and perform actions like data updates and avoid internal behavior traps; in case of danger of losing it, trust may be reestablished by an efficient crisis management, showing transparency and fairness. The external organizational mindset in regard with shareholder value assumes performing actions that will grow the shared value both on short and long term.

4 Corporate Management Decision Making

Corporate managers exist at all levels, and their main task is taking decisions on behalf of a company, with a singular scope—increasing the company’s visibility and share on the market. Generally, different management levels spend more time on different management functions, depending on the manager quality—board or owners, top management, middle management or operational management.

Corporate diplomacy promotes a new way of thinking for the managers, encouraging them to act diplomatically in pursuing an interest for the company, by providing

sustainability and acceptance on all levels and providing broad expectations (Falcone 2016), both internal and external.

Management decisions take into consideration the value chain, organized as Sarfati (2012) claims (Eřco et al. 2013) into primary and support activities; inbound logistics, operations, outbound logistics, marketing and sales and service are all activities considered to be as primary into a company, while the possibility of adjustment regards the support activities like procurement, human resource management, technological development and infrastructure.

Modern corporations developed specific features that primarily derived from their need to adapt to international markets, as a consequence of global expansion. With multinational teams and investments, they share a multinational organization. Growing in importance in the locus of production (Eřco et al. 2013) and influencing local employment, corporations have an increasing role in defining global policies, by adapting to public scrutiny as a consequence of the increasing pressure of civil society power.

Still showing a strong dependence to the national institutional frameworks, corporations show a tendency of pressuring specific national environments in order to coordinate traditional market objectives; given the enclosed corporate status on the global market, the corporate external policies show four dimensions, discussed by Sarfati (Eřco et al. 2013) in 2007. The author takes into consideration at first the market dimension seen as a cumulus of external factors that relate with corporate activity. He continues by highlighting the national government dimension and also the society dimension and their implications for the value chain. The last comment includes the information dimension, seen as communication strategies that affect and interfere with all the three abovementioned dimensions.

The corporate strategies have the essential role of implementing the specific corporate foreign policy, a cumulus of activities that define the existence of the corporate diplomat, as a manager that interferes with international business aspects when following the corporate business strategies and implementing them.

When implementing corporate diplomacy actions at firm level, there is a series of management actions that need to be considered, diplomatic know-how within a company becoming a strategic competence.

A Corporate Diplomacy Office

Corporate Diplomacy Managers

Corporate Diplomacy Liaisons

Corporate Diplomacy Management Information System

Strategic Planning Function Connection

A Mandate for Strengthening Organizational Capacity for Corporate Diplomacy Management

It appears that the synergy between business management and diplomacy in the main driver for the function of the modern global companies. Opting out for installing

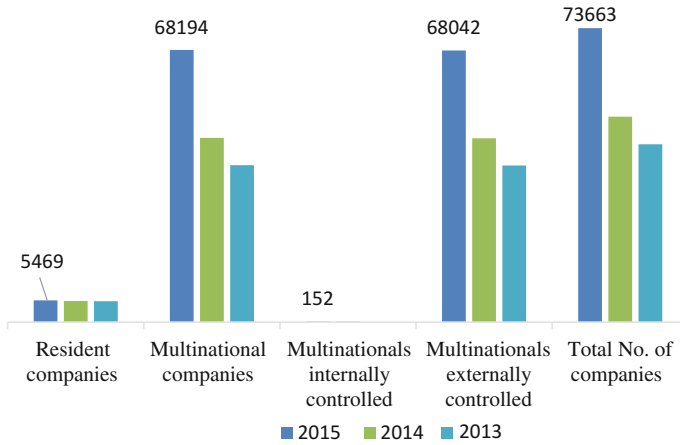


Fig. 3 Trends for the multinational companies in Romania. *Source* Own calculus by using data from INSE (Oliveira et al. 2018), 2018

a Corporate Diplomacy Office within a company proves the increasing internationalization of the corporate management, by assuming new responsibilities by top management and other business heads.

The focus on strategic alliances leads towards an increase of the number of partnerships with external stakeholders, where the key leaders are the managers as decision makers and opinion leaders (Moroianu and Moroianu 2006), whose activities depend on industry, country and company size and performance.

5 Case Study—The Specific Corporate Diplomatic Practices in Romania

As previously explained, corporate diplomacy explains the company’s capability of building and also maintaining relations with the external environment on international level. The importance of this practice subject for companies’ management is expressed by the constant need for growth and expansion of companies, that seek markets with increased revenue opportunities, frontier and foreign markets.

After a quiet foreign direct investment (FDI) path having as a main driver the financial economic crisis that started in 2007, Romania shows a steady tendency of becoming the host of an increased number of multinational companies that perform business on its territory. As shown in the Graph 1, the number of externally controlled companies in Romania increased with more than 20 thousand; from a total of 73,663 of active companies, more than 68 thousand were externally controlled multinationals in 2015, while only 152 had an internal controlled management (Fig. 3).

The study shows that the resident companies from Romania are outnumbered by externally controlled multinationals, a fact that creates a specific tendency for the national corporate management. Since most of the investors represent Germany, Netherlands, Austria, France and Italy, the corporate diplomacy will be influenced by the national features from the headquarters.

But the Romanian economy also knows the presence and activity of the offshore companies, whose main investors come from countries like Liban, Cyprus, Switzerland, Ireland or Luxembourg, and have a large capital share among the multinational companies from Romania (Prado 2009). The Bucharest Stock Exchange data also has relevance for the evolution of corporate diplomacy in Romania, since more than 30% of the enlisted companies represent shareholders from tax heavens.

The representatives from these countries and their related values will adapt in two different manners: at first, given the excedent in the number of Romanian employees and their cultural values, the corporate culture will adapt, creating a symbiotic relationship according to the working schedules (Tirelli et.al. 2015). From another point of view, there is the presence of external stakeholders, institutions and civil society that will determine multinational companies to adapt their policies.

An important driver for the corporate diplomacy currently performed in Romania is the industry specificity; most of the investments in 2015 regarded manufacturing industry, commerce, automotive, financial insurance and also agriculture. Although there are no industry-specific corporate drivers to be analyzed, in Romania the practice of corporate diplomacy is seen as a philanthropic and philosophic concept, and apparently the industry specific drivers for decision making are mainly specific for internal management and for the division organizational culture.

A common mistake is usually made: adapting organizational and management practices to a specific national environment will create the tendency of calling the entire process as corporate diplomacy; in fact, the corporate managers, when adapting their management actions to the Romanian environment, they will perform a different type of diplomatic activities—business activities. The Romanian division actions in regard with international stakeholders will determine corporate management decisions that subscribe to corporate diplomacy.

The success recipe for Romania in regard with encouraging the arrival of new investors (Știbli 2012) and also keeping the existing ones is still unclear, but for sure a more stable legislative framework and the flexibility of legislators when answering to the global stakeholder requests are for the moment lacking in consistency.

6 Conclusions—The Need of a Comprehensive Research Agenda

The power of multinational companies asserts to the phenomena of globalization, their power and activity diversification increasing continuously. On the agenda of

these companies is dealing with a greater variety of stakeholders and their behaviors, all competing for an increased global market share.

The human resources of corporations facing the new conditions need to quickly adapt, requiring for new internal behavior and management resources. Arising from this issue, a further research should answer to the question whether corporations should invest more energy in developing strategic policies and promote corporate diplomacy, or should they put under pressure the connection with national stakeholders and institutions and enhance business diplomacy instead. The recipe on how the civil society requests should be integrated within the corporate global policies may lead to new product and services development, in close dependence to the company-national institutions relations.

Another question to be answered in a further study regards the industry-specific corporate actions, since modern corporations show independence and not a cooperation behavior. With a lack of data in regard with the specific actions of corporate managers, we strongly recommend to companies to an increased transparency and a better cooperation with research institutions like universities or research centers, especially since students as future managers, are not exclusively prepared for performing business negotiation, international politics or business competencies.

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Corporate Income Tax Versus Tax on Turnover. Analysis on BET Index Companies



Andrei Ionuț Hușman  and Petre Brezeanu

Abstract Taxation and its effects have an important role for any company, being a key element for a company's financial situation. The corporate taxation is an endless dispute between the intention and vision of a country's governors and the needs and desires of all types of companies. At the level of legal entities, the discussions (at both national and international levels) focus mainly on finding a viable solution for taxing profits/revenues where they are actually realized. Therefore, through this paper we aim to propose and analyze a model of taxation applied to the turnover and to perform a comparative analysis based on the corporate income tax registered in the period 2012–2016 by the companies within the BET index. The results of such analysis will show that the tax on turnover would simplify the taxation of companies, but the related implementation needs to be analyzed from the perspective of the European Value Added Tax Directive. Moreover, as expected, at monetary level certain differences were ascertained between these two tax systems analyzed. Also, certain relatively surprising results were found.

Keywords Taxation · Listed companies · BET index · Corporate tax
Tax on turnover

1 Introduction

Nowadays, business models are developing at very rapid pace. In this context, the corporate taxation is an endless dispute between the governments and companies. It is self-evident that the interests of governments are to attract more resources to the state budget, while the companies are interested to register prosperous financial performance, fact that concerns the reduction of taxes. Thus, there can be many

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controversies about the tax system. Even more, when it comes to listed companies, the tax paid by the company is a key point of interest to investors as it has an impact on their wealth in terms of dividends received.

If, as far as individuals are concerned, there is the eternal controversy of progressive taxation at the expense of proportional and vice versa in order to ensure optimal taxation from both points of view of taxpayers and the state budget, the problem concerning legal entities is represented by the transfer of profits abroad and the related method of combating it. Therefore, states are in a continuous search for an efficient tax system.

Since the taxation level is a key element for an investment decision, depending on the tax systems and its pressure, investors will explore opportunities to invest in other countries with a more “relaxed” taxation. Consequently, one can argue that the taxation is a contributor factor to the capital inflows and outflows of a country.

Lately, at least a declarative level, some changes have been taken into account by the Romanian decision-makers related to a potential expansion of the system applied to microenterprises, namely expanding the tax on turnover.

Considering the above, through this paper we aim to perform certain simulations at the level of companies within the BET index (“BET index companies”) by applying turnover tax rates for the period 2012–2016. Further, we aim to compare the results obtained under the turnover tax scenario with the situation of the corporate income tax (“CIT”) actually recorded by these companies during the period analyzed. Before performing such analysis, we will also review some aspects relevant to the chosen subject as evidenced by the literature and we will analyze the fiscal situation recorded by the companies in question.

2 Literature Review

In the attempt of identifying some positive aspects on the Romanian tax system, we can mention the research conducted by Comaniciu and Bunescu (2013); they concluded that the coordinates for providing a positive image of taxation in Romania are represented by several elements such as the establishment of a fiscal pressure guided by the rationality, fair and impartial implementation of tax law and the use of public funds under conditions of transparency, efficiency and effectiveness.

Regarding the literature review, the subjects of the researchers are mainly focused on the impact of CIT/taxation on various financial/economic variables and less on alternative tax systems.

Aiming to reveal clusters of EU27 countries with similar tax burden or tax changes, Šimková (2015) found that mainly newly acceding countries (2004 and 2007) register a low tax burden in their attempt to encourage investors through favorable tax rates.

Analyzing the premises for implementing the “Common Consolidated Corporate Tax Base” system, Matei and Pârvu (2010) observed that the mobility of production factors can put pressure on governments to reduce taxation so that their countries remain attractive. They also analyzed the extreme diversity of approaches on the idea

of corporate tax harmonization and they argued that this diversity is a telling indicator of the complexity of problems that prevent the issuing of widespread solutions (even at the theoretical and independent levels) of political feasibility considerations.

As regards the effective tax rate registered by the Romanian companies, Vintilă et al. (2011) conducted a research on a sample of 40 Romanian companies and its results showed that, during 2009, the average effective tax rate was higher than the statutory one (16.88% versus 16%). Such difference may be explained by several tax adjustments performed for CIT purposes.

Through his research, Țâțu (2006) analyzed the CIT impact on the profitability of a company. He demonstrated that the profitability of an enterprise is influenced by the CIT through the share of non-deductible expenses in total amount of expenses, and as this share increase, the profitability decreases with an amount computed by the product of the tax rate and the value of the non-deductible expenses.

Researchers' attention was also directed to the listed companies. Thus, Pitulice et al. (2016) performed a research having the intention to identify a relation between the CIT and financial performance registered by the companies listed on the Bucharest Stock Exchange ("BSE"). As a result, the econometric models made reflect that the effective tax rate is econometrically significant, showing a negative influence on the performance indicators registered by the listed companies.

As it will be presented in the following section, the BET index is composed also of banks. Therefore, the literature offers some studies in terms of CIT and its impact on banks. Andries et al. (2017) examined how the taxation system (through the treatment of loan losses) impacts the bank financial reporting and they found that in the event of deductibility of general provisions, an increase of 1 percentage point leads to an increase in provisions of 4.9% of the average of the sample used. Such effect suggests that CIT is an important factor of the bank financial reporting transparency.

Regarding the literature on the controversy of progressive taxation (as alternative tax system) versus proportional taxation, we noticed that this refers in particular to the taxation of individuals. The case of progressive taxation for companies is less approached, with the general perception that corporate taxation is anyway progressive through its marginal tax rates registered. However, certain researchers have approached this topic by developing various analyzes in the field. By developing a model of options in the case of a firm operating in continuous time with an infinite horizon, Wong (2009) showed that in a progressive taxation—defined by an increase in the tax rate with the tax base—the tax on profit has a different effect than neutral on a company's liquidity. Further, Wong (2009) demonstrated that the trigger of the company's liquidation in progressive taxation decreases with an increase in the tax exemption threshold but increases with the increase in the corporate tax rate. Within other research performed by Agliardi and Agliardi (2008) it is demonstrated that a progressive tax schedule can either slow down or speed up the process of closing a company, while the flat tax does not affect the liquidation policy.

In terms of turnover tax, there is reluctance from the researchers, since the literature would indicate that this kind of taxation would be more specific to East European countries or is applicable to certain type of income or activities.

Table 1 BET index companies

Indicative	Name
TLV	Banca Transilvania S.A.
FP	Fondul Proprietatea
SNP	OMV Petrom S.A.
SNG	S.N.G.N. Romgaz S.A.
BRD	BRD—Groupe Societe Generale S.A.
TGN	S.N.T.G.N. Transgaz S.A.
EL	Societatea Energetica Electrica S.A.
DIGI	Digi Communications N.V.
TEL	C.N.T.E.E. Transelectrica
SNN	S.N. Nuclearelectrica S.A.
COTE	Conpet SA
M	MedLife S.A.
BVB	Bursa de Valori Bucuresti SA

Raiklin (1998) analyzed the diversity of views on turnover taxes, showing a mixed application of this type of taxation. Taking into account the particularities of the turnover tax in Curacao, Haiti, North Korea and the simultaneous existence of turnover tax and VAT in Argentina, Kyrgyzstan and Kazakhstan, Serebrianskyi and Stadnyk (2016) stated that the simultaneous existence of turnover tax and VAT may be justified under certain conditions such as: high level of shadow economy, budget deficit of low efficiency of public institutions.

Given the lack of studies on a tax system based on turnover tax, we are further proposing to analyze and discuss some aspects related to this topic.

3 Research Methodology

As mentioned above, our analyses will focus on the situation of the BET index companies, the main important index of the BSE. This choice is argued by the fact that the financial information (especially the fiscal ones) records a higher degree of transparency than for the non-listed companies and allows access to the necessary tax information (i.e. CIT and taxable profits registered). It is worth to mention that the BET index reflects the evolution of the 13 most traded companies on the Regulated Market of BSE. Therefore, our analysis is more reliable and meaningful in shaping an overview of this type of taxation. Further, we have analyzed the period 2012–2016 due to reduced data availability.

Thus, the Table 1 shows the companies that are part of the BET index starting with 2018.

Further on, we will refer in this paper to these companies by also using their indicative from Table 1.

Given that the analysis targets the period 2012–2016 and MedLife S.A. and Digi Communications N.V. (the latter being a foreign company, without fiscal residency in Romania) have entered within BET index after this time, we have removed these companies from the analysis. Also, according to the reports available on the BSE website, Societatea Energetica Electrica S.A. does not reported in its financial records current CIT in the period 2013–2016 and for 2012 no such data are available.

As concerns the fiscal and financial data, such information has been extracted from the companies' financial reports available on the BSE (2018) website. Also, in order to perform the analyses, the data provided on the website of the Ministry of Public Finance (2018) were consulted.

As regards the CIT statements, due to the accounting rules applicable, listed companies are registering both current CIT and deferred CIT. Thus, for the purposes of our analyses, only the current CIT was taken into account due to the fact that this indicator reflects the tax actually paid by a company in a fiscal year.

In the following chapter we will present and analyze the financial and fiscal positions of the BET index companies registered during the period 2012–2016.

4 BET Index and Its Financial and Fiscal Positions Recorded During 2012–2016

In order to better understand the context in which the turnover tax analysis is positioned, it is necessary to review tax and financial situations registered by the BET index companies.

4.1 CIT Registered by the BET Index Companies

In Fig. 1, we have exposed the CIT situation through the average CIT registered by the BET index companies during the period 2012–2016.

We can observe in the Fig. 1 that almost half of the CIT paid by the BET index companies was recorded by a single company, which, as we will see in the following chapters, recorded the highest turnover among the BET index companies.

The lower percentages of other companies can be explained by the fact that companies such as TLV, BRD and FP have not registered CIT for 2, 3 and 4 consecutive years. However, this fact does not necessarily reflect that these companies were not profitable.

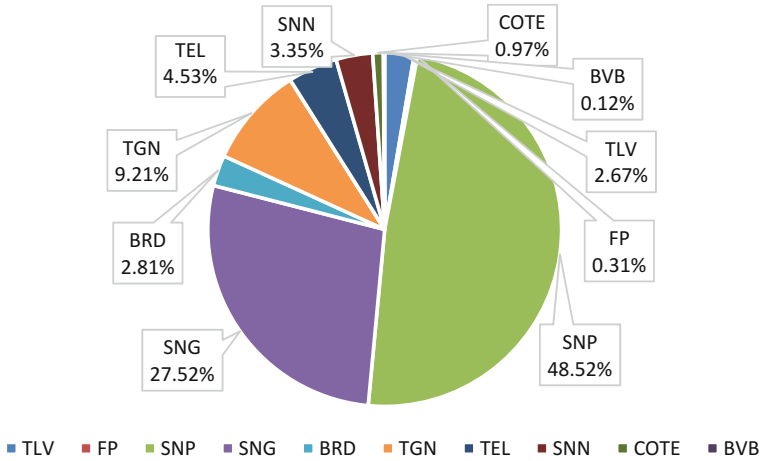


Fig. 1 The structure of average CIT registered by the BET index companies 2012–2016

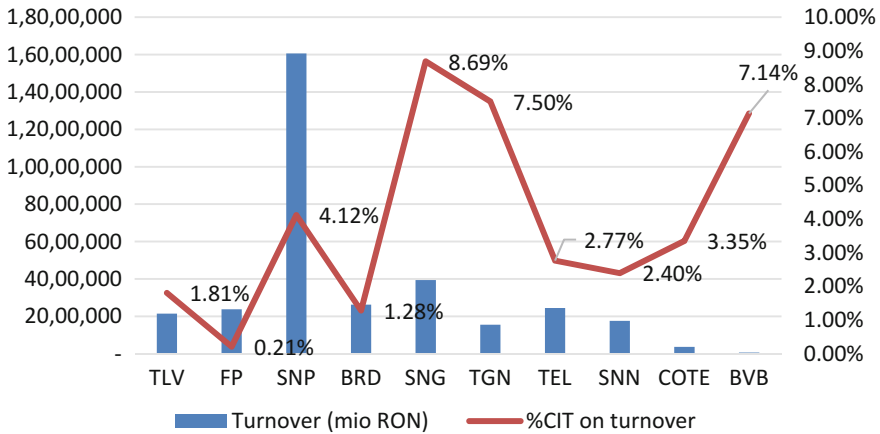


Fig. 2 The turnover and percentage of CIT on turnover registered by the BET index companies 2012–2016

4.2 Turnover and Percentage of CIT on Turnover Registered by the BET Index Companies

Figure 2 presents the average share of CIT on turnover registered by the BET index companies. Also, the average turnover in million RON is highlighted.

Such presentation would be used to draw the scenario in the next chapter.

As mentioned above, SNP is the leader of the BET index in terms of CIT and turnover recorded during the analyzed period.

As for the percentage of CIT on turnover, we can observe that within the BET index this indicator recorded a range between 0.21 and 8.69%.

One interesting result that can be ascertained from the Fig. 2 is that companies like BVB, TNG and SNG recorded the highest percentages as their turnover falls under the trend of the BET index, while SNP registered a percentage of only 4.12% in relation to the registered turnover value.

Starting from the situations outlined above, in the next chapter we will analyze the scenario of a turnover-based tax system in the case of BET index.

5 Scenario of Taxes on Turnover for BET Index Companies During 2012–2016

Based on the data mentioned under the previous chapters (with an emphasis on the turnover) and starting from the fact that micro-enterprises are currently taxed in Romania at a rate of 1 or 3% (depending on the number of employees—Law 227/2015), we built the range presented in Table 2.

Following the application of the ranges in Table 2, there were certain differences between the CIT actually paid by BET index companies during the period 2012–2016 and the taxes on turnover as a result of the target scenario (Table 3).

As a general rule, we can observe that the turnover tax under the scenario proposed by us (extending the micro-enterprise range) conducts to higher value of the taxes paid to the state budget.

One interesting thing that can be ascertained is that SNG, the company with the second average turnover recorded in the analyzed period within the BET index companies, recorded within this scenario a significant positive difference (in its favor) with an average of the savings in taxes of over 200,000,000 RON. This positive difference can be explained by the fiscal adjustments on the accounting results determined for CIT purposes.

However, a modification of the scenario (i.e. changes in the built-in interval) can lead to other results and, in the event of a partial or total implementation of this kind of system, an in-depth analysis should be performed in order to extend the system to all or more Romanian companies and based on the fiscal visions of the decision-makers.

Table 2 Turnover range and related tax rates

Turnover range (RON)		Tax rate (%)
From 4,500,000	To 499,999,999	3
From 500,000,000	To 1,499,999,999	4
From 1,500,000,000		5

Table 3 The difference between CIT and tax on turnover (RON)

	2012	2013	2014	2015	2016	Average
TLV	141,169,662	137,774,810	-6,824,064	39,090,873	43,715,154	70,985,287
FP	341,633,911	42,536,036	72,007,895	52,448,089	34,869,929	108,699,172
SNP	846,188,538	504,756,539	-45,964,716	-103,036,977	-213,879,126	197,612,852
SNG	-132,971,428	-207,661,124	-268,702,539	-297,206,976	-153,076,750	-211,923,763
BRD	174,578,156	36,930,344	224,667,059	202,634,187	170,593,382	161,880,626
TGN	-71,959,524	-61,333,468	-34,472,891	-20,971,879	-25,893,651	-42,926,282
TEL	62,314,077	-22,786,105	59,329,943	101,062,382	117,355,005	63,455,060
SNN	64,742,909	67,473,538	68,543,803	-6,803,157	35,953,897	45,982,198
COTE	-2,533,955	-3,901,281	-2,371,671	951,836	1,898,416	-1,191,331
BVB	-766,280	-353,626	-1,529,090	-1,094,953	-540,909	-856,972
Total	1,422,396,065	493,435,663	64,683,730	-32,926,574	10,995,347	391,716,846

6 Limitation of the Analysis and Further Discussions

- In assessing the CIT paid by the BET index companies during the period analyzed we did not take into account the tax incentive regarding the sponsorship deduction, which influenced the CIT actually paid by these companies. This fact was due to the lack of information on the value of sponsorships deducted from CIT by the Romanian companies. However, where this information was available, it was taken into account.
- Building an interval similar to the one from the scenario presented in this paper that should follow the general situation of the Romanian companies requires extensive analysis and involves information that is very difficult to obtain from public sources.
- As mentioned above, another corporate tax model could be progressive taxation. However, progressive taxation built on differentiated rates according to taxable profit is not seen by the researchers as applicable (as a side note, it is not applied by any country). Moreover, most researchers demonstrate that the CIT system is becoming progressive through the marginal tax rate. However, it remains a point of discussion.
- One can easily argue that the turnover tax simplifies corporate taxation, providing greater stability for companies as well as for state budget receipts, but the level of tax revenue depends heavily on the taxable thresholds and the related tax rates. However, the implementation of such a system needs to be analyzed from the perspective of the European VAT Directive. The European VAT Directive stipulates as a general rule that the only tax on sales is VAT. However, the micro-enterprise system in Romania is an exception to this rule.
- Another point of discussions could be represented by the intention of profit shifting in the case of a taxation system based on turnover.

7 Conclusions

Following the application of the scenario presented in this paper related to a tax system based on turnover, the overall rule showed an additional burden in terms of amounts to be paid for the BET index companies. But, the level of tax burden within such a system depends decisively on the chosen thresholds and a model applicable to all companies in Romania requires in-depth analyzes based on certain information that is not publicly available. It is worth noting that the turnover tax system simplifies the tasks of companies through easier evidence of fiscal variables. However, the implementation of this kind of system is difficult, considering the limitations mentioned above.

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Essence and Estimation of Economic System Sustainability



Alexey Karpovich  and Galina Litvintseva 

Abstract The term “economic system sustainability” has not been given any common explanation yet and has various interpretations in the economic literature. The authors present their approach to the sustainability concept for complex economic systems and related terms. Types, qualities and factors underlining economic sustainability are analyzed. It is suggested that economic sustainability should be considered based on the production function theory and the elasticity theory. The proposed approach includes a development of an economic-mathematical model of an economic system, a model of elasticity, as well as a model of elasticity with possible reserves. In article the most applicable production functions are used, the corresponding elasticity functions without reserve and with a reserve are presented. The example of the elasticity functions for single-factor production function illustrating deficit of resources and possible surplus is shown. Elasticity models simulate and evaluate economic system adaptation. Some recommendations on their practical application are given. The proposed approach can be used to improve programs and projects on economic system development.

Keywords Economic sustainability · Adaptability · Production functions

1 Introduction

The concept of stability is most widely used in various fields of science and engineering where stabilities of elastic systems and fluid motion as well as stabilities of structures, automatic control systems, transport vehicles, electric power systems, thermodynamic stability, etc. are studied. Their definitions are based on the mathematical theory of stability where the latter is characterized as a term without any clearly

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defined meaning that applies to motion, geometric or any other objects depending on parameters, e.g. statistics (statistical stability). It is emphasized, however, that the above applications of the “stability” concept do not fully cover its essence (Vinoogradov 1985). Among various concepts of motion stability the most popular are S. Poisson’s, G. Lagrange’s, A. A. Andronov’s and L. S. Pontryagin’s definitions as well as A. M. Lyapunov’s concept of stability. Analyzing stabilities of various systems, the concepts of local (“in small”) and global (“in large”) stabilities are of great importance (Voronov 1977). A system is locally stable if the stability property is defined only for states sufficiently close in some appropriate sense to the initial state (or for trajectories lying near the initial trajectory). A system is globally stable if stability applies to all states (trajectories) within the domain where the system is studied.

In our opinion, the apparent variety of stability definitions has a common element characterizing the kernel of this category: representing it with regard to a particular object as an attribute of this object enabling to preserve (possibly with some deformations) particular qualities, signs of features under uncertain conditions of its existence. According to this understanding, equilibrium and homeostasis are particular cases of a stable state. In addition, viability can also be treated as a demonstration of stability of autonomous systems.

2 Literature Review

Similarly, in economic literature “stability” is used as a rather term with various interpretations depending on a combination economic objects or categories such as market stability, economic stability in general, stability of development and economic growth, technological (production) stability, financial stability, stability of money circulation, price, resource and ecological stability as well as some others.

The basic, and chronologically the earliest concept, covering multiple aspects, is the concept of market stability which permits the following interpretations:

- (1) ability of a market system to finally attain price equilibrium/balance in the process of self-regulation (L. Walras equilibrium and stability of equilibrium);
- (2) equilibrium of economic interests of interacting market subjects treated as:
 - (a) J. Nash equilibrium/stability, that is a market condition (a market situation), changing which independently is unprofitable for any participant of market relations;
 - (b) F. Edgeworth equilibrium/stability, which is an unblocked state of a market community of economic agents (players) when it is unprofitable for any coalition within this community to separate from other players and distribute the benefits of coalition between themselves. A lot of such conditions (non-dominated systems of contracts, allocations, etc.) form the core of the economy or the C-core of a cooperative game (generally speaking, the latter can be not available—be empty).

The following classical equilibrium interpretation of economic stability is most often used in social and general economic literature: “when socio-economic parameters of a business entity maintain economic equilibrium at a particular level under any internal and external environment disturbances” (Bodrov et al. 2000). Nevertheless, one may and must talk of a stability of a particular state, about development and performance trajectory of an economic entity irrespective of the fact whether they are in equilibrium or not.

A number of authors treat economic stability as homeostasis or viability (Untura 2002). Financial, technological, price and resource stabilities are seen as elements of economic sustainability.

As a rule, modern economic systems (enterprises, organizations, economic entities) are socio-engineering systems, a qualitatively new kind of systems formed by integrating two subsystems—social and engineering (Chimshir 2011). Self-organization, rather than just organization, is most characteristic of socio-engineering systems. Moreover, they are complex systems with a goal-seeking behavior.

The term “sustainable development” emerged in the last third of the 20th century. It means a process of economic and social change when use of natural resources, direction of investments, technological progress and institutional changes are coordinated and strengthen national capacity to meet the needs of the present generation, without compromising the ability of future generations to meet their needs (Prosperity without growth 2009). In other words, a joint development (coevolution) that does not contradict the further existence and development of mankind.

Under the conditions of digital economy and creating ecosystems based on digital platforms, three main problems remain: employment, trust in the course of sharing processes and sustainability. The report of the World Economic Forum notes that “current business practices will contribute to a global gap of 8 billion tons between the supply of and demand for natural resources by 2030, translating to \$4.5 trillion of lost economic growth” (World Economic Forum 2017).

In view of the above, economic sustainability of socio-engineering systems can be understood as ability to pursue goals under uncertain conditions of performance and development (e.g. market fluctuations, unpredictable behavior of partners, production and technological failures, insecurity of resource supplies and other possible disturbances). Such aspects of sustainability as resource, technological, ecological, information, pricing, financial and investments reflects sustainability in relation to either particular parameters or particular functionalities of an economic entity, namely, production, logistics, finance, ecology, etc. We do not identify stability with sustainability. It can be treated as a particular case of the latter.

3 Basic Conceptual Framework

Economic sustainability can be classified into structural and functional-parametric stabilities.

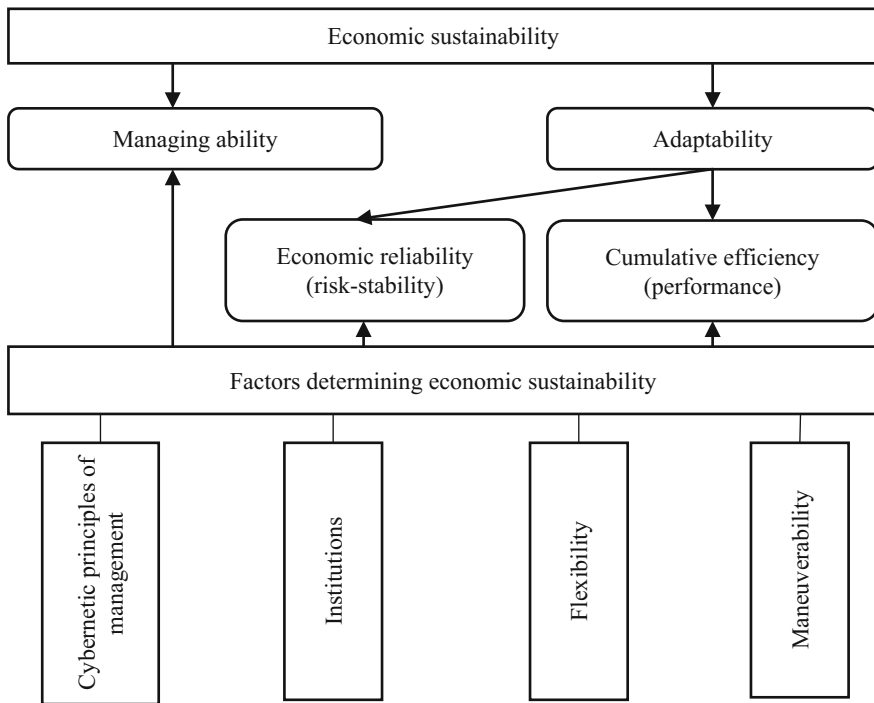


Fig. 1 Interrelation of economic sustainability characteristics and factors determining them

Structural stability is an ability of a system as a community of economic subjects to self-preserve and self-reproduce as well as an ability to maintain its integrity, organizational unity given different interests of the subjects involved in the system. Preservation of structural integrity as a set of some necessary subsets of interrelations between independent elements, forming the system is presupposed. Structural stability is a necessary condition for economic sustainability of the system, embodying the structural aspect of such sustainability. If the goals of the system are implemented, it may be said that it at least retains its integrity. If a system is disintegrated (decomposed), its goals cannot be achieved at all.

Functional-parametric stability is subdivided into stability to small disturbances (stability “in small”) and stability to large deep disturbances which is formed by managing ability and adaptability. Stability “in small” implies that small changes in conditions of development (functioning) of an economic object result in small deviations of its target values from the plan (program).

Managing ability is a quality of a system to generate rational managerial decisions (within a managerial subsystem) and to respond adequately to control (Fig. 1).

Adaptability is a quality to adapt (passively or actively) and to respond adequately to changes in external and internal environments. The process of adaptation in general

implies both adaptation to changes in conditions and inner changes. There are two aspects in this process.

The first aspect—reliability—is related to ability of a socio-engineering system to counteract decreased quality of its goals under negative (unfavorable) disturbances (economic reliability). The classical theory of reliability is developed for engineering systems; and its quantitative indicators (e.g. probability of failure, maintainability, etc.) are not applicable to complex socio-engineering systems. Therefore, we introduce the concept of economic reliability for the latter.

Note that we treat the economic reliability category as inverse to the risk category known in the literature (Kanav and Shevtsova 2015). Thus, economic reliability, being a reliability aspect of adaptability, can be defined as risk-stability.

The second aspect of adaptability is related to system ability to implement additional possibilities under positive (favorable) disturbances, for example, improved market conditions, new sources of investments, etc. Based on the above it is possible to call this aspect cumulative efficiency (performance).

Both aspects are related and defined by the following factors: maneuverability, flexibility as well as functioning institutions and cybernetic principles of management.

Flexibility of an economic system is its ability to adapt without any structural changes, for example, by creating various kinds of redundancies (reserves of production facilities, raw material stocks, materials, fuel, etc.)

Maneuverability is an ability of a system to maneuvering, i.e. to implement purposeful adjusting actions, to introducing active changes and to structural reconstruction in response to disturbances. These actions can essentially be expressed as changes in the setup of objects in a system under planning, their rearrangement, as well as changes in the directions of scientific and technological progress, organizational and economic characteristics of objects, the topology of relations between them, directions of disturbance distribution, etc.

Institutions are a set of formal and informal rules established by people as well as corresponding control mechanisms of their observance and protection. Institutions create inertia by virtue of their propagation and rooting in time and space (North 1990; Litvintseva 2016).

Cybernetic control principles—emergency, necessary variety, external addition, feedback, systematicity, hierarchy, etc—are well known and are used to plan and control systems (Ashby 1956; Beer 1959).

4 Research Methods

It is possible to estimate a system's economic sustainability based on the elasticity theory where elasticity is treated as an ability of an economic system to neutralize disturbances while experiencing certain deformations (losses) in achieving goals but avoiding their complete non-fulfillment. It is clear that flexibility and maneuverability act here as sort of internal springs providing elasticity. All other things being

equal, the loss value characterizes an elasticity level—it is higher the lower losses are and vice versa. The latter are a peculiar ‘payment’ for uncertainty used in information management. Elasticity is directly related to risk-stability because the latter is determined by elasticity and the level of possible disturbances corresponding to the estimated version of development/functioning of a socio-engineering system.

An object’s elasticity given the program of its development/functioning can be described by using a special payoff vector-function—the elasticity function approximating the relation between input disturbances and deviations from the program values.

The determination and measurement of elasticity in this context seems to be a mirror transfer of this concept from formation of the results of an economic system functioning (production function) to the aspect of its adaptation. Some elasticity functions can be obtained by a corresponding transformation from the known typical functions (Lancaster 1968; Renshaw 2005).

In current international studies, production functions are used, for example, to evaluate an effect of human capital on economic growth (Digital Globalization 2016).

Let $P = \pi(S_1, S_2, \dots, S_N)$ be a continuous scalar production function; $\pi(0) = 0$ and $\pi(S_1^0, S_2^0, \dots, S_N^0) = P_0$ be a condition of the initial balanced program.

Suppose it is necessary to find the elasticity function $\Theta = f(\Delta_1, \Delta_2, \dots, \Delta_N)$, where $\Theta = (P_0 - \pi(S_1, S_2, \dots, S_N)) / P_0$ and $\Delta_j = (S_j^0 - S_j) / S_j^0$.

By expressing S_j as Δ_j and substituting this expression for S_j we have

$$f(\Delta) = \Theta = 1 - \frac{1}{P_0} \cdot \pi[S_1^0 \cdot (1 - \Delta_1), S_2^0 \cdot (1 - \Delta_2), \dots, S_N^0 \cdot (1 - \Delta_N)]. \quad (1)$$

Based on the above let us consider as examples some elasticity functions obtained by using (1) from known typical production functions.

1. Production function with complementary factors:

$$P = \min_{1 \leq j \leq N} (a_j \cdot S_j), a_j \cdot S_j^0 = P_0, \forall j = 1, \dots, N.$$

$$\text{Then } f(\Delta) = 1 - \frac{1}{P_0} \cdot \min_j [a_j \cdot S_j^0 \cdot (1 - \Delta_j)] = 1 - \min_j (1 - \Delta_j) = \max_j \Delta_j. \quad (2)$$

Constructing $f(\Delta)$ we can see that given such an elasticity function elimination (neutralization) is absent regarding any of the incoming disturbances.

This example suggests that a compensating ability of an economic object should be determined appropriately. Let us consider that an object under this program of development and functioning possesses a compensating ability by the k goal indicator relative to the δ realization of the Δ vector if:

$$f^k(\delta) < \max_j \delta_j.$$

2. Power production function (function with interchangeable factors):

$$P = a \cdot \prod_{j=1}^N S_j^{\alpha_j};$$

$$f(\Delta) = 1 - \frac{1}{P_0} \cdot a \cdot \prod_{j=1}^N S_j^{0\alpha_j} \cdot (1 - \Delta_j)^{\alpha_j} = 1 - \prod_{j=1}^N (1 - \Delta_j)^{\alpha_j}. \quad (3)$$

It is easy to find conditions of neutralization of the disturbance vector δ .

Let $\delta_{j_0} = \max_j \delta_j$. By taking the logarithm of the inequality

$$1 - \prod_{j=1}^N (1 - \delta_j)^{\alpha_j} < \delta_{j_0} \quad (0 < \delta_j < 1, \forall j)$$

we have $\sum_j \alpha_j \cdot [-\lg(1 - \delta_j)] < -\lg(1 - \delta_{j_0})$.

As the right part of this relation is not smaller than any of the multipliers in brackets under the summation symbol, it will hold true for all δ if $\sum_j \alpha_j < 1$ ($\alpha_j > 0$); with $\sum_j \alpha_j = 1$ the inequality also holds excluding the case when $\delta_1 = \delta_2 = \dots = \delta_N$; with $\sum_j \alpha_j > 1$ its execution depends on δ .

Note that the above elasticity functions are invariant relative to the value of the program task P_0 .

5 Results of Applying the Research Method

Let the vector be $R = (R_1, R_2, \dots, R_N) \geq 0$. One of the methods for determining the elasticity function with regard for reserves $f_R(\Delta)$ may be:

$$f_R(\Delta) = \begin{cases} f(\Delta - R), & \text{if } f(\Delta - R) > 0; \\ 0, & \text{if } f(\Delta - R) \leq 0. \end{cases}$$

R is taken here as a vector of relative reserves of production factors.

Curves in Fig. 2 serve as examples of elasticity functions for $\Delta \geq 0$.

Let us consider that $f^k(\Delta)$ dominates over $f^l(\Delta)$ if $H(f^k(\Delta)) \geq H(f^l(\Delta))$; and $f^k(\Delta)$ absolutely dominates over $f^l(\Delta)$ if $f^k(\Delta) \leq f^l(\Delta)$ at any point of the given range of values Δ . The latter obviously implies the former.

Knowing distribution Δ , it is possible to use statistical linearization to replace nonlinear $f(\Delta)$ equivalent, in the probability sense, linearized functional dependence by the equality criterion relative to mathematical expectations and variances of the true and approximating functions.

The measurement of reliability by using indicators in the form $H_k = 1 - M(\Theta_k)$, $k = 1, \dots, K$, where is the operator of mathematical expectation M provides the

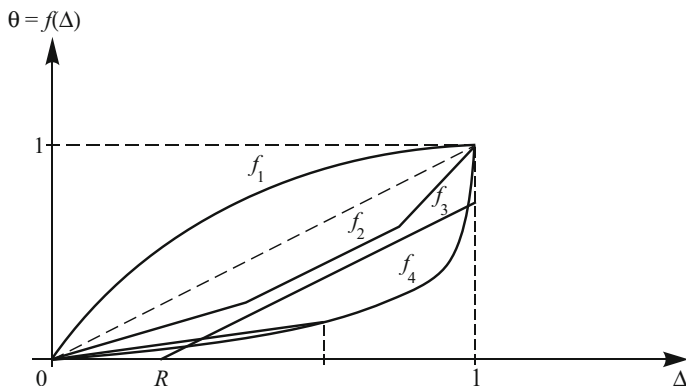


Fig. 2 Graphs of possible elasticity functions

preservation of the dominance condition. If Δ is uniformly distributed, then this condition has a very simple analogue at least for the two-dimensional case.

Let $\omega_{\Delta}(\delta)$ be the distribution density Δ on some interval where f^k and f^l are of constant signs, for example on $[0, 1]$. Then using the mean value theorem we have:

$$E_k = M(f^k(\Delta)) = \omega_{\Delta}(\bar{\delta}) \cdot \int_0^1 f^k(\delta) d\delta,$$

$$E_l = M(f^l(\Delta)) = \omega_{\Delta}(\bar{\delta}) \cdot \int_0^1 f^l(\delta) d\delta.$$

As $\omega_{\Delta}(\bar{\delta}) = \omega_{\Delta}(\bar{\delta})$, the inequality $E_k \leq E_l$ is equivalent to the inequality of areas under the graphs of the functions f^k and f^l .

For the multidimensional case the proof can be similar, although visual clarity and simplicity of the estimate are lost.

Consider, for example, the construction of elasticity functions for a single-factor production function.

Let us take the simple function $Y = a * L$, under the conditions $Y = 0.8 * L$, $L_0 = 100$, $Y_0 = 80$.

Example

(a) Let $L_1=80$, $\Delta L=0.2$. This means a negative disturbance, resource deficit.

$$Y_1=0.8 * 80=64 (\Delta Y=16 \text{ units } (=0.2)).$$

The elasticity function is as follows:

$$f(\Delta L) = 1 - (1/Y_0) * [0.8 * L_0 * (1 - \Delta L)] = 1 - [Y_0 * (1 - \Delta L)]/Y_0 = 1 * \Delta L$$

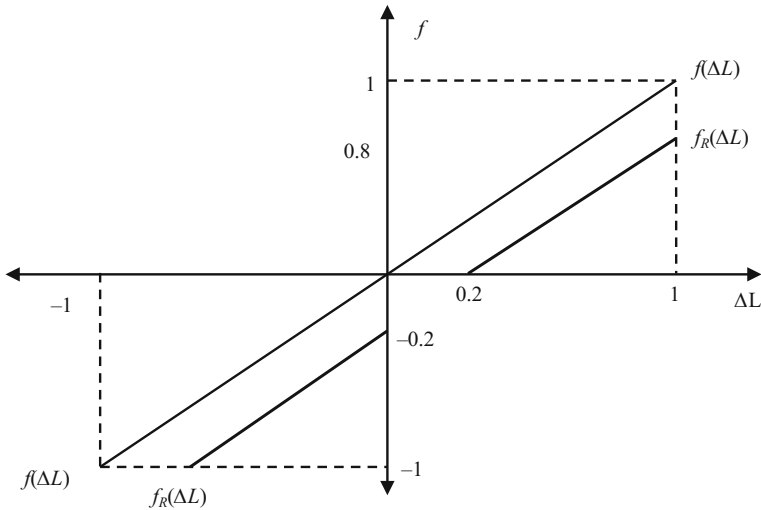


Fig. 3 The elasticity functions without reserve ($f(\Delta L)$) and with the reserve ($f_R(\Delta L)$) for the single-factor production function

For $0 \leq \Delta L \leq 1$, the elasticity function with a reserve has the following form:

$$f_R(\Delta L) = \begin{cases} 0, & \text{if } (\Delta L - R) \leq 0; \\ \Delta L - R, & \text{if } (\Delta L - R) > 0. \end{cases}$$

Let resource reserve $R=0.2$, then $f_R(\Delta L) = \begin{cases} 0, & \text{if } (\Delta L - 0.2) \leq 0; \\ \Delta L - 0.2, & \text{if } (\Delta L - 0.2) > 0. \end{cases}$

The loss of the result Y (20%) is equal to the decrease in the volume of labor L (20%).

Neutralization of the disturbance is absent. The graphs of the elasticity functions are in the right upper quadrant (Fig. 3).

Example

(b) Let $L_2=120$, $\Delta L=-0.2$. This means a positive disturbance, surplus resource.

$Y_2=96$ (units). $\Delta Y=-0.2$. Negative loss is profit.

The elasticity function is as follows: $f(\Delta L) = 1 * \Delta L$.

(b.1) Let $R=0$, then $f(\Delta L) = 1 * \Delta L$ (resource reserve is not used),

(b.2) Let resource reserve $R=0.2$, then $f_R(\Delta L) = f(\Delta L - R)$; by $-\infty < \Delta L \leq 0$.

The graphs of the elasticity functions are in the opposite quadrant.

The elasticity functions do not depend on the program task Y_0 and the coefficient a in the original function.

6 Recommendations on Practical Application

In practice the most typical distributions for many random disturbances are distributions whose densities decrease very steeply when deviation values (both positive and negative) increase. It seems quite natural as planned versions which are accompanied (with high probabilities) by large expected disturbances are most often rejected a priori. The above character of disturbance distributions may also serve as an indirect proof for existence of mechanical compensation of these disturbances in the economy. $f_2 \div f_4$ curves in Fig. 2 shift Δ distribution densities to zero while f_1 curve shifts then in the opposite direction. Under these conditions the initial segment of $f(\Delta)$ function domain mainly affects reliability indicators. Speaking about its linear approximation it is in this segment where the latter with the least errors is needed. Note that a formal relationship between the production function and the elasticity function should not conceal their fundamental difference.

The difference implies that they represent different aspects of a program for economic system development or functioning: the former simulates a mechanism for setting up program tasks while the latter simulates a mechanism of their stabilization or, more precisely and in a wider interpretation, an adaptation mechanism, built-in in the program. The latter is manifested only when the assumed conditions of program implementation are violated; generally speaking, when the conditions for generating the production function of the chosen program version are violated. Therefore, transformation (1) fixes sort of a general part or the intersection of above aspects in f . So, interchangeability of production factors is one of the characteristics of the production process, the process of obtaining results and at the same time a prerequisite of maneuvering. Reserves in their fundamental meaning are attributes of only an adaptive aspect of a program because the production function always describes production frontiers.

Let us assume that development of an economic system is simulated within a project which is characterized by target indicators (e.g. indicators of an effect and efficiency) and input parameters referred to as resource parameters (i.e. costs, terms and amounts of cash proceeds, discount rates, etc.) (Fig. 4).

Simulation experiments based on a project model allow building a model of the project elasticity as dependence of its target deviation from the input parameter disturbance. Using the elasticity model helps estimate the target indicator deviation under various changes in the external environment as compared to the predicted value. Reliability indicators can be calculated for various levels of disturbances. The estimates are used to scientifically substantiate improvement in a project management mechanism aimed at enhancing its economic reliability and efficiency and hence adaptability and sustainability of a respective economic system.

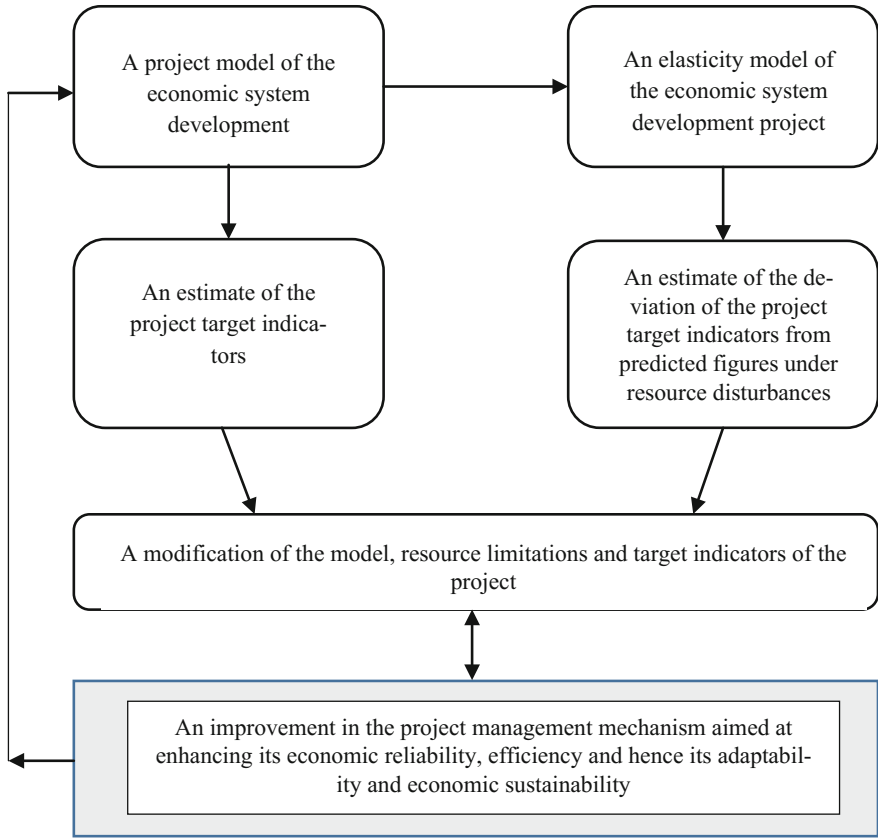


Fig. 4 Use of the project elasticity model of an economic system development to improve its management mechanism

7 Conclusions

The essence of economic sustainability is defined by such interrelated characteristics as managing ability and adaptability; the latter being subdivided into economic reliability (risk-stability) and cumulative efficiency (performance). The above characteristics and economic sustainability itself depend on a whole set of factors, first of all, flexibility and maneuverability, functioning of particular institutions, and use of the cybernetic principles of efficient management. The proposed approach can be used at the stage of devising programs and projects as well as at the implementation stage to reveal possible disturbances and update the goals and ways of their implementation.




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Analysis of Energy Security Provision in the European Countries



Ganna Kharlamova , Andriy Stavtyskyy  and Oleksandr Chernyak 

Abstract In this paper, different approaches to understanding the concept of “energy security” were considered through the prism of factors that affect its level and methods of its evaluation. An assessment of the energy security level was conducted based on the Shannon-Wiener index for 15 countries in Europe (Austria, Great Britain, Greece, Ireland, Spain, Italy, Netherlands, Germany, Norway, Poland, Ukraine, Switzerland, and Sweden) in the period 1985–2014. The impact of fuel prices, in particular, oil and natural gas, on the level of energy security in these countries have been researched. The grouping of these countries into clusters was carried out on the basis of the calculated value of the Shannon-Wiener index. As the structure of energy consumption in Austria, Greece, Norway, and Poland is diverse, that is, they consume different sources of energy (oil, natural gas, hydropower, nuclear power plants, renewable energy) in a more even way than those that have fallen into other clusters. In addition, the prediction of the level of energy security (the Shannon-Wiener index) was calculated for Ukraine by classical forecasting methods, the Holt-Winters method, using the Hodrick–Prescott filter, simple linear regression, and using trend lines. An absolute majority of forecasts have shown that Ukraine’s energy security level will slightly increase from its current level in 2015–2017. It says there is no reason to talk about sufficient improvement of the diversification of resource supply.

Keywords Energy security · Shannon-Wiener index · Clusters
Hodrick–Prescott filter

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1 Introduction

The urgency of the topic lies in the fact that energy security for each country is a very important component, firstly for its economic situation. Since the energy is the basis for the necessary and uninterrupted functioning of all sectors of industry and services in the modern world. Secondly, the energy security is a significant component of the ecological situation. In addition, energy security carries social, political and technical components, which is also a very significant aspect of the successful development of any country and the world as a whole. Therefore, assessing the current level of energy security to address future energy policy; forecasting the level of country's energy security in order to prevent negative impacts and to take further necessary measures in the future is exceedingly important for each country.

Instability and unpredictability are essential in our time. Therefore, as a benchmark, the Shannon-Wiener index is used to measure the diversity of energy consumption. It is an appropriate method as the diversification in energy consumption is an important aspect of energy security in the country. Consequently, it helps to protect the state from failures in the supply of any type of fuel, to avoid unexpected expenses from any type of fuel in the event of a sudden rise in prices.

The main idea of the research is the assessment of energy security level of the country through the prism of a consumption structure of various sources of energy (oil, natural gas, hydropower, atomic energy, and renewable energy). 15 European countries: Austria, Great Britain, Greece, Ireland, Spain, Italy, Netherlands, Germany, Norway, Poland, Ukraine, Switzerland, and Sweden are under analyses in the period 1985–2014. To achieve this goal, the following objectives are realized:

1. The concept of “energy security” is considered beneath current economic discourse.
2. The level of energy security of the country based on the structure of consumption of different types of energy is assessed by the Shannon-Wiener index.
3. The influence of prices for fuel (oil and gas) on the level of energy security of the country (on the Shannon-Wiener index) is traced.
4. The clustering of the analyzed states on the level of energy security (the Shannon-Wiener index) is conducted to monitor the similarity between countries.
5. The forecast of energy security level (the Shannon-Wiener index) for Ukraine in the period 2015–2017 based on 1985–2014 data was fulfilled.

The paper is structured in the following way. We start with the literature review, and then we assess the energy security using the Shannon-Wiener index methodology. Next step is devoted to clustering European countries based on the Shannon-Wiener index. After that, we forecast energy security index in Ukraine to clarify its perspectives. The final section contains discussion and conclusions.

2 Literature Review

The growth of energy consumption, the uneven distribution of energy resources in the world, rising prices for major energy sources and, consequently, the growth of energy dependence in most countries, the growing role of the geopolitical component in international energy trade lead to the urgency of the energy security strengthening. In addition, accordingly, it boosts up a significant amount research related to this problematic. Many scientists investigated the essence of energy security (Kharlamova 2013, 2106; Chernyak et al. 2017; Morozov 2004; Denchev 2010; Zemlyaniy 2009; Svirchevskaya 2014; Dannreuther 2017; Nyman 2018; Winzer 2012; Yergin 2006 and others). At the same time, active research does not exhaust this focus and does not relieve the complication in the understanding of the “energy security” concept and its measurement. In this regard, Zemlyaniy (2009) draws attention to the fact that “attempts to define the essence of the “energy security” concept were not systematic and are marked by a variety of approaches and insufficient reasoning”. A comprehensive theory of energy security has not been established yet. Besides, the interrelation of it with other components of the theory of economic security has not been determined (Van de Graaf and Colgan 2017).

The reason for various visions to the “energy security” concept is the complexity of the research object, which covers a large number of components linked by numerous bonds (Bobrov 2011). Partaking a prominent place in the national security system, the energy security is closely intertwined with its other components. As one of the key spheres of the national economy, energy directly influences the efficiency of economic activity in the country. Simultaneously, it is a significant pollutant of the environment. It affects the level of social development of the country both directly and by means of the ecological and economic component. Zemlyaniy (2009) stressed that it is difficult to isolate the energy security from economic and national security, since “it includes economic, political, social and environmental aspects. It is a plexus in which it is difficult to understand and build a harmonious system taking into account all interrelationships”.

The energy security is one of the most important aspects of the national energy system (Bobrov 2012). It affects politics in the field of international relations, traditional (military) security, trade, investment in infrastructure and technology. Consequently, on the one hand, the concept of “energy security” can be interpreted as a proper state of the technical security of energy systems. At the same time, the energy security, by its definition, ultimately aims to guarantee the protection of the individual, society, and the state from the shortage of fuel and energy resources. It has a broader meaning than the notion of reliability and acts as an economic, political and philosophical category. The energy consumption is a prerequisite for the existence of humanity.

For each country, the weight of a factor depends on the specific conditions that are being compiled. Analyzing these factors, two main directions of ensuring the energy security can be singled out:

- supply of physical volumes of energy resources according to the needs of the economy, while reducing the influence of external factors on the stability of energy supply,
- reducing the growth of the demand for energy while ensuring a stable GDP growth by increasing the efficiency of the use of energy resources by the national economy.

Moreover, these directions also contribute to strengthening the economic security of the state (Bondarenko and Shcherba 2009).

Currently, the method of monitoring and indicative analysis is mainly used to assess the level of energy security. The indicative analysis is used as the main method for studying energy security. Its essence lies in the formation of a system of indicators that allows assessing the degree of energy level crisis and developing a set of measures for the elimination and prevention of threats. The situation is assessed as the stable one in cases where the actual values of the indicators do not exceed their threshold values. The basis of the indicative analysis is the following principles:

- the complexity of the approach,
- the internal and external interrelations of the research objects,
- the unconditional priority of economic security, ensuring the social stability of the individual as the main and the ultimate goal of security.

The degree of crisis indicators is estimated on the scale of crisis with selected critical zones, which are determined by entering the threshold values—pre-crisis and crisis.

The integrated assessment of the energy state is determined using ball scores on a uniform ball scale. The following structural separation of indicators with respect to blocks is used: the fuel supply unit; unit of electric and thermal energy generation; transmission and distribution unit of energy; power import unit; ecological unit; consumer unit; a block of management and finance. The main indicators selected for each block are listed in Table 1. Each of the selected energy security indicators is a physical quantity that characterizes a certain real or projected energy indicator at the time taken to assess the level of energy security—current or future.

To match the indicators and use them in the calculation models, their physical values lead to the same normalized form by determining the ratio of the indicator value in a physical measurement at a given time point to its own threshold. Accordingly, the threshold value is some critical value of the same indicator that characterizes the maximum permissible state of energy in accordance with this indicator, the transition through the value means getting into the crisis zone. On the scale of the crisis, the determination of the location of each indicator by comparing its numerical value with threshold values that characterize the zone of the pre-crisis state is manual. If its value falls into an interval determined by inequality, then its value is given a ball assessment. It allows getting an integrated assessment of the status of the blocks, regions, and country as a whole. The threshold values of the indicators can be determined by the expert method (Energy 2020). For example, the main indicators for assessing energy security within the International Energy Agency are: dependence on petroleum fuels for transport; the intensity of fuel supply by land; the share of

Table 1 Classification of indicators

#	Blocks	Indicators
1	Fuel supply	Fuel consumption per capita The fate of the dominant fuel in the total amount of fuel
2	Production of electric and thermal energy	Electricity generation per capita Generation of heat energy per capita The share of own sources in coverage of the balance sheet The share of hydroelectric power stations in the total installed capacity The share of block stations in total installed capacity The share of power of the largest power plant Installed capacity reserve level
3	Transmission and distribution of energy	Substation wear rate The degree of wear of switches The degree of wear of transformers
4	Electricity import	The level of inter-system provisioning reserve Reserve level in power grid Import value of electricity per unit of electricity consumed
5	Ecological	Level of carbon dioxide emissions by 1 thousand t.o. The level of carbon dioxide emissions per inhabitant
6	Consumers	Consumption of electricity per capita Heat consumption per capita Value of per capita income of the population
7	Management and finance	Level of receivables from consumers' accounts regarding the cost of consumed energy Level of receivable interdepartmental debts accounts between enterprises of fuel and energy complex regarding the cost of consumed energy resources Level of total receivables in ratio to the cost of consumed energy resources Level of total payables for the cost of consumed energy

Source Mikitenko (2005)

energy in GDP; use of electricity in the country; dependence on gas imports; real retail electricity prices; real gasoline prices; emissions of carbon and sulfur dioxide (Kaufman and Rousseeuw 2009).

The application of aggregated energy security indicators implies the use of a specific methodology. In particular, the energy security index may be reflected in the Shannon-Wiener index, which includes four indicators of long-term energy security from the point of view of energy supply, namely diversification of energy sources in energy supply; import diversification in relation to imported energy sources; long-term political stability in the regions of origin; resource base in regions of energy sources origin:

$$H = - \sum_{i=1}^I (p_i \ln p_i) \quad (\text{Shannon} - \text{Wiener index})$$

where p_i —is the share of a certain type of fuel in the fuel and energy balance or market share in the supply of this type of fuel.

3 Assessment of Energy Security for European Countries

The Shannon-Wiener index is a simple and reliable quantitative indicator for measuring diversity. At that juncture, the calculation of the diversity index helps to decide the regulation of the share of each type of fuel in the structure of fuel and energy balance of the country. The index value can range from zero to five.

To measure the energy diversity, the Shannon-Wiener information entropy measure is used. The Shannon-Wiener index we apply for 15 European countries: Ukraine, Austria, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, and the United Kingdom. The energy consumption structure is an important policy issue for each country. The indices are calculated based on the structure of consumption of the main energy sources in percentages. These are the following energy sources: oil, natural gas, coal, atomic nuclei, hydropower and alternative sources. We consider the hypothesis that each fuel in the fuel and energy balance of the country is equally distributed on its significance, taking into account the share of each of them. When the fuel is unique, the Shannon-Wiener measure is zero.

The structure of consumption of energy sources in the fraction of 15 countries of Europe was calculated according to the formula:

$$\begin{aligned} & \textit{The share of consumption of a certain type of energy} \\ & = \frac{\textit{The amount of consumption of this type of energy}}{\textit{Total energy consumption}} * 100\% \end{aligned}$$

We compute values of the share of consumption of each type of energy (oil, natural gas, coal, hydropower, atomic energy, and renewable energy) per each country on the base of *BP Statistical Review of World Energy*. Based on the calculated values of the partial consumption of each type of energy for the selected 15 European countries in 1985–2014, we calculate the Shannon-Wiener index as an indicator of the country's energy security level for each year (Appendix 1). Analyzing the received values of the Shannon-Wiener index for each country in 2014, one can see that rather heterogeneous indicators are received. The highest index value stands for Sweden, the lowest—Austria. It means that in the structure of the fuel and energy balance a certain kind of fuel imposes a dominant position. The Shannon-Wiener index for Austria as an indicator of the energy security of the country flooded, and after 2003 began to increase, indicating a deterioration in the energy security of the country. The reason for this is a significant concentration of the European country on the consumption of hydropower. Austria has decreased consumption of oil and coal, but somewhat increased consumption of hydroelectric power. The country should more differentiate fuel consumption because the high value of the index indicates an unsatisfactory level of energy security. That can be explained by fair consumption of all fuel species, or at least most of them. It can be seen that, unlike Austria, other states did not focus on the consumption of any one type of fuel, but uses almost all types in a fairly high percentage. If we consider France as an example, the value of the index decreased during 1991–2007. The reason for this is a change in the structure of energy consumption in France. Thus, from 1985 to 2014, the share of oil consumption decreased, the share of natural gas consumption slowly increased, and the consumption of nuclear and renewable energy sources increased. Consequently, the state of energy security in France improved over a specified period; as the country began more differentiate the distribution of consumption of each type of fuel in its energy consumption structure.

Let us look at the structure of fuel consumption in Ukraine and the dynamics of the Shannon-Wiener index.

From Fig. 1 we can observe that for the specified period, the value of the Shannon-Wiener index demonstrated higher entropy. That indicates an improvement in the state of energy security in Ukraine. Over the past 10 years, there has been a decline in natural gas consumption. The consumption of coal and atomic energy sources slightly increased. Figure 2 shows the shares of different types of fuel in the structure of energy consumption of Ukraine in 2014. In terms of the uniformity of consumption of different types of fuels, Ukraine has a good indicator of the state of energy security. For 2014, the value of the Shannon-Wiener index was 0.354.

Let us explore the interdependence of resource prices and the Shannon-Wiener index. If we analyze the dynamics of oil prices and the corresponding changes in the Shannon-Wiener index, which reflects the state of energy security of countries. Almost all countries have a direct relationship between fuel prices and the state of energy security. This is due to the quite balanced structure of energy consumption. Besides, it can be noted that the rise in oil prices did not affect the Austrian index, and indexes of the UK, Greece, Ireland, and Spain. This is due to the fact that fluctuations in the price of oil do not cause changes in the structure of energy consumption in

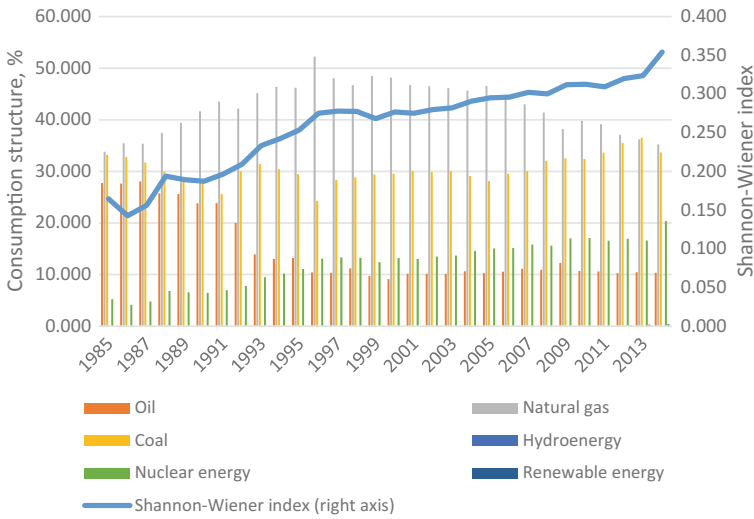


Fig. 1 Reflection of the change in the energy consumption structure and the variation in the Shannon-Wiener index in Ukraine in 1985–2014. *Source* Author’s calculation on the base of Appendix 1 and BP Statistical Review of World Energy (2014)

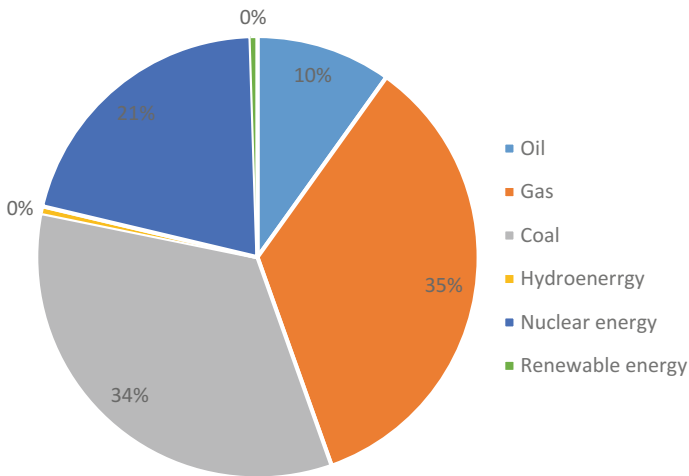


Fig. 2 Structure of fuel consumption in Ukraine in 2014. *Source* Data BP Statistical Review of World Energy (2015)

the country. Actually, the index does not depend on the prices. For example, if the country used to consume more oil, then after raising the price, it tries to replace it with another more favourable kind of fuel. In those countries where the dynamics of oil prices almost did not affect the value of the index, consumption of this type of fuel could be insignificant.

Table 2 Countries belonging to clusters (3)

Clusters		
I	II	III
UK	Austria	Spain
Ukraine	Greece	Germany
Switzerland	Ireland	Finland
	Italy	France
	Netherlands	Sweden
	Norway	
	Poland	

Source Own calculations based on Appendix 1

4 Clustering of the 15 European Countries by the Value of the Shannon-Wiener Index

Cluster analysis is the method of partitioning a given sample of objects (situations) into a subset, called clusters so that each cluster consists of similar objects, and the objects of different clusters differ significantly (Hartigan and Wong 1979; Rosen et al. 2010). Wide application for clustering tasks with a large amount of input information has received the K-medium method. Suppose there are hypotheses regarding the number of clusters (according to the state of energy security). In this case, it is possible to specify the algorithm to form a certain number of clusters so that they are as different as possible. This is exactly the type of task that solves the algorithm of the K-mean method. In the general case, the K-mean method builds exactly K different clusters, located at the largest distances from each other.

Our task is to cluster each of the 15 selected European countries (Austria, Great Britain, Greece, Ireland, Spain, Italy, the Netherlands, Germany, Norway, Poland, Ukraine, Switzerland and Sweden) on the similarity of the Shannon-Wiener index. It illustrates that countries have similar patterns of consumption of different types of fuel. As a result, they have similar rank of energy security of the country.

Using IBM SPSS Statistics we conduct a cluster analysis by the K-mean method for countries data relative to the Shannon-Wiener index as an indicator of the level of energy security. For statistical units we take each country; variables—the value of the Shannon-Wiener index in 1985–2014.

Since the use of the K-mean method involves choosing the number of clusters by the expert, then we consider the number of clusters 3 and 5 and analyze the similarity of the countries. From Tables 2 and 3 we see how the countries are separated on the similarity of the level of energy security (the structure of consumption of different types of fuels or by the Shannon-Wiener index) with the number of specified clusters equal to 3 and 5. It can be concluded that such countries as UK, Ukraine, and Switzerland have a bit different structure of fuel consumption from most of the countries in Europe. However, generally, we suppose that there should be more clusters diversity.

Table 3 Countries belonging to clusters (5)

Clusters				
I	II	III	IV	V
Netherlands	Ireland Italy	Austria	UK Spain Germany Ukraine Finland France Switzerland Sweden	Greece Norway Poland

Source Own calculations based on Appendix 1

Table 3 exactly evidences that we have a bit varied energy diversification in such states: the Netherlands, Austria, Ireland and Italy—like more one-fuel concentrated states, and Greece, Poland and Norway—as the “more baskets” energy consumers.

5 Forecast of Ukraine’s Energy Security

Based on the data of Appendix 1 we carry out the forecast of the Shannon-Wiener index for Ukraine as an indicator of the level of energy security for 3 years: 2015–2017. To forecast we apply different methods: fluid average; ordinary double and triple exponential smoothing; Holt-Winters method; Hodrick–Prescott filter; simple linear regression; exponential, logarithmic, polynomial and power trends.

First, we make smoothing and forecasting according to the classical approaches of time series analysis. Smoothing methods are used to reduce the influence of the random component (random oscillations) in time series. It gives the opportunity to receive more “pure” values, which consist only of deterministic components. Some of the methods are aimed at highlighting only some of the components, for example, the trend. We perform smoothing and forecasting using the moving average method with step 4 (Fig. 3). This method is one of the simplest, which allows determining a trend. The standard method is described by the expression:

$$\tilde{y}_t = \frac{1}{k} \sum_{j=-k_1}^{k_2} y_{t+j}, \quad k = k_1 + k_2 + 1$$

Smoothing and forecasting by means of the usual exponential smoothing is much more prevalent than the previous model. Best of all, this method has proven itself when data has a very smooth, or even a horizontal trend. The new sequence is based on the rule:

$$S_t = \alpha y_t + (1 - \alpha)S_{t-1}, \quad 0 < \alpha < 1$$

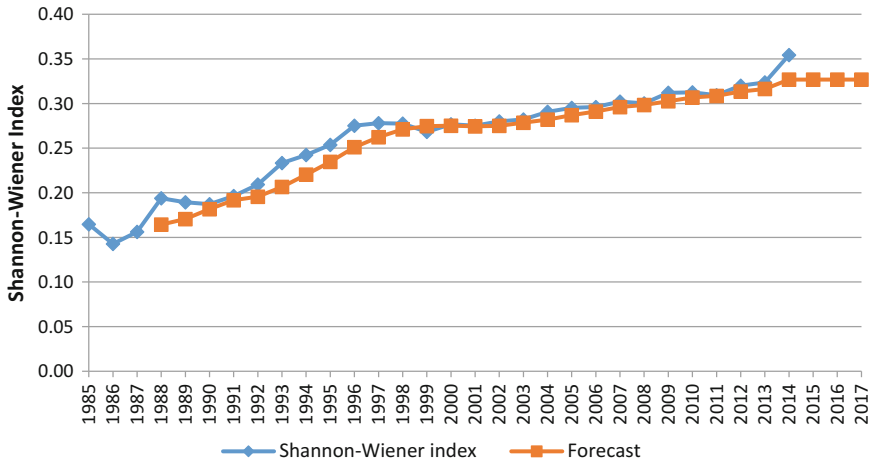


Fig. 3 Moving average time series of the Shannon-Wiener index and the forecast of the indicator for 2015–2017 for Ukraine. *Source* Own calculations

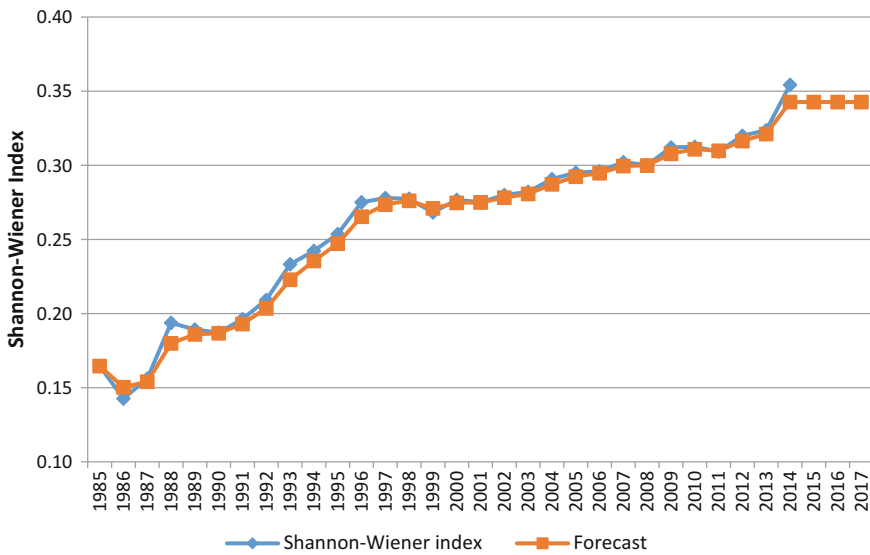


Fig. 4 Exponential smoothing of the time series of the Shannon-Wiener index for 1985–2014 and the forecast of the indicator for 2015–2017 for Ukraine. *Source* Own calculations

If one selects a value close to one, then the latest time series data are more important for the forecast. Therefore, let us take, for example, 0.65 (Fig. 4). The forecast of the time series values is equal to the last member of the sequence S_t :

$$\tilde{y}_{T+p} = S_T, \quad p = 1, 2, \dots$$

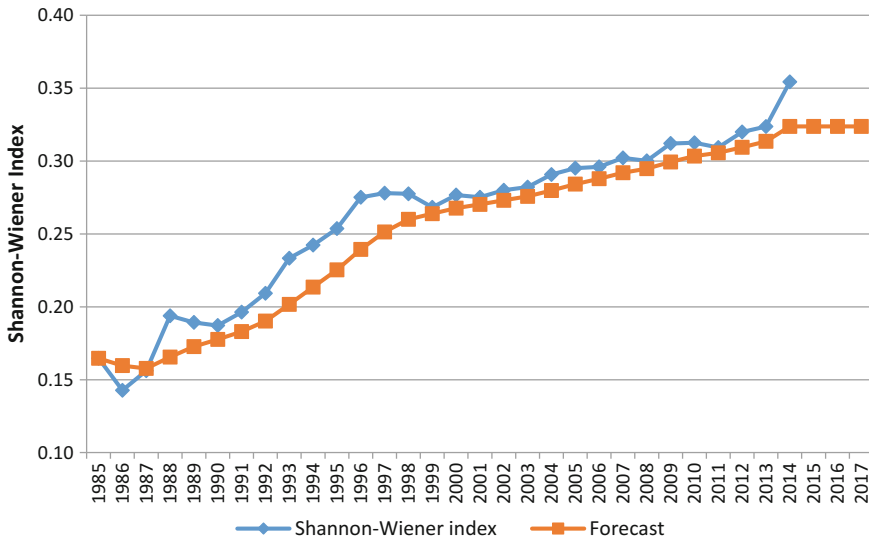


Fig. 5 Double exponential smoothing of the time series of the Shannon-Wiener index for 1985–2014 and the forecast for 2015–2017 for Ukraine. *Source* Own calculations

Further, smoothing and forecasting by means of double exponential smoothing is constructed similarly to the previous one, only the smoothing process is done twice:

$$S'_t = \alpha y_t + (1 - \alpha)S'_{t-1},$$

$$S''_t = \alpha S'_t + (1 - \alpha)S''_{t-1}, \quad 0 < \alpha < 1.$$

The forecast is constructed as the last value of the second sequence (Fig. 5):

$$\tilde{y}_{T+p} = S''_T, \quad p = 1, 2, \dots$$

In its turn, smoothing and forecasting by the method of triple exponential smoothing is similar to the previous two, only smoothing is performed three times. New sequences are built according to the rule:

$$S'_t = \alpha y_t + (1 - \alpha)S'_{t-1},$$

$$S''_t = \alpha S'_t + (1 - \alpha)S''_{t-1},$$

$$S'''_t = \alpha S''_t + (1 - \alpha)S'''_{t-1}, \quad 0 < \alpha < 1.$$

The forecast for the following periods has the form (Fig. 6):

$$\tilde{y}_{T+p} = S'''_T, \quad p = 1, 2, \dots$$

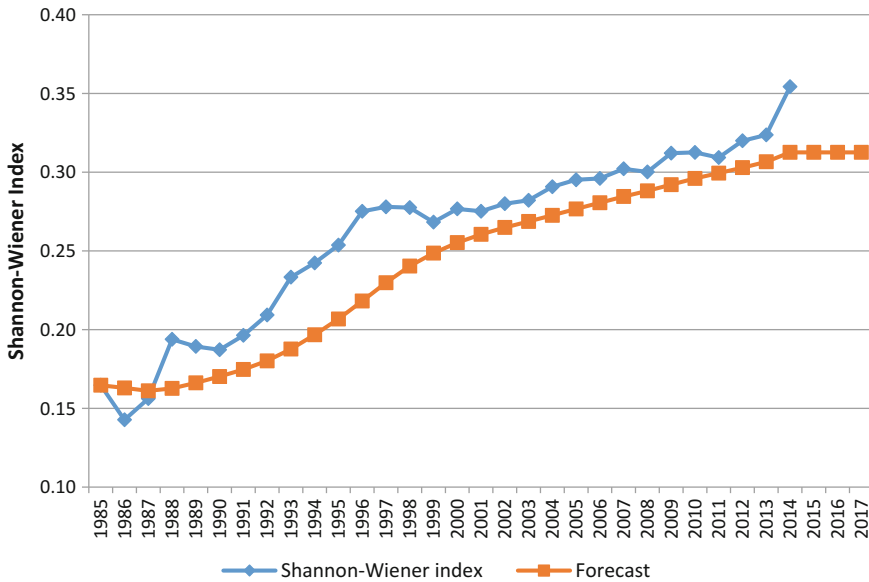


Fig. 6 Triple exponential smoothing of the time series of the Shannon-Wiener index for 1985–2014 and the forecast for 2015–2017 for Ukraine. *Source* Own calculations

The iteration with the Holt-Winters method is similar to dual exponential smoothing, but allows one to allocate a trend component using the second sequence:

$$\begin{aligned}
 S'_2 &= y_2, & S''_2 &= y_2 - y_1, \\
 S'_t &= \alpha y_t + (1 - \alpha)(S'_{t-1} + S''_{t-1}), & 0 < \alpha < 1, \\
 S''_t &= \beta(S'_t - S'_{t-1}) + (1 - \beta)S''_{t-1}, & 0 < \beta < 1.
 \end{aligned}$$

Forecast for the following periods:

$$\tilde{y}_{T+p} = S'_T + pS''_T, \quad p = 1, 2, \dots$$

It should be noted that the forecasts made by this method are usually either strongly overestimated or understated (Fig. 7).

Many of the real economic variables in discrete development generally decrease or increase. This means that this variable has a trend component. Well-known scientists and researchers made it known, but at present, there is no universal method that can accurately determine the level of change in some economic process. Of course, in the presence of many surveys of a process, it is possible to construct regression models that more or less accurately reflect the trend. In the short-term observations of the process, and especially if it has seasonal fluctuations, the regression constructed in this way does not yield a satisfactory result with an acceptable error, but it may

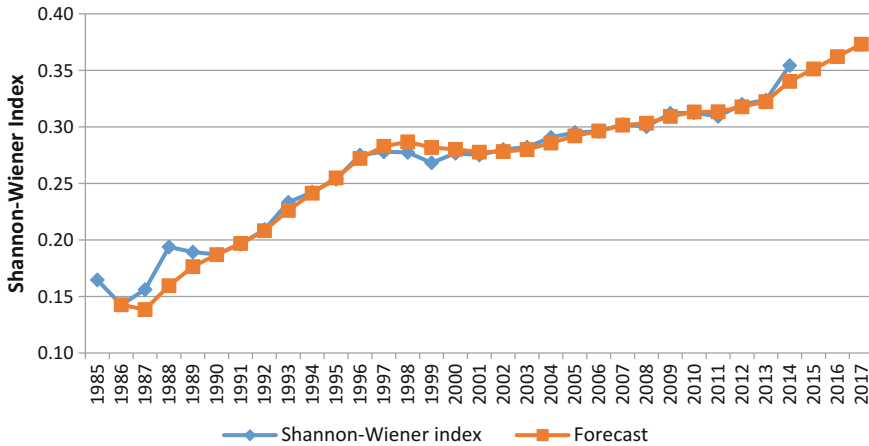


Fig. 7 The sequence S'_t (trend line) of the time series of the Shannon-Wiener index for 1985–2014 and the forecast of the indicator for 2015–2017 for Ukraine by the Holt-Winters method. *Source* Own calculations

even not correctly determine the direction of dynamics. Therefore, in the study of processes with a small amount of data, it is necessary to use a different technique. One such method is the Hodrick–Prescott filter. This method follows from the theory of real economic cycles. If the variable t characterizes the time, then the parameters of the function $f(t)$ representing the trend component are selected in such a way as to minimize the expression:

$$S = \sum_{t=1}^T (y_t - f(t))^2 + \lambda \sum_{t=2}^{T-1} ((f(t+1) - f(t)) - (f(t) - f(t-1)))^2 \rightarrow \min$$

Using MS Excel (HP function), the trend line of the time series of the Shannon-Wiener indexes for 1985–2014 was constructed and the predictive values of this index for 2015–2017 were found (Fig. 8).

Next step is the prediction of the Shannon-Wiener index for Ukraine by simple linear regression:

$$y_i = \alpha + \beta x_i + \varepsilon_i$$

where x_i —the value of an independent variable, y_i —the value of a dependent variable.

The time serves as an independent variable, and the dependent variable is the value of the Shannon-Wiener index.

From the results of regression analysis (Table 4), we conclude that the regression is constructed qualitatively since the R-square is approaching 1; the model is adequate

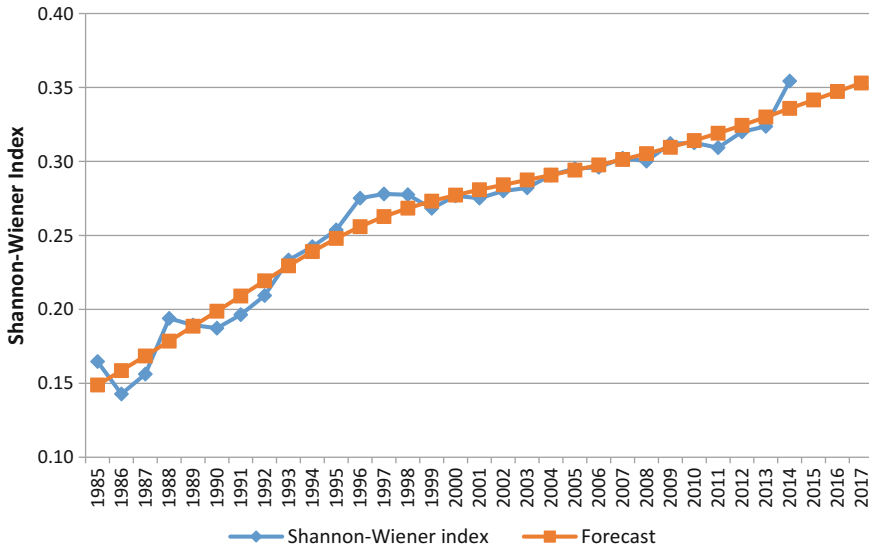


Fig. 8 Expression of the trend of the time series of the Shannon-Wiener indexes for 1985–2014 and the forecast of this indicator for 2015–2017 for Ukraine using the Hodrick–Prescott filter. *Source* Own calculations

Table 4 Results of regression analysis

<i>Regression statistics</i>		
R-square	0.90	
<i>Dispersion analysis</i>		
Significance F	0.0000	
	Coefficients	<i>P</i> -value
Y-intersection	0.173	0.0000
Index	0.006	0.0000

Source Own calculations

because “significance *P*” < 0.05; we have (*P* < 0.05) that the obtained coefficients are also significant.

Based on the regression equation coefficients, we find the sequence of values of the Shannon-Wiener index of the trend line. We also calculate the forecast values of this indicator for 2015–2017 (Fig. 9).

We also constructed trend lines based on various functions and derived the predicted values of the Shannon-Wiener index for 2015–2017. On the basis of the obtained determination coefficients, we receive linear ($R^2 = 0.91$), a logarithmic ($R^2 = 0.90$) and polynomial ($R^2 = 0.95$) trend lines. Consequently, the more accurate values of the forecast will correspond to trend lines with a higher value of the determination coefficient. Table 5 summarizes all forecasts.

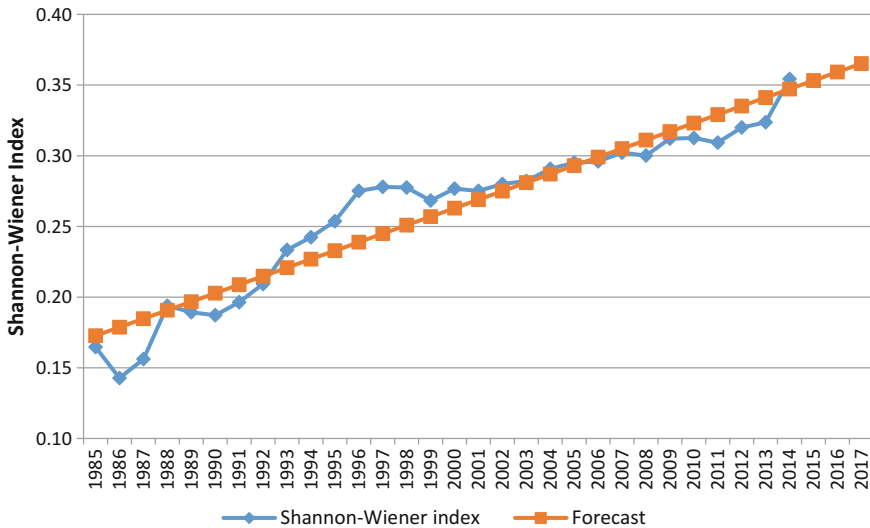


Fig. 9 The trend line of the Shannon-Wiener index for 1985–2014 and the forecast of this indicator for 2015–2017 for Ukraine. *Source* Own calculations

This table also contains calculated values of the accuracy of prediction (based on the previous data of the Shannon-Wiener index—1985–2014) using one of the relative criteria for the accuracy—RMSPE error:

$$RMSPE = 100 \sqrt{\frac{1}{n} \sum_t \left(\frac{y_t - \hat{y}_t}{y_t} \right)^2}$$

the root of the mean square error as a percentage of the actual values for n steps. We can see that the accuracy of the forecast in all cases is very high (Table 5).

6 Conclusions

In this work, the level of energy security of 15 European countries (Austria, Great Britain, Greece, Ireland, Spain, Italy, the Netherlands, Germany, Norway, Poland, Ukraine, Switzerland, and Sweden) was assessed for 1985–2014 based on the index of the variety of Shannon-Wiener. The clusterization of countries by the K-means method because of the obtained indicators helped to unite these countries by the similarity in the structure of consumption of energy sources. It was proposed to group countries by the level of energy security in three and five clusters. The resulted grouping in three clusters has the following structure:

Table 5 Results of the forecast of the Shannon-Wiener index for 2015–2017 by each method

Method	Forecasted value of the Shannon-Wiener index			RMSPE (%)
	2015	2016	2017	
Moving average (step = 4)	0.333	0.333	0.333	5.74
Normal exponential smoothing ($\alpha = 0.65$)	0.343	0.343	0.343	9.82
Double exponential smoothing ($\alpha = 0.65$)	0.324	0.324	0.324	14.90
Triple exponential smoothing ($\alpha = 0.65$)	0.313	0.313	0.313	16.99
Holt-Winters ($\alpha = 0.5$; $\beta = 0.5$)	0.351	0.362	0.373	6.28
Hodrick–Prescott	0.342	0.000	0.353	4.48
Linear trend	0.347	0.353	0.359	7.86
Logarithmic trend	0.317	0.319	0.321	8.88
Polynomial trend	0.324	0.325	0.326	5.27

Source Own calculations

- I. UK, Ukraine, Switzerland;
- II. Austria, Greece, Ireland, Italy, Netherlands, Norway, Poland;
- III. Spain, Germany, Finland, France, Sweden.

The clustering in five clusters showed a clearer distribution of selected European countries. The clustering with the division into five clusters has the following form:

- I. the Netherlands;
- II. Ireland, Italy;
- III. Austria;
- IV. UK, Spain, Germany, Ukraine, Finland, France, Switzerland, Sweden;
- V. Greece, Norway, Poland.

From the distribution obtained, it can be concluded that the highest value of the Shannon-Wiener index for the years 1985–2014 is for countries that have fallen to the 3rd and 5th clusters, which is the best energy security indicator. As the structure of energy consumption in these countries is diverse, that is, they consume different sources of energy (oil, natural gas, hydropower, nuclear power plants, and renewable energy) in a more even way than those that have fallen into other clusters. Such a distribution in energy consumption generates a certain energy security for them, due

to the fact that they are not substantially dependent on a single source of energy and, therefore, to some extent insured against unpredictable events such as a sudden increase in the price of this type of energy source, supply failures, etc.

The highest value of the Shannon-Wiener Index and, accordingly, the worst level of energy security was given by the country of the 1st cluster. Countries in other clusters have an average level of energy security in the best or worse, depending on the cluster they hit.

Ukraine entered finally to the IVth cluster, describing it as a country with a fairly good level of energy security in terms of energy consumption. The Shannon-Wiener Index in 2014 was 0.354. The level of Ukraine's energy security is similar to that of Germany, Spain, Switzerland and the UK. In addition, the second main task of this work was the forecasting of the Shannon-Wiener index for Ukraine for 2015–2017 based on data for 1985–2014. The forecast was made by different methods. Among them are classical (moving average, ordinary, double, triple exponential smoothing), Holt-Winters method, Hodrick–Prescott filter, simple linear regression, different lines of the trend (linear, exponential, logarithmic, polynomial, and power). The predicted values for 2015–2017 fluctuate from 0.313 to 0.373, depending on the forecasting method. The most accurate method with minimal RMSPE is Hodrick–Prescott. An absolute majority of forecasts have shown that the level of Ukraine's security will slightly increase in 2015–2017, thus, there is no reason to talk about the significant improvement of the diversification of resource supply.

At the same time, it should be noted that there are currently significantly enough changes to be made in measuring energy security and the structure of the Shannon-Wiener index. In particular, the scale of this index for maximization requires that each resource is used in the country at about a third of the total. Obviously, this cannot be achieved if the state uses four or more resources. At the same time, it should be noted that European countries set a clear target for reducing the share of consumption of non-renewable resources. In this context, it becomes clear that such countries will gradually abandon the consumption of coal, oil, diesel and even natural gas. Already today, in European countries, the goal is to achieve 20% of all energy from renewable sources. However, some countries have made significant progress, already guaranteeing more than 53% of renewable energy (for example, in Sweden, Norway, and Iceland). It is obvious that under such conditions the value of the Shannon-Wiener index for such a country will not be optimal. At the same time, the share of renewable energy in the Netherlands is only 6%, and the energy security index is almost twice as high as in Sweden. In this way, the role of the energy security index should change, in particular, in the counting of renewable energy sources.

However, the development of technologies is not stopped, and, therefore, the countries that are engaged in the lowest positions at the current stage of development have an opportunity for significant innovative solutions. Consequently, the state most energy-dependent plans should accelerate the transition to renewable energy sources, stimulating their production within the country. This is especially expedient for countries with low population density, namely, they have free territories for the construction of new complexes. In this regard, Ukraine has significant potential for its development. In addition, for Ukraine, it is a manoeuvre to substantially reduce

losses during transmission and distribution of electricity, which at the moment are 3–4 times higher than the average European indicators. Due to these measures, Ukraine can significantly improve its energy security.

Appendix 1

Shannon-Wiener index of European countries in 1985–2014

Year	Austria	Great Britain	Greece	Ireland	Spain	Italy	The Netherlands
1985	0.002	0.194	0.010	0.009	0.228	0.065	0.063
1986	0.002	0.187	0.010	0.009	0.259	0.073	0.075
1987	0.002	0.180	0.010	0.009	0.267	0.010	0.057
1988	0.002	0.194	0.010	0.009	0.291	0.008	0.059
1989	0.002	0.209	0.010	0.009	0.292	0.008	0.062
1990	0.006	0.202	0.010	0.009	0.333	0.036	0.069
1991	0.006	0.208	0.010	0.010	0.328	0.036	0.062
1992	0.006	0.221	0.010	0.010	0.284	0.040	0.072
1993	0.006	0.241	0.013	0.011	0.307	0.041	0.075
1994	0.006	0.244	0.012	0.012	0.312	0.009	0.060
1995	0.007	0.246	0.012	0.011	0.292	0.040	0.078
1996	0.007	0.248	0.012	0.013	0.297	0.043	0.081
1997	0.007	0.258	0.012	0.020	0.291	0.044	0.067
1998	0.007	0.261	0.014	0.028	0.298	0.048	0.085
1999	0.007	0.260	0.018	0.028	0.303	0.052	0.087
2000	0.006	0.247	0.028	0.032	0.312	0.055	0.091
2001	0.007	0.255	0.039	0.034	0.323	0.060	0.092
2002	0.007	0.259	0.037	0.035	0.333	0.066	0.097
2003	0.008	0.262	0.046	0.037	0.339	0.072	0.097
2004	0.009	0.255	0.047	0.046	0.346	0.079	0.104
2005	0.011	0.266	0.053	0.068	0.346	0.082	0.122
2006	0.012	0.263	0.058	0.077	0.360	0.088	0.120
2007	0.014	0.252	0.062	0.087	0.358	0.092	0.124
2008	0.014	0.241	0.073	0.105	0.390	0.101	0.140
2009	0.013	0.291	0.082	0.123	0.419	0.113	0.150
2010	0.013	0.280	0.088	0.117	0.464	0.131	0.144
2011	0.013	0.351	0.111	0.162	0.453	0.168	0.158
2012	0.012	0.340	0.142	0.163	0.482	0.208	0.163
2013	0.015	0.370	0.174	0.173	0.505	0.232	0.153
2014	0.016	0.394	0.192	0.188	0.508	0.255	0.170

Year	Germany	Norway	Poland	Ukraine	Finland	France	Switzerland	Sweden
1985	0.283	0.006	0.010	0.165	0.336	0.370	0.289	0.372
1986	0.271	0.006	0.010	0.143	0.334	0.373	0.294	0.376
1987	0.280	0.006	0.010	0.156	0.333	0.374	0.289	0.376
1988	0.291	0.007	0.010	0.194	0.333	0.375	0.290	0.377
1989	0.302	0.007	0.010	0.189	0.330	0.376	0.291	0.376
1990	0.300	0.065	0.011	0.187	0.462	0.388	0.320	0.424
1991	0.289	0.033	0.011	0.196	0.466	0.412	0.307	0.414
1992	0.299	0.033	0.014	0.209	0.472	0.389	0.300	0.428
1993	0.310	0.034	0.014	0.233	0.491	0.388	0.301	0.431
1994	0.293	0.036	0.014	0.242	0.477	0.389	0.322	0.429
1995	0.296	0.037	0.014	0.254	0.489	0.389	0.319	0.434
1996	0.298	0.037	0.014	0.275	0.479	0.388	0.336	0.425
1997	0.311	0.031	0.016	0.278	0.505	0.389	0.319	0.440
1998	0.315	0.033	0.017	0.278	0.523	0.390	0.316	0.441
1999	0.326	0.035	0.016	0.268	0.533	0.390	0.317	0.442
2000	0.338	0.039	0.017	0.277	0.528	0.391	0.323	0.467
2001	0.344	0.038	0.018	0.275	0.514	0.392	0.322	0.458
2002	0.360	0.038	0.019	0.280	0.513	0.393	0.339	0.472
2003	0.372	0.054	0.020	0.282	0.498	0.395	0.355	0.467
2004	0.392	0.057	0.024	0.291	0.524	0.396	0.346	0.502
2005	0.405	0.066	0.030	0.295	0.540	0.397	0.318	0.514
2006	0.419	0.077	0.035	0.296	0.529	0.402	0.350	0.520
2007	0.437	0.086	0.041	0.302	0.529	0.411	0.353	0.539
2008	0.447	0.088	0.051	0.300	0.548	0.418	0.353	0.554
2009	0.449	0.083	0.065	0.312	0.540	0.428	0.311	0.570
2010	0.454	0.088	0.074	0.313	0.541	0.371	0.350	0.563
2011	0.467	0.103	0.089	0.309	0.559	0.446	0.360	0.594
2012	0.468	0.108	0.107	0.320	0.586	0.462	0.346	0.614
2013	0.464	0.119	0.108	0.324	0.597	0.467	0.370	0.612
2014	0.486	0.130	0.120	0.354	0.608	0.472	0.386	0.615

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The Quality of Liquidity Risk Management of Bank Pembiayaan Rakyat Syariah (BPRS)/Islamic Rural Bank Using Liquidity Risk Management (LRM) Index Method



Himmatul Kholidah, Nisful Laila and Imron Mawardi

Abstract Islamic Rural Bank (BPRS) is one of the financial institutions which is profit oriented and has a lot of risks. Liquidity is one of the main risks in Islamic Rural Bank. Islamic Rural Bank should maintain the effective and efficient pf assets, liabilities, and policy assessment in order to have the optimum quality of liquidity risk management. The research aims to study assessment on asset side, liability side and liquidity management policies that reflect the quality of liquidity risk management on Islamic Rural Bank in Sidoarjo. The research method used is quantitative approach. The data was collected by questionnaire for liquidity management manager of BPRS Baktimakmur Indah, BPRS Annisa Mukti and BPRS Unawi Barokah. The results shows that BPRS Baktimakmur Indah has an excellent quality of liquidity risk management, while BPRS Annisa mukti and BPRS Unawi Barokah have a good quality of liquidity risk management.

Keywords Islamic Rural Bank · Liquidity risk management
Liquidity risk management (LRM) index

1 Introduction

One of the types of bank in Indonesia is Islamic Rural Bank (BPRS). According to Act No. 21 of 2008 concerning Islamic Banking, Islamic Rural Bank is defined as an Islamic bank that its activities do not give a service in terms of payment traffic. This is

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Table 1 Total portion of BPRS financing in East Java Province (in million Rupiah)

Financing	Total	Percentage (%)
Capital working and investment	547,984	48.76
Consumption	575,826	51.23
Total	1,123,810	100

Source Statistics Statistik Perbankan Syariah (SPS)/Islamic Banking, 2016

Table 2 Total assets of BPRS in Sidoarjo (in thousand Rupiah)

BPRS	2011	2012	2013	2014	2015	2016
Baktimakmur Indah	47,371,911	80,918,469	108,165,347	143,189,383	150,358,342	140,373,388
Annisa Mukti	5,163,457	6,983,513	8,258,994	8,355,503	9,527,753	9,625,148
Unawi Barokah	1,974,256	2,374,156	3,232,357	3,412,195	3,396,491	3,851,118

Source Publication of Bank Financial Reports in December 2016 (www.bi.go.id)

what causes Islamic Rural Bank is not allowed to offer wadiah giro and differentiate Islamic Rural Bank with Islamic banks and Islamic business units.

According to Outlook of Islamic Banking in 2014, Islamic Rural Bank (BPRS) as an intermediation institution gives its priority to provide financing to micro, small, and medium enterprises, especially in small areas such as village or regency. It is in line with the operational purpose from BPRS which is to improve social welfare in small areas so that it can also reach equitable economic welfare.

One of developed BPRSs is the BPRS in East Java Province. Soekarwo stated that East Java is ready to become a pilot project of Islamic economy in Indonesia. It is based on 90% East Java population which is moslem. There are about 6000 Islamic boarding schools which could be developed as a basis of Islamic banking and social culture that are very respectful to kyai (religious leader) in all things. It can be an asset in developing Islamic banking industry (Syariah.bisnis.com 2015).

The financing performance of BPRS in East Java in June 2015 report is that the portion of productive financing distribution—which includes working capital and investment—is bigger than the portion of consumption financing distribution. Tables 1 and 2 shows that the portion of working capital and investment financing is 51.23% of the total financing distributed. While the portion of consumption financing is 48.77% of the total financing distributed. The high portion of BPRS's productive financing in East Java shows that the public has started to trust BPRS as a business partner which is not only for fulfilling daily needs (consumption).

One of BPRSs in East Java is BPRS which is in Sidoarjo. Most of the population are Moslems and have reached 95% of the total population which amounts 1,603,136 people. Then, it has many Islamic boarding schools which are 25 (BPS). According to the publication of financial statement in Islamic Banking Statistics (SPS) on December 2016, there are three BPRSs in Sidoarjo, which are BPRS Annisa Mukti, BPRS Baktimakmur Indah and BPRS Unawi Barokah. The asset growth of these

three BPRSs was continuously increasing from 2011 until 2016, and the total asset data was gained in December 2016.

BPRS as financial institution which is profit-oriented also has a lot of risks. It is because the risks are always attached to business activities. There must be a risk and it has been mentioned in Surah Lukman verse 34 which the meaning is: "Indeed, Allah [alone] has knowledge of the doomsday and sends down the rain and knows what is in the wombs. And no soul perceives what it will earn tomorrow, and no soul perceives in what land it will die. Indeed, Allah is The Knowing and The Aware".

The essence of this verse according to Department of Religion (2009:825) explains that human's knowledge is limited, and no one can ensure what is being done and what will happen tomorrow, as well as no one can perceive when and where he/she will die. It shows that the risk is an inseparable part of life.

One of the important risks in BPRS is liquidity risk. It relates to the function of the bank as a financial intermediary, so that the liquidity risk management is so important to BPRS. One of the risk managements faced by BPRS is liquidity risk management. BPRS has to consider the amount of liquidity appropriately, because if the liquidity amount is overwhelming, it could decrease this bank's efficiency which will affect bank's profitability, otherwise if the existing liquidity in bank is too small, then it will disturb operational daily needs. BPRS as financial intermediary must have an appropriate liquidity management, because on the one hand, BPRS must process its funds to earn revenue, and on the other hand, BPRS must provide its sufficient funds so that when there is a customer who withdraws his/her funds, BPRS has sufficient funds.

It also applies to liquidity risk management that it is not only limited to risk identification and mitigation, but also to design an appropriate liquidity risk management system by assessing liquidity risk management. It aims to find out the quality of liquidity risk management so that it could run effectively and efficiently. According to Ismal (2010), the assessment of liquidity risk management is performed by index of liquidity risk management in some managements, which are management on the side of asset, management on the side of liability, and management on the side of policy in liquidity management.

BPRS in a way of managing risk management has to maintain asset and liability managements and also create an appropriate policy so that liquidity risk management runs effectively and efficiently. That is why it is needed to do an assessment of liquidity risk management by using liquidity risk management index in BPRS Sidoarjo. Liquidity Risk Management (LRM) Index is an index that has been suggested by Ismal (2010) to measure a quality of liquidity risk management in Islamic Rural Banks in Indonesia. In this research, this liquidity risk management index will be adapted to the condition of BPRS.

Based on the background of the study above, the research problem is that "does the management on the side of asset, liability, and policy reflect on the quality of liquidity risk management in BPRS Sidoarjo?".

2 Theoretical Framework

1. Liquidity Risk Management

In a term of liquidity management, the bank faces conflicting issues of keeping a sufficient supply of money to always be able to fulfill any withdrawal by the customer and provide sufficient funds to meet credit demand. In a term of bank, liquidity risk usually emerges in three things, which are: the way the bank manages primary reserve, the way the bank manages secondary reserve, and how the bank can manage daily funding. A good liquidity risk management can be performed by setting the financial position to deal with daily transaction. The intended transactions are withdrawal of deposit, disbursement of term deposit, and credit request.

2. The Quality of Liquidity Risk Management in BPRS

BPRS as an Islamic banking institution must be able to predict an accurate and appropriate liquidity management, because BPRS is directly related to micro, small, and medium enterprises activities where it becomes one of the real economic activities. If liquidity risk management cannot be done appropriately, then it will affect real economic balance and social welfare. In its practice, one of the main purposes of this liquidity management is to maintain the balance of management on the side of asset and liability.

Besides that, BPRS also has a role as a financial intermediary, supporter and facilitator, so that BPRS should position itself as a trusted institution for investors and business partners. That is why liquidity management in BPRS should be based on trust, conviction, and support of one another.

3. The Quality of Liquidity Risk Management with LRM Index

Theoretically (Ismael 2010), the assessment of liquidity risk management is done by liquidity risk management index in management of some sides, which are liability side and policy side in liquidity management. Liquidity risk management index is an index that has been suggested by Ismael (2010) to measure liquidity risk management.

All indexes in every aspect studied are separated in different questions with the aim of detecting bank actions on mitigation and prevention of liquidity risk in detail.

The assessment of the quality of liquidity risk management on asset, liability, policy sides could be categorized into four qualities, which are excellent, good, satisfactory, and poor. The total points on the assessment of each side are also categorized into four qualities, which are 100–75 points for excellent category, 74–50 for good category, 49–25 points for satisfactory category, and under 25 points for poor category (Table 3).

4. The Quality of Liquidity Risk Management with LRM Index in Management of Asset Side

The management on the side of asset, according to Ismael (2010) is done by analyzing liquidity risk management considering bank's effort in monitoring financing,

Table 3 The assessment of the quality of liquidity risk management

Assessment	Total points	Excellent	Good	Satisfactory	Poor
Asset	35 points	26–35 points	17–25 points	8–16 points	Under 8 points
Liability	35 points	26–35 points	17–25 points	8–16 points	Under 8 points
Policy	30 points	22–30 points	15–21 points	7–14 points	Under 7 points
Total indexes	100 points	75–100 points	50–74 points	26–49 points	Under 25 points

Source Ismal (2010)

arranging the appropriate allocation of financing, overcoming the failure of financing, overcoming bad economic condition, and dealing with the lack of liquidity. Monitoring, evaluation, and coordination of BPRS with its business partners reflect on the quality of BPRS management control (Greuning and Iqbal 2011).

5. The Quality of Liquidity Risk Management with LRM Index in Management of Liability Side

The management of liability side according to Ismal (2010), is done by evaluating and focusing on the bank's effort to manage an appropriate fund allocation, and build a good communication with customers relating to the way customers withdraw their funds which affects bank's liquidity, and also plan potential liquidity risk.

6. The Quality of Liquidity Risk Management with LRM Index in Management of Policy Side

The management of policy side in liquidity management focuses on the bank's effort in creating good liquidity management practice. In managing an appropriate liquidity management, Islamic bank should have a team or division that particularly handles liquidity risk, has quantitative model and insure all funds that have been collected before (Ismal 2010). In a practice of liquidity risk management, there should be an effort to maintain Islamic bank so that it could be in optimum liquidity level that both advantages and disadvantages of liquidity can be avoided. According to Ismal (2010), one way to do is to plan the appropriate Islamic bank finance arrangement.

3 Research Method

The approach used in this research is quantitative approach, while operational definitions of variables are explained as follows:

- a. The management of asset side. The implementation of liquidity risk management on asset side in this research can be obtained by analyzing:

1. The effort of BPRS in monitoring financing;
 2. The effort of BPRS in managing an appropriate financing allocation;
 3. The effort of BPRS in overcoming the failure of financing;
 4. The effort of BPRS in overcoming bad economy condition;
 5. The effort of BPRS in handling disadvantages of liquidity.
- b. The management of liability side. The implementation of liquidity risk management on liability side in this research can be obtained by analyzing:
1. The effort of BPRS in evaluating and focusing on the bank's effort to manage an appropriate funds allocation;
 2. The effort of BPRS in building a good communication with customers relating to the way they withdraw their funds which affects bank liquidity;
 3. The effort of BPRS in planning potential liquidity risk.
- c. The management of policy side. The implementation of liquidity risk management on policy side in this research by analyzing anything is related to the policy of BPRS in building a good liquidity management practice.

Data source used in this research consists of primary data and secondary data. The primary data was obtained directly from the location of the research by collecting data of filled questionnaire which had been arranged systematically. This questionnaire was addressed to the manager of liquidity management in BPRS. While the secondary data was obtained from related proofs: Central Bureau of Statistics, journal, internet, and the other relevant sources. The sample in this research is BPRS in Sidoarjo which are BPRS Baktimakmur Indah, BPRS Annisa Mukti, and BPRS Unawi Barokah.

In this research, the analysis technique used is analysis technique with Liquidity Risk Management (LRM) Index. It consists of three questions which are a question on asset side, liability side, and policy side in risk management. Every question from the management of asset, liability, and policy sides of risk management should have its respective index value. Then, the formula used in this research is:

Liquidity Risk Management (LRM) Index

$$L = \sum_{t=1}^n A_i + \sum_{t=1}^n B_i + \sum_{t=1}^n C_i \quad (1)$$

where:

- L Total indexes of the asset, liability, and policy sides management
 A_i The management of asset side
 B_i The management of liability side
 C_i The management of policy side
 n Amount of indexes obtained from each management
 t Duration in this research.

Table 4 The quality of liquidity risk management in Islamic Rural Bank (BPRS) Sidoarjo with liquidity risk management (LRM) index

BPRS	Total indexes	The quality of liquidity risk management
Baktimakmur Indah	75 points	Excellent
Annisa Mukti	62 points	Good
Unawi Barokah	64 points	Good

Source Writer, processed

Table 5 The quality of liquidity risk management in BPRS Sidoarjo in management of asset side with LRM index

BPRS	Total indexes	The quality of liquidity risk management
Baktimakmur Indah	27 points	Excellent
Annisa Mukti	26 points	Excellent
Unawi Barokah	22 points	Good

Source Writer, processed

4 Result and Discussion

1. The Quality of Liquidity Risk Management of BPRS in Sidoarjo with Liquidity Risk Management (LRM)

The quality of liquidity risk management in BPRS Sidoarjo with Liquidity Risk Management (LRM) Index is shown in Table 4. The management of asset, liability and policy sides will reflect on the overall quality of liquidity risk management in BPRS Sidoarjo. The result of this research shows that each BPRS has made serious efforts to optimize the management of asset side, liability side, and policy side.

2. The Quality of Liquidity Risk Management in BPRS Sidoarjo in Management on Asset Side with LRM Index

The quality of liquidity risk management in BPRS Sidoarjo in management on asset side with LRM index is shown in Table 5.

In the practice of asset side management, all BPRSs in Sidoarjo put the reserve fund on another bank, because the reserve fund saving that is done by BPRS itself will have a high risk. These three BPRSs in Sidoarjo also put the reserve fund in Islamic banks, and there is only one BPRS which does not have the reserve fund in conventional bank, and that is BPRS Baktimakmur Indah. It is caused by the rule of Financial Services Authority i.e. if Islamic financial institution releases its fund in conventional bank, the interest will not be recognized as income, but as social fund. It will certainly damage BPRS, so that it would be better if BPRS puts its fund in Islamic bank which is able to provide additional income and help the development of the Islamic financial industry.

Table 6 The quality of liquidity risk management in BPRS Sidoarjo with LRM index in management of liability side

BPRS	Total indexes	The quality of liquidity risk management
Baktimakmur Indah	26 points	Excellent
Annisa Mukti	17 points	Good
Unawi Barokah	20 points	Good

Source: Writer, processed

Each BPRS has a standard to determine beneficial financing. BPRS Baktimakmur Indah has equipped its marketing to analyze enterprises. BPRS Baktimakmur Indah provides financing for kinds of common ventures or enterprises that are operated in the respective branch of its area. BPRS Annisa Mukti will see the track record and track checking of prospective customer in Bank Indonesia to observe the customer behaviour from the previous record, and check the environment around customer's enterprise before distributing the financing. Monitoring, evaluation, and coordination of BPRS with its business partners reflect on the quality of control of BPRS management (Greuning and Zamir 2011).

The asset management of the three BPRSs in Sidoarjo has maximized the increase of BPRS' revenue through equity as a plan of the future more than the increase of its revenue based on debt. It relates to what Ismal (2010) has suggested that Islamic bank must utilize the funds for equity-based financing. The reason is that the equity-based financing can move the real sectors that are productive. It means that this financing is distributed for investment and working capital needs. Financing is the main component of BPRS productive asset in performing its function as a financial intermediary, so that the asset management is important to maximize revenue increase through equity. It happens because the revenue increase through debt will involve the other party so that it can increase the risk. The entire policies are performed to keep a balance in management of asset sides in BPRS Sidoarjo.

3. The Quality of Liquidity Risk Management in BPRS Sidoarjo with LRM Index in Management of Liability Side

The quality of liquidity risk management in BPRS Sidoarjo with LRM index in management of liability side is shown in Table 6.

The growth in every bank is strongly affected by the development of the ability to collect social funds, both small and large scales with adequate deposition period. The high short-term deposit in BPRS Sidoarjo does not become main incentive to liquidity risk problems. It is because BPRS has loyal consumers in each BPRS, so that many customers do deposit prolongation with automatic roll over (ARO), and it causes many short-term deposits do not disturb the balance of BPRS' liquidity.

The dominant deposit in all BPRSs Sidoarjo belongs to the public. The ownership of the deposit also influences the balance of BPRS's liquidity. The present government-owned deposit shows cooperative and communicative attitudes with

Table 7 The quality of liquidity risk management in management of policy side in BPRS Sidoarjo with Liquidity Risk Management (LRM) Index

BPRS	Total indexes	The quality of liquidity risk management
Baktimakmur Indah	22 points	Excellent
Annisa Mukti	19 points	Good
Unawi Barokah	22 points	Excellent

Source: Writer, processed

Islamic banks, so that they do not worry about a sudden withdrawal which can disturb the balance of the liquidity. In another case, it is certainly different that the deposit is owned by the public personally but all BPRSs in Sidoarjo have loyal and communicative customers with them.

In the practice of liability side management, all BPRSs in Sidoarjo have planned and arranged their finance for the future by considering liquidity risk management which will prioritize more on putting the deposit in a long term. As Ismal (2010) has suggested that the planning of Islamic bank finance related to liquidity risk management prioritizes more on planning the deposit in a long term, choosing deposit instrument which is in accordance with the condition and need of Islamic bank, and matching the deposit funds with another bank as a reference of financing and last option which is to cooperate with another banks. These all policies are performed to keep the balance of liability side management in BPRS Sidoarjo.

4. The Quality of Liquidity Risk Management in BPRS Sidoarjo with LRM Index in Management of Policy Side

The quality of liquidity risk management in management of policy side in BPRS Sidoarjo with Liquidity Risk Management (LRM) Index is shown in Table 7.

In the practice of policy side management, all BPRSs in Sidoarjo has a model qualitatively to keep the liquidity balance from each BPRS. A quantitative model which is owned by BPRS is in the form of a special system that is owned by respective BPRS. This system functions to monitor funds development from BPRS, both are collected and received by BPRS. The quantitative model is also one of the efforts of BPRS to build the optimal practice of liquidity management.

When the case of failure with business partners happens, all BPRSs will switch to profit reserve owned. It is because Islamic bank is a profit-oriented Islamic finance institution. The profit is not only a matter of importance from the owner, but also the importance to develop operational venture or enterprise from the Islamic banks so that they can keep operating.

When liquidity run happens, BPRS Baktimakmur Indah and BPRS Unawi Barokah prioritize more to release deposit that has been in another bank, while BPRS Annisa Mukti prioritizes more to evaluate the planning between the due date of financing and the due-date of deposit. When liquidity run is not applicable anymore to do evaluation and planning, concrete step must be done, which is releasing the

deposit that is in another bank. All these policies are performed to keep the balance of policy side management in BPRS Sidoarjo.

5 Recommendation

1. To BPRS in Sidoarjo, especially BPRS Baktimakmur Indah, it is important to maintain the performance of asset, liability, and policy sides management, so that the quality of liquidity risk management can reach excellent category. While BPRS Annisa Mukti needs to improve the performance of liability and policy sides management, so that the quality of liquidity risk management can also reach excellent category. The last one is BPRS Unawi Barokah that needs to improve the performance of asset and liability sides management, so that the quality of liquidity risk management can reach excellent category. Besides that, BPRS Annisa Mukti and Unawi Barokah that still cooperate with conventional bank, hopefully can involve Islamic banks only in operational term in the future. It is just for avoiding riba and supporting the progress of Islamic finance institutions in Indonesia.
2. To the government, it is important to give some solutions to BPRS when it faces advantages and disadvantages of liquidity. Some solutions are by actualizing APEX BPR and especially involving all parties i.e. the academics, practitioners, and religion leaders (ulama) to participate in socializing the performance of BPRS to the public.

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The Role of Neuromarketing in Identifying Consumer Preferences



Liviu Mărcuță, Bogdan Mârza and Alina Mărcuță

Abstract Nowadays, the companies are searching new solutions to contribute to the growth of their sales and to increase their profit. This can only be obtained with the help of marketing researches that try to find more precise and efficient methods for consumers to express their preferences. Often, they are not able to accomplish this verbally, they fail to express their emotions or feelings, their thoughts or reactions to a certain product and therefore, their real preferences cannot be identified. The marketing experts have become aware of the limited traditional methods regarding the market research and have tried to find new solutions. One of these solutions is precisely the neuromarketing which uses techniques developed by experts in neurosciences and psychology in view of analysing and understanding the reaction of consumers to different products in order to perform as efficient as possible marketing researches. This paper intends to analyse the role of neuromarketing in identifying the consumer preferences and in developing marketing campaigns, starting from the role that the brain can have in consumer choices, presenting the tools underlying the neuromarketing studies and presenting at the same time the reasons for the criticisms that benefit from the neuromarketing.

Keywords Neuromarketing · Consumer preferences · Advertising

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1 Introduction

The greatest mysteries are represented by the human mind and the universe. The idea of finding out what they think, in fact, consumers have always been concerned with marketing specialists as well as with large companies that have begun to invest in this field of marketing techniques because the results obtained are useful in promoting their products. Studies show that new products entering the market fail in the first year since launch, due to their lack of knowledge by consumers. Therefore, the use of appropriate marketing techniques could lead to increased consumption, given its role, namely: Presentation of products so that they meet consumers' preferences and influence their decision-making process (Frone 2007). Because although when we buy something we have the belief that the decision was taken independently, in fact, there are many techniques that make us buy certain products that are promoted by different marketing techniques. Advertising specialists have found that traditional methods of market research have certain limits, which is why they sought new, more accurate and effective solutions in the field of marketing research that responds to modern business demands (Zara 2012). Thus, finding that people cannot or does not want to express real thoughts, that they do not always know how to feel or remember a certain advertisement after a while they have come to perform some neuromarketing research. Following consumer responses to different stimuli (visual or auditory), they were able to determine what are the factors that can stimulate consumer interest in certain products. This could be done by tracking how certain brain areas activate when the subject is in front of the stimuli that led to reading consumer thoughts. The studies are based on monitoring the oxygen consumption achieved by these areas. More oxygenated areas are stronger colored in warm colors, while less oxygenated areas appear in cooler or completely uncolored. In this way, people's reactions to different products launched on the market, to different promotions, could be understood, which led to increased marketing campaigns.

2 The Role of Neuromarketing

Neuromarketing has thus become an innovative way of market research that emerged in the early 1990s, but whose bases were put in the years 2002. It uses neuroimaging technology (magnetic resonance, electroencephalography, head magnetic stimulation, eye-tracking etc.) to determine how the brain is physiologically influenced by advertising or marketing strategies. This procedure can provide answers to important questions about advertising, namely: whether an advertisement can trigger emotional reactions among consumers; how strong he can capture the attention of the viewer; the items in the creative can be stored in the consumer's memory.

Neuromarketing works because of implicit communication that is much stronger than explicit communication and is based on much more supple and neurophysio-

logical mechanisms, which has far more powerful effects on consumers. (Balaban 2009).

The human brain has three components each responsible for certain emotions or behaviors. Thus, the brain stem or “reptilian brain” is triggering alarm signals to protect life, being responsible for maintaining vital processes, ensuring our safety as an individual, and perpetuating the species. The limbic system or “visceral brain” is the physiological center of emotions, playing an important role in processing the information that actually reaches our consciousness and which it selects according to some exciting, boring, new-repetitive or pleasant-unpleasant criteria, adjusting the reality and preventing us from becoming aware of some uninteresting or traumatic aspect. Neocortex or “thinking brain” is responsible for abstract thinking, language, symbology, ethical and moral considerations. And then, by exploiting all this knowledge of brain function, one can find those marketing techniques that help to increase consumer satisfaction.

Data collection for neuromarketing studies uses neuroimaging methods such as: fMRI (functional magnetic resonance), EEG (electroencephalography), SST, eye tracking or facial coding.

fMRI produces high-resolution brain imaging that can be used to observe areas of the brain that respond to stimuli such as sounds, visual images, etc. The region responsible for each activity is well demarcated in the human brain and is the same for all people, and the knowledge of these centers has applications in marketing and advertising. Although the spatial resolution of the fMRI is much better than the EEG, the temporal resolution is brighter and cannot provide a good analysis for an advertisement that captures sequences, images or sounds.

EEG consists of using electrical signals in the brain to produce visual recordings through sensors attached to the scalp. Data evaluation is based on algorithms that quantify the information and presents it in an easy-to-read form.

Using this marketing technique allows specialists to track what’s happening to the consumer’s mind while watching different TV ads, seeing store shelves, reacting to the new design of a product, listening to the song on the background of an advertisement, feeling a fragrance or flavor a coffee. The EEG is thus used to track consumer cognition and to study its emotional responses to messages sent to the conscious level.

Based on EEG results, subjects’ emotions and intensity can be measured, reflecting the attachment to a particular brand, thus providing consumers with subconscious information. This technique allows you to measure brain activity in real time without interrupting the experience and can be used in the typical environment where consumers have the experience.

SST (Steady State Topography) observes and measures human brain activity as a method of research into cognitive neuroscience. In addition to the electrical activity of the brain (EEG), a sinusoidal signal is used that causes an electric oscillatory response in the brain, which is called visual potential caused by steady state.

Based on this technique, changes in brain activity are tracked and analyzed, with the latency between stimulus and response over long periods of time, which provides information on brain functions based on neuronal processing speed.

Eye tracking techniques may be invasive and inactive and non-invasive and passive. Eye tracking records the various fixation and jerking patterns that a user performs while viewing the visual stimulus, being a tool used to understand consumer actions (Robu 2013). The main objective of the research involves understanding the type of information the user needs to make a decision.

Facial coding is a technique that has begun to be used in market research, being one of the most fashionable biometric tools to measure people's reaction. However, the human face is still a great enigma, but the latest technology demonstrates the interest in decrypting not only the human face but also what it conveys. Decoding human facial movements is a tricky action, but one that may want more a salesperson than know what the consumer is thinking about his product.

The interest in facial encoding is due to the fact that new technologies are becoming more competitive, and on the other hand, the increasing access to modern facial recognition tools (any mobile phone user has access to this technology), making it more the easy task of marketing specialists.

Decoding facial movements is still a difficult task, but the effort is worthwhile considering what a salesperson may want more than knowing what the consumer is thinking about his product.

Therefore, by applying the knowledge provided by neurosciences, by understanding how the human brain works when subjected to stimuli such as advertising campaigns, brands, products, it is possible to understand the behavior of the consumer.

Among the most popular neuromarketing techniques used to increase sales include:

Displaying the money symbol, or rather, not placing these symbols near the prices, which would have a negative impact on buyers' decision.

Hot spots, that is, those areas where marketers have found that consumers stay longer, where products sell better, and where they place new products to increase sales.

Feedback to consumer demands is another technique that increases both sales and product confidence. The more companies pay more attention to their consumers, responding to their demands, the higher the confidence.

The atmosphere in the shops, restaurant influences the choices made by consumers. Thus mirrors placed in these places increase their self-confidence, music can also influence buying decision. Thus, a rhythm that exceeds 100 pairs/min determines buyers to buy faster, while slower music makes them buy more than they have intended. In restaurants, slow music makes the customer stay longer and order more. Hot light positively influences buying decision, unlike a cold light. Temperature is also a determining factor. Temperatures too low or too high increase the stress of the body, influencing negatively the comparison or consumption decision (Mărcuță et al. 2014). Hot colors have positive effects on the body, leading to increased sales, while cold colors have a reverse effect. Smell comes directly into the induction of emotions, which is why it is another element that is used in influencing consumers (Mărcuță et al. 2014). It is used to promote sales not only in the restaurant, but also in other areas such as sales of clothes, cars, gas stations, etc.

Attractive labels and not just the attractive label design that is the most effective and cheap way to popularize products and bundles, as well as simple and clear fonts, is an advantage in terms of buyers' deception. Complicated fonts are negatively perceived, resulting in a decrease in purchasing decisions.

Sellers' attitude, which, as studies show, can increase sales by up to 40% is another element used in neuromarketing, because the message sent, their smiling attitude, gains both the confidence of the interlocutor and also communicates the message non-verbally. Smiling girls used in commercials also lead to increased sales.

Exploiting some fashionable concepts, such as using eco, bio, highlighting the quality of these products, labeling on the label, choosing the most suave images, using raw paper are elements that can increase sales by influencing buyers.

Induce feelings, such as the feeling of guilt or shame that leads to good marketing results. Wine-based messages work well in social campaigns, nonprofit organizations use them, and fitness halls are notorious for using guilt as the main trigger. The same sentiment is used in campaigns to promote slimming solutions, cosmetics (toothpaste, mouthwash), chewing gum, bio products that contribute to a healthier environment, products that are not tested on animals, children's products which are safer than other products on the market, etc. In this case, however, exaggerations can lead to the transformation of guilt or shame into humiliating the client, which will have negative effects and not the expected outcome.

Subliminal messages that are messages in the creative we are not aware of, but which act on certain areas of the brain. Thus, commercials where the volume is much higher than the rest of the show have the effect of capturing the attention of the advertiser. Use of advertiser personalities, advertisements considered in terms of education level, negative advertisement, etc. are elements that influence our choices.

Neuromarketing can be used primarily in the design phase of products, in their presentation forms, in finding the most appealing way of presenting them, which will lead to the creation of pleasant sensations that can determine the product's choice. It can also be used in the promotion and advertising stage for printing a specific image of the product to be used for market segmentation purposes, that is, grouping similar "buy drivers" and not just by factors socio-demographic (age, gender, income, education).

Neuromarketing is no longer limited to the production of advertisements that convey a message that involves consumers emotionally, to be well understood, with a correct decoding of the main messages, to be relevant, credible, but to bring more, because knowledge about brain hemispheres and its functional differences help us rebuild creative, change sequence order, or delete something from a spot so that its impact is greatest.

One of the results of the studies, which could not otherwise be demonstrated, was that the choice of a brand is not only due to the qualities of the products made, but to the negative attitude towards other brands. And then this is important not only to know the consumer's attitude towards certain products but also to the policy applied to the other competitors (Pinto 2017).

Neuromarketing research can provide us with advice on how to better communicate products, logos, pack upgrades, and build up the website to maximize marketing campaign results.

Neuromarketing studies have been used over time in various areas: performing advertisements or testing alternative advertisements; in electoral campaigns; in media, cinema for choosing actors, choosing alternative endings, creating company launches; branding or identifying cognitive or emotional responses to a brand; in choosing product design and packaging; in the media for the purchase of television, radio, digital media, etc.; in designing web designers; in the development of the mix of strategies, budgets, promotional materials, merchandising and campaign pretesting.

Neuromarketing is not the only innovation that allows a better understanding of the consumer, as the technology used today provides a growing amount of information about existing customers or potential customers, information that allows us to identify their buying intentions. Because we use different search engines, social networks, smart phones, smart sensors installed in shopping centers, we do nothing but create information that is used by advertisers, businesses, research institutes that use them to find consumer preferences. The advocates of these marketing research consider that these techniques have the advantage of meeting the needs of consumers and not consuming resources to produce unsuccessful goods. And then, they plead in favor of it, considering that since a direct link between spontaneous preferences and the memory of sensations could not be established, then conditionality to acquire a particular good cannot be imputed to it.

On the other hand, there are also critics of neuromarketing, ethics being an important aspect to be discussed. The complexity of the advertising communication phenomenon, as well as its problematic relationship with ethics, highlights the need for advertising professionals to become aware of the importance of the ethical factor in the elaboration of advertising communication strategies. Ethics can be interpreted as an additional confirmation of the many facets of contemporary advertising (Grad 2014).

The ethical conduct of neuromarketing investigations is one of the most important challenges for organizations that practice such studies, the beneficiaries of the results obtained (the companies producing goods and services) and their final consumers (Pop et al. 2014).

As we have shown, neuromarketing aims to identify a button that activates buying within the brain. Various consumer protection organizations criticize the neuromarketing that they consider invasive, and because of the effects it has on the consumer. In most cases, consumers are unaware of the effects these marketing campaigns have on them. Also, the use of neuronal research to influence consumer choices is considered by the defenders of ethics to be a form of mental manipulation stronger than conventional advertising (Pop et al. 2014). Neuromarketing is considered more dangerous than other forms of advertising because it is a more aggressive form of consumer behavior manipulation (Levy 2009). It raises the question of the free will of the individual, because it is not known whether that consumer is those decisions in his or her own will or is influenced in their taking. Or all that we have exemplified

so far favors the fact that our choices are influenced, induced, which ethically poses particular problems.

The consumer society has an important responsibility in relation to the ethics of responsibility, which supports individual choice and facilitates personal attachment to ethical values, avoiding the creation of a neutral space specific to the law that diminishes personal involvement and the ethical vocation of responsibility (Frunza 2014).

Those who criticize neuromarketing consider it only a way to legitimate advertising, as well as a way of subliminal influence of the brain.

Although there have been results in this area of neuromarketing, there are many specialists who consider it a new way for people to make money on behalf of people, consuming too much financial resources and too much time in their attempt to influence consumer behavior, hoping to find that button in the brain to trigger consumer preferences. But they believe that finding a link between brain areas and behavior is not enough to support the idea of neuromarketing. Although there are many studies, it seems that the results have been influenced by the experience of marketing specialists rather than the response of the human brain, manipulating responses or influencing the subjects' responses. Furthermore, some specialists believe that these experiments carried out at the laboratory level will not be applicable to real situations, to the different groups from the cultural or genetic point of view.

Therefore, we cannot decide whether or not neuromarketing will be a marketing of the future or just an opportunity that can be used today. But any business opportunity has to be taken advantage of, and this opportunity is being exploited by marketing companies. The promise of market penetration reductions is attractive for companies, and then the use of any risk reduction techniques is also attractive.

In Romania, we still cannot talk about the application of in-depth neuromarketing techniques. But there are companies that have begun to use these techniques and are aware of the potential that they might have over their business development.

3 Conclusions

Today, marketers are interested in the ability to use human brain responses and relate them to behavior, thus providing a great deal of information. How they use this data to promote their messages is an issue that has not yet been provided with enough answers.

Neuromarketing is a new marketing field that still has a lot to say and prove. By using it, it is not just trying to determine the factors that influence the consumer's decision, but also finding ways to get him to buy a product or use a certain service and create a preference for them.

It can become valuable in providing information on how to position the products in advertisements and reducing the risk of failure of various campaigns, helping to eliminate the focus of focus groups and providing objective information to guide marketing campaign organizers instead.

Supporters of neuromarketing believe that the great advantage of using neuroimaging in marketing is the primary reaction that subjects relate to a product, making it easier to target, while its critics consider it a method of invading the subconscious an individual to induce a buying behavior. They consider neuromarketing as not an alternative to the future of marketing, but an evolution of it. It will have a major impact on the development of society and that's why it is important to understand them very well the mechanisms and how, in the future, it will revolutionize the laws of commerce.

On the other hand, critics of neuromarketing show that this technique does not benefit from academic validation, but from isolated case studies that do not certify this research.

They believe that neither the knowledge about neuroscience nor the techniques used are sufficiently developed to truly anticipate consumers' preferences. More consumer is the slave of involuntary choices, which could justify reactions to unhealthy nutrition, lack of recycling, and ultimately lower producer responsibility.

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Sharing Economy and Employment: What's Next?



Silvia Cristina Mărginean

Abstract The sharing economy is growing 20 times faster than was predicted. Travel, transportation, finance, are just few examples of sectors involved in collaborative economy. Labor market and employment have to face the challenges of sharing economy and for many years from now we will have to deal with the impact of this new trends. Innovative business models like Uber and AirBnb will change the landscape of job creation and will determine a demand for new skills.

Keywords Sharing economy · Collaborative economy
Innovative business models · Employment · On-demand work

1 Introduction

Economic literature agree that the landscape of the economic environment has fundamentally changed in the last years. Production and consumption, selling and buying processes, market and non-market activities are different than ten years ago. In this stage, academic community, specialists and professionals are still searching for appropriate names for all new forms that are emerging around us. From knowledge economy, to digitalization, fourth industrial revolution, internet of things, and sharing economy, all these new concepts and many others are still under debate. The evaluation of their implications and impact on different dimensions of economic activity is still a work in progress.

This paper discuss the impact of sharing economy on labour market. Digitalization has changed the way that we live our lives, and all new devices, platforms and smart objects are important for work and leisure, for individuals and organizations and they were gradually integrated in our environment. However, in some industries these trends are completely changing the competitive landscape, because new business

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innovate the way they manage and understand suppliers, clients, the value chain, production and consumption in the same time. With so many dimensions involved, it is really difficult to analyse the overall impact, so we will focus only on the following questions: what is sharing economy and which are its main characteristics? How is labour market affected by this new phenomenon? What are the future implications for jobs, work, skills or employment as we understand them now?

2 Sharing Economy: What It Is About?

Mark Suster, in the Foreword to Alex Stephany's book *The business of sharing: Making it in the new sharing economy* (Stephany 2015) called sharing economy as "the most promising trend arising from global, mobile and social connectivity". In his opinion, the basic characteristics of internet—scale, transparency, and speed—will impact the consumption, making possible the exchange of goods and services between individuals who will benefit from their assets and their time. Also, the sharing economy will impact labour, changing not only the required skills but also the content of traditional concept like job, employment and unemployment.

The academic community is still debating the name of this phenomenon. Frenken and Schor (2017) are discussing sharing economy "and its close cousins" such collaborative consumption, on demand economy, or second hand economy. The arguments for the last concept are related to the consumer to consumer interaction, specific also for sharing economy, but in the same time different because the sharing economy does not involve the permanent transfer to one consumer to another. Considering that the interaction between users, enabled by Information and Communication Technologies are a key component in definition of the concept, Laurell and Sandstrom (2017) emphasize the relationship between collaborative consumption and sharing economy.

Not only the name, but also the definition of this new trend is still a source of debate. In one of the most cited study, Price Waterhouse Cooper (PWC 2014) define sharing economy as follows: "Sharing economies allow individuals and groups to make money from underused assets. In this way, physical assets are shared as services." Another definition says that "the sharing economy is the value in taking underutilized assets and making them accessible online to a community, leading to a reduced need for ownership of those assets" (Stephany 2015).

For some authors (Daunoriene et al. 2015) the key concept in the definition of sharing economy is the notion of sharing. They present a series of definitions, not contradictory in nature, all of them based on the idea that sharing economy offers alternatives to the private ownership, for resources which are monetized in a different way than few years ago. However, some specialists narrow the concept, looking at "ICT's based sharing economy" (Roh 2016) as a new economic model, based on sharing things more than owning them, but also emphasizing that sharing systems has particularly fuelled by ICTs. The information and communication technologies platforms were the vehicle that facilitated the connection between demand and sup-

ply, making sharing of assets possible. Definitions typically include references to different models of co-access and co-ownership of assets (goods, services, time), to joint production and/or consumption among multiple actors (Miralles et al. 2017).

The debate about the novelty of the concept often is focus on the transition from the ownership, as the traditional permanent way to have access to goods or services, towards a temporarily access (the use of the word sharing instead of renting is explainable but still a source of debate for some authors) (Matzler et al. 2015).

The main challenge related to the definition of sharing economy is the meaning and importance of the word *sharing*. There are at least two opposite groups: some specialists say the word share excludes the idea of any payment between parts; for another group, the word share is related to the idea of replacing the ownership with using, and this doesn't exclude payments. Sharing is not a new idea and historically, sharing was closer to free use than to paid access to resources. However, there is something new about the sharing economy, which one of us has called "stranger sharing" (Schor 2016). Sharing was based on trust and was limited to family, friends and neighbours but the new sharing economy is about platforms facilitate sharing among people who do not know each other. The digital platforms provide enough information about strangers, and the sharing became less risky and more tempting because the reputation and the ratings are more reliable (Frenken and Schor 2017).

Another important question related to the conceptualization of sharing economy is how old is it? It appears that the concept entered public discourse around 2011–2012 (Martin 2016). In the period 2011–2014, the growing number of references in the newspaper articles is the sign of increased interest in the concept.

In the next stage (2014–present) the debate became more about the content and characteristics than about the existence of the phenomenon. According to PWC (2014), the core pillars of sharing economy are: (1) Digital platforms that connect spare capacity and demand; (2) Transactions that offer access over ownership; (3) More collaborative forms of consumption; (4) Branded experiences that drive emotional connection.

Two years later, in his book *The sharing economy: The end of employment and the rise of crowd-based capitalism*, Sundarajan identifies five characteristics of the sharing economy as a new economic system: (1) largely market-based: the increased economic activity is the result of the higher exchange of goods and services which takes place on the new created markets; (2) high-impact capital: underused assets, time, skills or money are the source of value in the sharing economy, which creates opportunities to be used at levels closer to their full capacity; (3) crowd-based "networks" rather than centralized institutions or "hierarchies": the supply of capital and labor comes from individuals rather than corporate or state aggregates; (4) blurring lines between the personal and the professional: the supply of labor and services often involve direct interaction, which could be considered closer to personal than to professional relationship; (5) Blurring lines between fully employed and casual labor, between independent and dependent employment, between work and leisure: traditionally full-time jobs are replaced by on demand work, contracts, and entrepreneurship (Sundararajan 2016).

3 Sharing Economy and Labor Market

One of the main trends induced by sharing economy related to the labour market is offshoring. According to Blinder, a Princeton economist, quoted by ..., manufacturing jobs were already offshored many years ago. Sharing economy induce a change in services, because digital platforms enable companies to employ people anywhere in the world. This will impact the demand for new skills and resources: highly populated countries, with good languages and computer skills, as basic requirements to compete in a truly global market.

Sharing economy will represent, for many workers a huge opening toward global competition, the same as it was for companies few years ago. There are some essential conditions: interconnectivity, language barriers, and entrepreneurial skills. You can sell your abilities to a potential 7 billion consumers if you know how to design a website, online marketing or to provide translation from one language to another.

Another important question related to the impact of the sharing economy is related to wages. In a book published in 2016 Sundararajan (2016) compares the hourly wages in San Francisco (summer 2015) for digital labour marketplace average wage rate and the data from US Bureau of Labour Statistics Average wage rate and concludes: Our findings have consistently suggested that workers can generally expect to earn more per hour getting their freelance assignments through a digital labor market than by seeking it through traditional channels, even after they pay the platform its commission. A study by Hall and Krueger (2015) documented a similar difference between the average hourly earnings of Uber drivers and taxi drivers.

Martin and Shaheen (2011) consider that sharing economy could play an important role in solving unemployment, and link shared economy to social sustainability. But the particular definition of a job or the way sharing economy affects unemployment could be debatable because most of the workers in the digital labour market should be considered freelancers, since they make money from labour outside an employee-employer relation (De Groen and Maselli 2016).

Some of the labour market characteristics are subjects of change in this new form of economy. The time is perceived differently, and we are more than happy to use the immediacy of labor supply. According to Sundarajan (2016) work is no more related to work hours and to big blocks of time allocated to work. Sometimes, work in sharing economy can take place in a minute or two, in a “more granular way”, more efficient.

4 Conclusions

Sharing economy will continue to change the landscape of labor market. The challenges will be to identify and classify different types of work (for example to have distinction between employed people and people working by contract) and to have accurate statistics. There is still difficult to say if an unemployed person driving his

own car or rent the spare room to tourists have a job (and should be counted as employed), and also if we are a blurring line between full time and part time employment, if the answer is yes. In the same time, to count and report the number of hours worked is really difficult. Maybe in the case of driving the things are simpler: you can count the money and if the revenue is above a certain amount (national according to the national rules) the person cannot be considered unemployed. But the estimation of the number of hours necessary to clean your house for guests it is really difficult (you work 6 h per day because you have different guests every day, five days a week and you also provide them breakfast and dinner or you can have a little income sharing your spare room with a guest for a week now and then). Offshoring make the challenge more difficult: if you provide editing or translation services for people from different countries and you are in the same time on few platforms it is almost impossible to track all the revenues, the number of hours and finally to say if this person is still unemployed in the home country.

The challenges are related sometimes to the concept and definition of sharing economy itself: some of the authors consider cost sharing outside the labour market, some of them include platforms like BlaBlaCar in the same category with Uber.

The research agenda in the field will include in the next years not only many conceptual questions but also some important methodological issues related to data collection and national or international statistics, which are not yet sophisticated enough to count all these questions. Having a job is no longer the best way to earn money and the measurement of employment will be more difficult in the future. The conclusion is that in the future we will have to rethink not only the skills that we need for different occupations but also the way that we call or measure work in sharing economy.

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National Cultural Dimensions and Economic Freedom in Ukraine: A Review



Zoriana Matsuk 

Abstract The cultural dimension of nations is studied by many authors and many affirmations of its influence on the economy are found. The article involves actual evidence confirming the hypothesis that there is a connection between indicators of national cultural dimension (after Hofstede) and the indicators of economic freedom (after Heritage Foundation). Hence, analyses were performed for 18 indicators from 35 European countries: 6 indicators of national cultural dimension and 12 indicators of economic freedom. The study helped to build economic and mathematical models and to find out how much the national cultural dimension influences to the economic freedom of the country. Authors believe that using proposed hypothesis is useful. This review continues to exist as an open window for the upcoming investigations. In search of an answer to the question “How can culture influence on the economic freedom?” it is important to study deeper informal institutions of the country.

Keywords Economic freedom · Ethnometry · Cultural dimension

1 Introduction

Over the past two decades neo-institutional economics has been transformed into influential discipline. Nowadays it claims to get the status of social metascience, which can explain and predict the changes in societies in time. In comparison with classical economic theory, which overlooked the research of institutions, it is a significant step forward in understanding the logic of society functioning and the processes of social transformations taking into account the mentality factor.

The economic freedom depends on how national economic culture responds to advanced foreign experience: repels it, creatively perceives, or automatically copies. The economic history of Ukraine is a series of attempts to copy foreign experience followed by periods of rejection of it. Till the end of XX century economists stud-

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ied economic life of society as passive object of social design, where experienced “architect” could build “beautiful castle” instead of “outdated cottage”. Failure of attempts to transform the countries of the socialist camp in “normal” western society proved that architect had to account “material resistance”.

Even after 25 years from the beginning of “capitalist revolution” in Ukraine the capitalism feels itself uncomfortable. That’s why there is a question: is Ukrainian culture compatible with the idea of capitalist modernization? Will such modernization require a cardinal refusal of Ukrainian national cultural dimension? Or due to the features of national cultural dimension such modernization, in principle, can not be successful in our country? To answer this question we tried to use principles of ethnometry—new interdisciplinary direction, which helps to find out how much the Ukrainian cultural dimension influences on the economic freedom in Ukraine.

Over the past decades Ukraine tries to copy foreign model of economy and in search of answer to the question “which countries to follow?” we tried to implement American liberal model and European market economy. We think that European experience of a combination of “normal” and “communist” entrepreneurship may provide a sufficient basis for reflection on the prospects for the development of economical freedom in Ukraine. These thoughts are extremely relevant, because European’s experience shows a successful model of capitalist modernization in conditions of complex political composition of the population.

The article is organized as follows. After the introduction and literature review, we present methodology, statistics and exchange views about the results. Ultimate section brings to a close the research and recommends the direction of hereafter research.

2 Literature Review

Nowadays the main role of values and traditions, national interests and mentality is noted by many researchers. Economic freedom is characterized by socio-cultural, institutional, demographic and geographical factors. That is why the identification of the problems of economy will depend on the level of cooperation between economic science and other social sciences, especially psychology and sociology.

The special role of culturally motivated norms on the market environment was studied by G. Hofstede, S. Schwartz, C. Hampden-Turner, F. Trompenaars etc.

In the 60–70’s of the last century the Dutch sociologist G. Hofstede began the search of the truth in the issues of the national cultural dimension, its influence on work, business and economics. He defined six cultural dimensions, which affect the economy: power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence versus restraint (Hofstede 1980). Hofstede conducted surveys in the offices of the company IBM in 50 countries and received answers from 116 thousand employees. These questionnaires became the basis for the study. A few years later, his followers expanded the list of countries to 70.

One of the leading researches of value orientations of the individual is Israeli scientist S. Schwartz. His scientific interest embraced the values of different cultures and people. Relying on the work of his predecessors, he selected the values that are used in the most popular method for determining instrumental and terminal value orientations of Rockeach (1973), and also in the methods of the other researches (Schwartz et al. 2001, 2012). He supplemented them with values derived from religious and philosophical literature, and grouped them into basic types of values. Based on previously collected data, Schwartz and Bilsky (1987) investigated 58 basic personal values, structured them depending on motivational types and objectives and described the dynamic interaction of values of different types. Summing up the long-term multilateral studies, Schwartz (1992) built the theory of fundamental values, which are found in all humankind. He determined these values for non-public purposes, which are different in their significance and serve as guiding principles in the life of a person or group (Schwartz et al. 2012). The fundamental values organized in an agreed basic system, which can describe individual decision-making, attitudes, and behavior.

Studies of Trompenaars and Hampden-Turner (1997) were performed on the basis of large empirical material, which were received during 1986–1993 in the series of interviews of almost 15 thousand managers from many countries of the world. The interviews held during the seminars at the Center for International Business Studies and its branches. In addition to the fact that C. Hampden-Turner and F. Trompenaars proposed seven indicators for comparative analysis and interpretation of national business cultures, they investigated the problems of interaction and mutual influence of national and in-house management culture in a globalized economy. Their conclusion was that the dominance of the national business culture in its interaction with the organizational culture of the company determines the existence of various models of the latter ones.

National mentality is the basis of economical behavior and a factor of economic freedom. In defiance of the existing of a quite a few studies devoted to national cultural dimensions, the investigation of economic freedom in Ukraine was not transmitted, so we attempted to fill this empty space. On the one hand this article is a continuation of author's research of informal institutions (Matsuk and Deari 2016). But on the other hand through this article the author begin to study the influence of the national cultural dimension on the economic freedom in Ukraine.

3 Methodology

In the research the following methods were used: coefficients and relative values—for the evaluation of national cultural dimension indicators and economic freedom indicators; correlation analysis—for determination of the connection tightness between national cultural characteristics and the level of economic freedom for European countries; regression analysis—for calculation the growth reserves; logical generalization—for the formulation of the conclusions.

The fundamental thesis of economical theories described in the scientific studies of foreign and national scientists served as the theoretical basis of research.

The informational basis of research was:

1. Indicators of national cultural dimensions (after Hofstede) in European countries. The Hofstede model of national culture includes six elements. The cultural values denote independent predilections for one state of affairs over another that characterize countries (more than individuals) from each other. Six indicators that describe prevailing value systems in different countries and ethnic groups: Power Distance—PDI, Individualism—IDV; Masculinity—MAS; Uncertainty Avoidance—UAI; Long-Term Orientation—LTO; Indulgence versus Restraint—IND (Hofstede 1980). All indicators are in the range of 0 to 100 points.
2. Twelve indicators, which characterize the measure of economic freedom of the country (indicators of index economic freedom): PR—Property Rights; JE—Judicial Effectiveness; BE—business environment; GE—Government Integrity; TB—Tax Burden; GS—Gov't Spending; FH—Fiscal Health; BF—Business Freedom; LF—Labor Freedom; MF—Monetary Freedom; TF—Trade Freedom; IF—Investment Freedom; FF—Financial Freedom (Index of economic freedom 2018). All indicators are in the range of 0 to 100 points.

We formulated the hypothesis that there is a connection between the indicators of national cultural dimensions (after Hofstede) and the indicators of economic freedom.

For confirmation of this hypothesis, we: (1) calculated the coefficient of correlation (Naconechnyi et al. 2006) between the indicators of national cultural dimensions (after Hofstede) and the indicators of economic freedom of 35 European countries and evaluated the tightness of the connection between them; (2) selected and grouped for further research those indicators, which have the coefficient of correlation higher than 0.7; (3) checked the calculated correlation coefficient using a coefficient of reliability (Lukyanenko and Krasnikova 1998), the value of which was compared with the quantile u of the normal distribution for the significance level α ; (4) to determine the relationship between variables, calculated the t -tests and compared with the critical values of its criterion (Lukyanenko and Krasnikova 1998); (5) calculated the coefficients of regression; (6) build the economic and mathematical models; (7) check the model for adequacy (Lukyanenko and Krasnikova 1998); (8) definition the growth reserves; (9) made the relevant conclusions.

4 Data, Results and Discussion

Output data is presented in Table 1 (indicators of national cultural dimensions) and Table 2 (indicators of economic freedom) for 35 European countries in 2017.

Ukraine is a sovereign state where power keepers are very withdrawn from the population. Being the biggest country completely within Europe and being about a century district of the Soviet Union, Ukraine evolved as an extremely centralized nation. If Ukrainians organize to go out with their companions they would literally

Table 1 National mentality indicators of European countries

Countries	PDI	IDV	MAS	UAI	LTO	IND
Albania	90	20	80	70	61	15
Austria	11	55	79	70	60	63
Belgium	65	75	54	94	82	57
Bulgaria	70	30	40	85	69	16
Croatia	73	33	40	80	58	33
Czech Republic	57	58	57	74	70	29
Denmark	18	74	16	23	35	70
Estonia	40	60	30	60	82	16
Finland	33	63	26	59	38	57
France	68	71	43	86	63	48
Germany	35	67	66	65	83	40
Greece	60	35	57	100	45	50
Hungary	46	80	88	82	58	31
Iceland	30	60	10	50	28	67
Ireland	28	70	68	35	24	65
Italy	50	76	70	75	61	30
Latvia	44	70	9	63	69	13
Lithuania	42	60	19	65	82	16
Luxembourg	40	60	50	70	64	56
Malta	56	59	47	96	47	66
Netherlands	38	80	14	53	67	68
Norway	31	69	8	50	35	55
Poland	68	60	64	93	38	29
Portugal	63	27	31	99	28	33
Romania	90	30	42	90	52	20
Russia	93	39	36	95	81	20
Serbia	86	25	43	92	52	28
Slovakia	100	52	100	51	77	28
Slovenia	71	27	19	88	49	48
Spain	57	51	42	86	48	44
Sweden	31	71	5	29	53	78
Switzerland	34	68	70	58	74	66
Turkey	66	37	45	85	46	49
Ukraine	92	25	27	95	55	18
United Kingdom	35	89	66	35	51	69

Source compiled by the author on the basis of data (Hofstede Insights 2018)

Table 2 Indicators of economic freedom in European countries

Countries	PR	JI	GI	TB	GS	FH	BF	LF	MF	TF	IF	FF
Albania	54.1	25.4	39.9	85.1	72.7	67.5	69.1	50.4	82.4	87.8	70	70
Austria	83.5	80.9	73.5	49.9	19.4	81.1	75.5	66.7	83.7	86.9	90	70
Belgium	81.2	69.5	70.9	44.0	12.1	67.9	80.6	59.5	82.6	86.9	85	70
Bulgaria	63.6	42.5	38.2	90.9	60.5	94.3	64.3	66.1	82.8	86.9	70	60
Croatia	65.9	56.5	40.5	66.0	32.5	67.2	58.9	43.0	79.1	87.4	75	60
Czech Republic	73.0	57.9	51.1	82.9	48.6	96.2	72.5	76.8	85.2	86.9	80	80
Denmark	84.8	83.6	84.1	41.4	10.6	96.7	92.5	82.8	86.4	86.9	90	80
Estonia	80.4	83.9	75.7	80.7	52.6	99.8	75.6	54.8	85.1	86.9	90	80
Finland	89.0	82.7	89.8	66.5	2.3	81.1	89.9	50.5	86.0	86.9	85	80
France	84.0	72.7	65.1	47.3	2.7	60.8	80.2	45.0	81.6	81.9	75	70
Germany	81.0	78.0	75.3	61.3	41.3	90.8	86.1	53.3	86.2	86.9	80	70
Greece	52.3	59.0	37.9	60.4	20.9	70.5	74.4	54.4	81.0	81.9	55	40
Hungary	57.6	57.1	36.4	78.6	29.4	82.4	61.8	68.7	91.6	86.9	80	70
Iceland	86.7	72.6	77.3	72.1	44.2	94.3	89.5	61.8	81.7	88.5	85	70
Ireland	87.7	79.0	79.0	76.1	69.6	80.8	81.8	76.4	87.4	86.9	90	70
Italy	71.2	60.9	40.1	55.2	24.1	68.2	70.3	50.3	88.2	86.9	85	50
Latvia	68.3	58.9	45.4	84.0	59.0	95.3	80.1	72.5	87.3	86.9	85	60
Lithuania	73.8	66.7	50.9	86.4	63.9	96.7	73.4	64.5	89.9	86.9	80	70

(continued)

Table 2 (continued)

Countries	PR	JI	GI	TB	GS	FH	BF	LF	MF	TF	IF	FF
Luxembourg	82.7	77.9	79.0	65.1	48.5	99.0	69.2	46.2	87.6	86.9	95	80
Malta	68.1	62.8	49.9	64.7	51.0	90.0	64.0	61.1	78.8	86.9	85	60
Netherlands	87.9	74.1	86.0	52.5	39.1	88.2	80.5	61.5	87.5	86.9	90	80
Norway	86.4	86.0	93.6	56.4	29.2	97.8	90.4	54.6	73.9	87.9	75	60
Poland	61.8	56.6	50.9	75.9	47.8	81.5	67.2	63.9	85.0	86.9	75	70
Portugal	69.2	70.1	56.8	59.8	29.8	46.0	83.2	44.1	85.3	86.9	70	60
Romania	61.0	59.7	40.0	87.3	66.9	91.1	65.2	66.8	82.8	86.9	75	50
Russia	48.7	46.9	38.1	85.8	62.5	87.7	77.0	52.0	60.8	79.4	30	30
Serbia	46.2	48.2	36.5	83.5	40.6	67.0	68.3	69.2	82.9	87.4	70	50
Slovakia	68.2	38.8	38.2	78.9	44.3	84.9	63.9	54.0	81.0	86.9	75	70
Slovenia	76.6	57.7	52.1	58.7	31.2	66.3	79.5	61.3	87.3	86.9	70	50
Spain	73.1	62.0	51.5	62.0	42.8	36.1	66.3	59.0	86.7	86.9	85	70
Sweden	92.6	88.2	92.9	43.9	23.2	96.1	89.3	53.7	83.8	86.9	85	80
Switzerland	84.2	82.1	82.8	70.5	65.4	95.9	75.7	73.9	85.2	90.0	85	90
Turkey	54.7	54.5	42.0	74.7	68.1	93.6	63.3	47.6	72.3	78.6	75	60
Ukraine	41.0	29.5	29.0	80.2	45.0	75.9	62.7	52.8	60.1	81.1	35	30
United Kingdom	92.2	93.8	79.0	65.2	44.4	53.5	91.1	74.4	85.2	86.9	90	80

Source compiled by the author on the basis of data (Index of economic freedom 2018)

declare “We with friends” in place of “I and my friends”. For Ukrainians relatives, companions and community get along with common life’s problems. At workplace and during the meeting Ukrainians a stranger rather underrate their personal accomplishments, contributions or potentials. They speak modestly about themselves and scientists, researchers or doctors are most often supposed to exist on a very modest standard of livelihood. Ukrainians perceive very much threatened by equivocal circumstances. Demonstrations are either not ready, e.g. when discussions are being started or the concentration is on the connection building or exceptionally detailed and well-made preparations. Additionally, detailed planning and briefing are very widespread. Ukrainians favor to have circumstances and environment information. As long as Ukrainians get together with people considered to be strangers they feature very conventionally and indirect. At the same time formality is used as a demonstration of respectfulness. Ukrainians have a propensity to doubtfulness and defeatism. They do not put many prominences on time to spare and manage the satisfaction of their wishes. Ukrainians have the discernment that their movements are restrained by social standards and feel that indulging themselves is somewhat wrong (Hofstede Insights 2018).

And what about the level of economic freedom in Ukraine? Property rights are preserved under state law, and mortgages and liens are put on record. The judiciary is one of the state’s weakest and least trusted public institutions and is connected with serious issues of corruption. Judges protect business and are the power sources of influence on it. The main individual income tax rate is 20%, and the high corporate tax rate is 18%. Other taxes include value-added and property taxes. The general tax burden measures up to 35.5% of total domestic income. Over the past three years, government spending has amounted to 42.8% of total output (GDP), and budget deficits have averaged 2.6% of GDP. Public debt is equivalent to 81.2% of GDP. The momentum for business reform has stalled, and political instability continues to compound regulatory uncertainty in commercial transactions. Ukraine has a well-educated and skilled labor force, but the labor code is outmoded and not enforced consistently. The government has reduced energy subsidies and is ending some special tax breaks for agriculture. Trade is extremely important to Ukraine’s economy; the combined value of exports and imports equals 105% of GDP. The average applied tariff rate is 1.9%. Nontariff barriers impede trade. Government openness to foreign investment is below average. The Russia–Ukraine conflict continues to interfere with trade and investment flows. A large number of nonperforming loans remains a drag on the banking system (Index of economic freedom 2018).

Among 44 countries in the Europe region, Ukraine placed the last position, and its total rating is further down than the regional and world averages.

In order to estimate the tightness of connection between indicators of national cultural dimensions and indicators of economic freedom of 35 European states, it is obligatory to investigate the coefficients of correlation. The numerical values are given in Table 3.

As a result we selected those indicators, which have coefficients of correlation ≥ 0.7 (Table 4).

Table 3 Coefficients of correlation

Indicators	PR	JI	GI	TB	GS	FH	BF	LF	MF	TF	IF	FF
PDI	-0.77	-0.85	-0.79	0.47	0.27	-0.30	-0.62	-0.34	-0.48	-0.39	-0.69	-0.61
IDV	0.71	0.69	0.63	-0.44	-0.30	0.22	0.49	0.33	0.43	0.29	0.63	0.61
MAS	-0.20	-0.25	-0.30	0.16	0.13	-0.22	-0.43	0.06	0.15	0.06	0.06	0.11
UAI	-0.71	-0.58	-0.70	0.24	0.04	-0.37	-0.61	-0.37	-0.31	-0.41	-0.55	-0.63
LTO	-0.09	-0.18	-0.18	0.21	0.19	0.24	-0.25	-0.07	-0.02	-0.05	-0.08	0.07
IND	0.69	0.70	0.74	-0.73	-0.40	0.02	0.55	0.16	0.17	0.17	0.48	0.45

Source author's calculations

Table 4 The tightness of correlation

Indicators	IDV (x_1)	IND (x_1)
PR (y_1)	0.71	0.69
JF (y_2)	0.69	0.70
GI (y_3)	0.63	0.74

Source author's calculations

Table 5 The coefficients of reliability

Indicators	IDV (x_1)	IND (x_1)
PR (y_1)	3.51	3.23
JF (y_2)	3.23	3.36
GI (y_3)	2.56	4.01

Source author's calculations

Table 6 The coefficients of reliability

Indicators	IDV (x_1)	IND (x_2)
PR (y_1)	2.47	2.34
JF (y_2)	2.34	2.40
GI (y_3)	1.99	2.69
Critical values of t-criterion	2.03	2.03

Source author's calculations

As we can see, significant connection was detected between such indicators as: Property Rights, Judicial Effectiveness, Government Integrity, Individualism and Indulgence versus Restraint. For verification of the calculated correlation coefficients we use the coefficient of reliability, the value of which we compare with the quantile of the normal distribution for the significance level α . In our case, this value is 2.43. Calculated values of coefficients of reliability are presented in Table 5.

Analyzing calculated coefficients of reliability, we can say that the connections between these countries are reliable. All coefficients of reliability are higher than the critical value, which indicates the existence of a connection between them, moreover the connection is linear. The sign of coefficient of pair correlation will show a direct or inverse dependence between countries under consideration. In order to determine whether the relationship between countries is significant, we calculate the t-criterion. After calculating the value of the criterion, it is necessary to compare result with the theoretical value. If $t_{emp} > t_{crit}$ the null hypothesis is rejected. The results are in Table 6.

Evaluating the results from Table 6, we can conclude that the tightness of the connection between these indicators is significant: (1) y_1 (Property Rights)— x_1 (Individualism) and x_2 (Indulgence versus Restraint); (2) y_2 (Judicial Effectiveness)— x_1 (Individualism) and x_2 (Indulgence versus Restraint); y_3 (Government Integrity)— x_2 (Indulgence versus Restraint) since the calculated value of the Student's criterion is higher than critical value. For the determination the

Table 7 The coefficients of regression

Indicators	Coefficients	t-statistics
y_1 -crossing	39.5832	8.5230
x_1	0.3533	3.9449
x_2	0.3131	3.6178
y_2 -crossing	26.9992	4.9234
x_1	0.3914	3.7010
x_2	0.3876	3.7931
y_3 -crossing	27.4161	4.9813
x_2	0.7444	6.3453

Source author's calculations

Table 8 Regression's statistics

Indicators	Value
Multiple R (y_1)	0.8032
Multiple R (y_2)	0.8005
Multiple R (y_3)	0.7413

Source author's calculations

quantitative change of the values y_1 , y_2 and y_3 under the influence of the determinants x_1 and x_2 we calculate the coefficients of regression (Table 7).

The calculated economic and mathematical models will have the following form:

$$y_1 = 39.5832 + 0.3533 * x_1 + 0.3131 * x_2 \quad (1)$$

$$y_2 = 26.9992 + 0.3914 * x_1 + 0.3876 * x_2 \quad (2)$$

$$y_3 = 27.4161 + 0.7444 * x_2 \quad (3)$$

Analyzing these models we can do the following conclusions:

- (1) when the indicator x_1 (Individualism) increases on 1% the value of the indicator y_1 (Property Rights) increases on 0.3533 points; when the indicator x_2 (Indulgence versus Restraint) increases on 1% the value of the indicator y_1 (Property Rights) increases on 0.3131 points;
- (2) when the indicator x_1 (Individualism) increases on 1% the value of the indicator y_2 (Judicial Effectiveness) increases on 0.3914 points; when the indicator x_2 (Indulgence versus Restraint) increases on 1% the value of the indicator y_2 (Judicial Effectiveness) increases on 0.3876 points;
- (3) when the indicator x_2 (Indulgence versus Restraint) increases on 1% the value of the indicator y_3 (Government Integrity) increases on 0.7444 points.

The calculated coefficients of multiple correlations are in Table 8.

The coefficients of multiple correlation are more then 0.7. It means that the independent variables have significant impact on the resulting variables.

The next step is checking the received models on adequacy. For this we calculated the F-criteria and compare it with tabular ones. Data for calculation F-criteria are in Tables 9, 10 and 11 (see Appendix). The calculated values of F-criteria are more then table ones, so the models (1), (2) and (3) are adequacy.

5 Conclusion

Proposed hypothesis got economic and mathematical proof. The elements of mentality dimensions have influence on the level of economic freedom. In particular, the indicators—Individualism and Indulgence versus Restraint—have positive correlation with the index of economic freedom, in particular, with the indicators—Property Rights, Judicial Effectiveness and Government Integrity.

Economic culture forms strong restrictions on social design, carries out a kind of “testing” of new institutes on their compatibility with previously prevailing values and norms, implant only those innovations that are tangent to old cultural traditions (congruent to them). Thus, national economic mentality is fundamental informal institution, which may be very different from the “typical western” mentality and from the “typical eastern” one. This allows us to question the success of institutional import in general—from the West and from the East and confirms the importance of economic mentality and the necessity of its consideration as a part of the institutional field of the economic freedom. The rapid and qualitative development of the economic freedom can only be achieved through national mentality, but in long-term perspective the predominance of informal institutions over formal ones can lead to increased abuses and opportunistic behavior. Informal agreements are formed in general terms and are not secured by reliable sanctions.

This research opens the door for the following studies in the case of economic freedom toward examining formal and informal institutions in European countries. In further study we'll try to prove the hypothesis that countries, which demonstrate close connection by indicators of mentality (after Hofstede) and the indicators of the economic freedom, are possibly dependent. In search of an answer to the question “Which countries to follow?” it is important to study deeper the experience of those countries, the formation of their models of capitalist modernization in conditions of complex political composition of the population.

Appendix

See Tables 9, 10 and 11.

Table 9 Data for checking model (1) on adequacy

y_i	\bar{y}	$(y_i - \bar{y})^2$	y_{theory}	$(y_i - y_{theory})^2$
54.10	72.36	333.43	51.35	7.59
83.50		124.10	78.74	22.66
81.20		78.15	83.93	7.44
63.60		76.74	55.19	70.70
65.90		41.73	61.57	18.71
73.00		0.41	69.15	14.79
84.80		154.75	87.64	8.09
80.40		64.64	65.79	213.43
89.00		276.89	79.69	86.72
84.00		135.49	79.70	18.52
81.00		74.65	75.78	27.27
52.30		402.40	67.60	234.20
57.60		217.86	77.55	398.13
86.70		205.64	81.76	24.41
87.70		235.32	84.67	9.21
71.20		1.35	75.83	21.41
68.30		16.48	68.38	0.01
73.80		2.07	65.79	64.15
82.70		106.92	78.31	19.23
68.10		18.15	81.09	168.81
87.90		241.49	89.14	1.53
86.40		197.12	81.18	27.23
61.80		111.51	69.86	64.98
69.20		9.99	59.45	94.97
61.00		129.05	56.44	20.76
48.70		559.80	59.62	119.33
46.20		684.35	57.18	120.62
68.20		17.31	66.72	2.19
76.60		17.98	64.15	154.98
73.10		0.55	71.38	2.97
92.60		409.66	89.09	12.33
84.20		140.19	84.27	0.01
54.70		311.88	68.00	176.82
41.00		983.45	54.05	170.34
92.20		393.63	92.63	0.19
Total		6775.08		2404.68
F-criteria				2.82

Source author's calculations

Table 10 Data for checking model (2) on adequacy

y_i	\bar{y}	$(y_i - \bar{y})^2$	y_{theory}	$(y_i - y_{theory})^2$
25.40	65.05	1572.12	40.64	232.29
80.90		251.22	72.95	63.28
69.50		19.80	78.45	80.06
42.50		508.50	44.94	5.97
56.50		73.10	52.71	14.39
57.90		51.12	60.94	9.25
83.60		344.10	83.09	0.26
83.90		355.32	56.68	740.67
82.70		311.52	73.75	80.09
72.70		58.52	73.39	0.48
78.00		167.70	68.73	85.99
59.00		36.60	60.08	1.16
57.10		63.20	70.33	174.95
72.60		57.00	76.45	14.84
79.00		194.60	79.59	0.35
60.90		17.22	68.37	55.85
58.90		37.82	59.44	0.29
66.70		2.72	56.68	100.30
77.90		165.12	72.19	32.62
62.80		5.06	75.67	165.72
74.10		81.90	84.67	111.68
86.00		438.90	75.32	113.98
56.60		71.40	61.72	26.25
70.10		25.50	50.36	389.75
59.70		28.62	46.49	174.42
46.90		329.42	50.02	9.71
48.20		283.92	47.64	0.32
38.80		689.06	58.20	376.55
57.70		54.02	56.17	2.34
62.00		9.30	64.02	4.06
88.20		535.92	85.02	10.10
82.10		290.70	79.20	8.43
54.50		111.30	60.47	35.68
29.50		1263.80	43.76	203.38
93.80		826.56	88.58	27.27
Total		9332.77		3352.73
F-criteria				2.78

Source author's calculations

Table 11 Data for checking model (3) on adequacy

y_i	\bar{y}	$(y_i - \bar{y})^2$	y_{theory}	$(y_i - y_{theory})^2$
39.90	59.13	369.79	38.58	1.74
73.50		206.50	74.31	0.66
70.90		138.53	69.85	1.11
38.20		438.06	39.33	1.27
40.50		347.08	51.98	131.82
51.10		64.48	49.00	4.39
84.10		623.50	79.52	20.94
75.70		274.56	39.33	1323.03
89.80		940.65	69.85	398.13
65.10		35.64	63.15	3.81
75.30		261.47	57.19	327.90
37.90		450.71	64.64	714.82
36.40		516.65	50.49	198.60
77.30		330.15	77.29	0.00
79.00		394.82	75.80	10.23
40.10		362.14	49.75	93.09
45.40		188.51	37.09	69.00
50.90		67.73	39.33	133.95
79.00		394.82	69.10	97.96
49.90		85.19	76.55	710.04
86.00		722.00	78.04	63.44
93.60		1188.18	68.36	637.15
50.90		67.73	49.00	3.60
56.80		5.43	51.98	23.22
40.00		365.96	42.30	5.31
38.10		442.26	42.30	17.67
36.50		512.12	48.26	138.28
38.20		438.06	48.26	101.19
52.10		49.42	63.15	122.04
51.50		58.22	60.17	75.16
92.90		1140.41	85.48	55.07
82.80		560.27	76.55	39.11
42.00		293.44	63.89	479.25
29.00		907.82	40.82	139.60
79.00		394.82	78.78	0.05
Total		13637.13		6142.61
F-criteria				2.52

Source author's calculations

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The Role of Museums in the Development of Cultural Tourism. Case Study: Bucharest Municipality



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Abstract The study aims at highlighting the importance of the museums of the Bucharest Municipality in the development of cultural tourism. The capital city has 35 museums, representing 5% of total number of museums nationwide. Methodologically, official statistical and perceptual data were analyzed relating to the number of visitors in the museums and to the cultural consumption of the resident population. The authors collected the data using multiple sources: official statistics (from the National Institute of Statistics and research institutions: National Institute for the Research and Cultural Training). A comparative study analysis with other cultural cities at the national level (Sibiu, Timisoara, Cluj-Napoca) was elaborated. Bucharest has recorded a significant increase in the number of visitors in museums over the past ten years. The use of perceptual data has highlighted details on visiting frequencies (the resident population opts to visit the museums once every few months) and on tourists' motivation (education, relaxation, culture).

Keywords Cultural destination · Tourist motivation · Cultural consumption

1 Introduction

Cultural tourism is a complex concept whose definition has been strongly debated in order to highlight its characteristics in relation to the meanings of culture and tourism (OECD report 2009; Teodorescu 2009; Csapó 2012; Šebová et al. 2014; Mousavi et al.

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2016). Ashton (1995) quoted by Mousavi et al. (2016, pp. 71–72) differentiates three definitions of culture related to tourism: „Art Tourism“, which „is the simplest form of culture to be commodified for tourism, generally associated with art and artistic products and performance; i.e., theatre, ballet, concert, festivals, museums and opera performances“; „Heritage Tourism“, most manifested in a mix of preserved buildings, conserved cityscapes and morphological patterns, as well as places associated with historical events and personalities; „Place-specific Tourism“, defined as the common set of values, attitudes and thus behavior of a social group. Thus, (Mousavi et al. 2016, p. 73) synthetically consider that „cultural tourism involves the consumption of a wide range of cultural manifestations like heritage, art, folklore etc. by tourists. Cultural tourism can be generally seen as a sociocultural relationship between people which is promoted, moderated and mediated by a range of various actors including, planners, politicians, researchers, marketing professionals, travel agencies and so on.“

According to the World Tourism Organisation (WTO), cultural tourism covers the “movements of persons for essentially cultural motivations such as study tours, performing arts and cultural tours, travel to festivals and other cultural events, visits to sites and monuments” (p. 123), considered to be a narrow definition by the organisation that formulated it.

Another definition of cultural tourism in the view of International Council on Monuments and Sites (ICOMOS), reflects that is “that activity which enables people to experience the different ways of life of other people, thereby gaining at first hand an understanding of their customs, traditions, the physical environment, the intellectual ideas and those places of architectural, historic, archaeological or other cultural significance which remain from earlier times. Cultural tourism differs from recreational tourism in that it seeks to gain an understanding or appreciation of the nature of the place being visited”.

The multiple ways of defining cultural tourism drawn attention to its complexity, on the one hand, highlighting its various assets of tourist attractiveness, as well as the relation to the spatial context and, on the other hand, its complexity reflects the role of the local population in the way of preserving and capitalizing on the specific cultural elements.

Moreover, cultural tourism is considered as a support for national identity, and justifies and stimulates the maintenance and protection actions of cultural heritage (Teodorescu 2009; Lord and Lord 2002; Cuccia and Cellini 2007; Domšić 2013).

The diversity of material cultural heritage features (archeological sites, historic buildings, historic urban centers, museums etc.) and immaterial ones (traditions, folklore, arts, etc.) explains the tourist attractiveness, which has led to their grouping from the thematic perspective and the differentiation of several types of cultural tourism. Thus, in specialty literature the following types of cultural tourism were identified: heritage tourism; cultural thematic routes; cultural city tourism, cultural tours; traditions, ethnic tourism; event and festival tourism; religious tourism, pilgrimage tours; creative tourism (Csapó 2012). While traditional cultural tourism is based on viewing, seeing and contemplating (e.g. visiting museums, art galleries, concerts, ballet performances etc.) (Teodorescu and Szemkovics 2017; Hargrove

2002), creative tourism is a new form of cultural tourism involved experiencing, participating and learning (Teodorescu and Szemkovics 2017).

One may notice that cultural tourism activities may include many different types of experience based on authentic resources (Macleod 2006; Kolar and Zabkar 2010; Doganer and Dupont 2013; Wickens 2016; Dragicevic et al. 2013).

A particular category of cultural resources is represented by museums that, through their unique architectural styles and exhibits (Herreman 1998) they are growing importance as cultural attractions (Teodorescu 2009; Benediktsson 2004; Tien 2008; Gheorghilas et al. 2017). Museums are considered to be 'traditional' cultural tourism resources (Cuccia and Cellini 2007). Also, museums are important cultural touristic attractions because the collections they hold belong to the attribute of authenticity characteristic to cultural tourism; on the other hand, the authenticity and the typological diversity of museums stimulate the desire to visit (both of the local population and tourists), especially in the case of museums that have unique or special collections.

To attract the cultural tourists, museums need to understand their travel motivations and respond to the needs of highly and partly motivated tourists from the cultural point of view (Cuccia and Cellini 2007), especially as they compete with cinematography, theatres, commercial centers or other cultural organizations in their attempt to attract a significant number of people (Cultural Consumption Barometer 2015), plus an increase in the competition for the free time of the population (Merciu et al. 2012; Gheorghilas et al. 2017). In the context of a diversified cultural offer, the tourist has to make difficult choices, especially given the limited resources, both in terms of time and financial resources.

Also, the challenge of attracting tourists is related to the existence of an increasingly sophisticated public (Cultural Consumption Barometer 2015). From this perspective, it can be appreciated that the museums have made significant changes regarding the ways to attract tourists through multiple actions that aimed their transformation from static spaces into dynamic cultural spaces, diversifying their functions: to the traditional ones (educational, cultural, preservation and restoration) have been added in recent years social, recreational functions.

The most challenging objective is to stimulate revisiting the museum (e.g. organization of temporary exhibitions and cultural events in museums, cultural clusters: network of museums) (Tien 2008; Cultural Consumption Barometer 2015; Popescu and Profiroiu 2012; Dumbraveanu et al. 2014; Arnold and Geser 2008). Also, the use of modern promotion methods (technological developments: new user-friendly solutions: guidance systems, portable devices, smartphone-aided location-aware Information System, media façades) facilitates the connection of museums to a larger number of visitors (Zbucnea and Ivan 2008; Bergemann et al. 2013; Mojtaba et al. 2013; Dumitrescu and Fuciu 2015; Lazaridou et al. 2017).

Museums' public has a strong relation to tourism, since the tourists are part of the public and for the some museums even a large part of the total number of visitors (Tien 2008; Zbucnea and Ivan 2008). It is important to analyze the typology of tourists visiting museums to highlight their relationship with the museum (Tien 2008; Cultural Consumption Barometer 2015; Zuned 2018), but also to reflect the degree

of attractiveness of the museums (Popescu and Profiroiu 2012). It is imperative to know which the buying behavior of consumers is in general and in particular for travel services (Towards an integrated approach to cultural heritage for Europe Report 2014).

The most important elements that influence visiting a museum or participating in its public programs are motivations, conceptions of life, culture, leisure and accessibility. The main motivations that determine the interest in a museum and its public programs are: education, spiritual enrichment, cultural development, pleasant leisure time, curiosity, social prestige, carrying out of socio-cultural activities (Zbucea and Ivan 2008).

According to a study conducted by European Commission quoted by Mousavi et al. (2016), regarding habits of cultural consumption for Europeans in 2002, people tend to visit galleries and museums abroad as frequently as they do at their homes.

The analysis of the relationship between museums and cultural tourism, by comparing the basic elements of the two components, results in a series of differences and common elements. The element of differentiation consists in the non-profit character of the museums and the profit character of cultural tourism. The common elements are the provision and promotion of experience, education, recreation and the development of intercultural understanding, plus the public dimension (Tien 2008).

The purpose of this study is to highlight the importance of Bucharest museums for the development of the cultural tourism by referring to the number of visitors formed by tourists, on one hand, and by the cultural consumption of the city's population, on the other hand. It was also considered important to analyze visitors' motivations to highlight the elements of attractiveness of the museums. The choice of Bucharest as a case study is not accidental because it has the largest number of museums at national level (35) and, at the same time, it concentrates most museums of national importance. At the same time, Bucharest is one of the cities that entered the competition for the title of the European Capital of Culture in 2021, along with 14 other cities nationwide.

2 Methodology

In terms of the availability of the statistical data, efforts to improve the volume, range and quality of data have been made lately at the European level. Although there are European institutions and organisations whose main activity is collecting data on cultural heritage, there is a lack of reliable data (Melstrom Melstrom 2015; Urban Audit Methodological Handbook 2004; Urban Europe Statistics on Cities, Towns and Suburbs 2016). For example, Urban Audit provides comparable available data at city level for nearly 300 indicators, but offers only 2 indicators for cultural heritage: the number of museums and the number of museum visitors per year. Another available indicator is related to cultural participation: average cinema attendance relative to the size of the resident population (Urban Europe Statistics on Cities, Towns and Suburbs 2016, p. 151). Also, data on the cultural participation of the resident population are

collected in the member countries of the European Union in the form of Cultural Barometers.

Data are either not available, either collected with largely diverging methodologies between countries and sometimes even between regions within the same country. This inconsistency in data availability and methodology between European countries is especially problematic with regard to listing criteria (Espon Project 1.3.3 2006).

Taking into account these limitations of the availability of statistical data, the authors reported on a narrow research niche to highlight the contribution of the museums to the development of cultural tourism in Bucharest by reference to a number of available data on the number of visitors to museums and to a detailed analysis of the cultural consumption of the local population. At the same time, the degree of participation of the population in different cultural activities helps to measure the social impact of the cultural heritage.

A first step was to collect data using multiple sources: official statistics (from the national sources: National Institute of Statistics) and perceptual data collected by research institutions. For example, National Institute for Research and Cultural Training has developed the Barometer Cultural Access and Participation survey for cultural participation assessment.

The second step will involve processing the raw data in order to highlight the contribution of the museums from Bucharest city to the development of cultural heritage.

3 Results

Bucharest is the most important economic, cultural and historical city center at the national level. Bucharest is also the most important academic center, hosting 117 high schools and 33 universities (of which 17 public educational units and 16 private educational units), 344 libraries in the year 2016 (National Institute of Statistics, Tempo online database).

Bucharest is known as the Little Paris, name acquired during the interwar period (Bogan et al. 2017), due to its elegant architecture and urban atmosphere (Bogan et al. 2017; Ionescu et al. 2013).

The cultural importance of the capital city results from the diversity of cultural heritage (museums, old buildings, historical sites, churches, etc.) and immaterial (cultural events: festivals, variety of art shows: dance, theater, music). It is also notable the growing number of open air festivals, concerts and events, and a rapidly developing contemporary art scene; some cultural activities also take place in unconventional spaces (Merciu et al. 2013; Baciu et al. 2015).

In Bucharest there are 40 show and concerts institutions and companies. At the same time, besides the municipal and national cultural institutions, independent art organizations also operate; the independent sector of art organization has registered a rapid growth over the past 15 years as a result of the annual incorporation of a high

number of young graduates from all over the country, making it the most active and innovative part of the local cultural scene (Baciu et al. 2015).

Thus, Bucharest holds an important traditional cultural infrastructure with a capacity of more than 22,000 people/day in the public spaces of performances and events and about 50,000 visitors/day in museums (Cultural Strategy of the City of Bucharest 2016–2026 2016).

It can be mentioned a series of short-term projects already planned for the restoration and modernization of the National Museum of History and the Romanian Peasant Museum and, at the municipal level, the creation of new equipment and institutions in the Old Center, in patrimony spaces—Pinacoteca of Bucharest Municipality in the Dacia-Romania Palace, Museum of Multiculturalism (French Street) (Cultural Strategy of the City of Bucharest 2016–2026 2016).

The cultural infrastructure is unevenly distributed over the city with more than 80% of all cultural facilities located in the center of only 8 km², which also serve the metropolitan area of 400 km² (Baciu et al. 2015). Reporting to the metropolitan area is justified by the power of attraction of the capital city through cultural activities, exerted on the population living beyond its administrative boundaries, respectively in its metropolitan area.

In this context it is explained the diversity of the tourism forms proposed to be promoted within Bucharest, such as: cultural tourism (Popescu and Profiroiu 2012; Ionescu et al. 2013; Dumitrescu et al. 2014; Gheorghe 2013), meetings, incentives, conferences, exhibitions (MICE) (Gheorghe 2013), business tourism, city-break tourism, tourism generated by events or well-being tourism (Popescu and Profiroiu 2012; Ionescu et al. 2013; Bogan et al. 2017).

An analysis of the capital cities of Central and Southeast Europe indicates that they are among the urban centers as a result of the political context prior to the 1990s. So, “they displayed a certain dynamics from the very beginning of the transformation period, but was at first limited to a small number of extraordinary attractions like (Prague, Budapest, Cracow, Dubrovnik etc.)” (p. 483) (Jordan 2014). This situation is also explained by accessibility issues, poorly developed tourism infrastructure or lack of promotion during the transition from the communist regime to the capitalist economy (Jordan 2014). Some Central and Southeast European cities have witnessed a significant development of cultural tourism since 2004 due to improved accessibility (introduction of low-cost air travel) and increased tourism promotion (e.g. by declaring some cities “cultural capital of Europe”); to these actions are added the organization of cultural events (festivals, popular and folk culture) (Jordan 2014). Compared to other capital cities in Southeast Europe, Bucharest has a smaller share of the cultural tourism market.

Due to its rich cultural heritage, Bucharest is one of the most visited cities on the national level, followed by other urban centers such as Sibiu (the European Capital of Culture in 2007), Timisoara, Cluj-Napoca, Iasi, Arad, etc.

Referring to the purpose of the present study, as previously mentioned, the capital city has 35 museums and collections, representing 5% of the total number of museums at national level (Fig. 1).

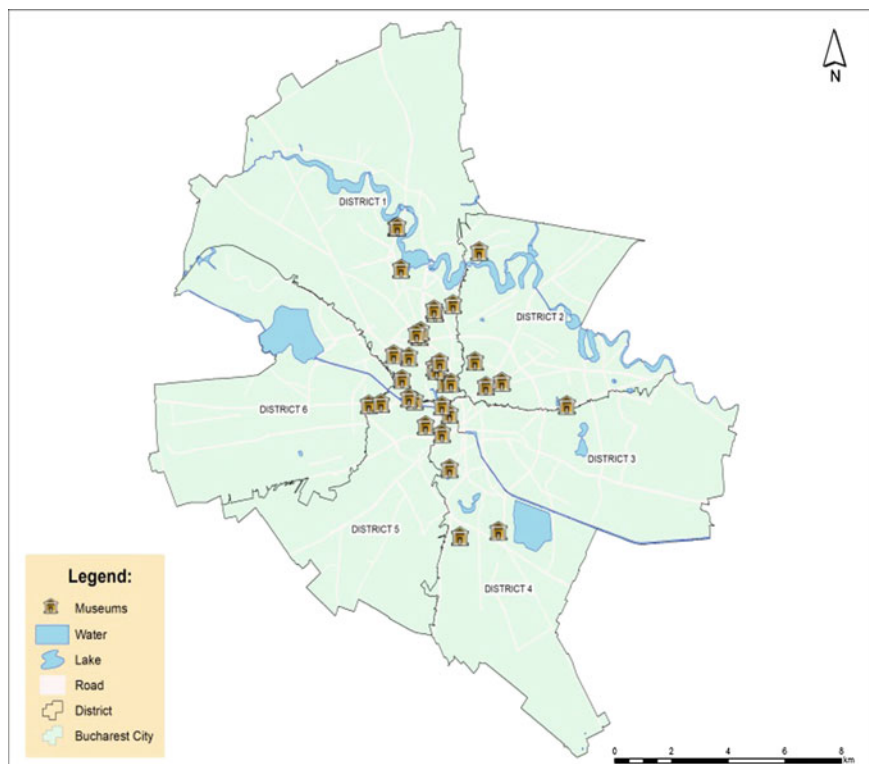


Fig. 1 The spatial distribution of museums in Bucharest. *Source* Map made by the authors in GIS soft based on the processing of statistical data

Bucharest has an extensive museum infrastructure, more diversified than in the rest of the country.

According to statistical data on the number of museums and collections in Bucharest, there is a favorable situation between 2006 and 2008, when there is a slight decrease by 2010, followed by a significant increase in 2011 and a sharp decrease in 2012 and 2014 respectively. If in 2008 there were 53 museums and collections, their number decreased significantly in 2011 to 47 and 37 respectively in 2014 (National Institute of Statistics-NIS, Tempo online database).

The analysis of the statistical data related to the number of visitors to museums over the last ten years reflects the fact that in the capital city, although there is a slight fluctuation, the dynamics is positive. The number of visitors to museums may be partly influenced by the reduction in the number of museums and collections. On the other hand, comparing the official statistics with the perception data, it can be concluded that the decrease in the number of visitors to museums is also determined by the non-consumption of museums/exhibitions (i.e. reducing the participation in the cultural life of the local population) (Cultural Consumption Barometer 2015).

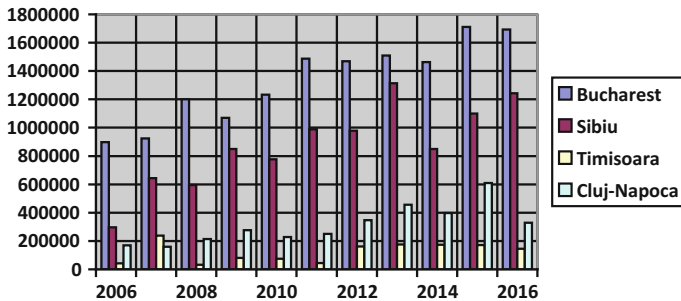


Fig. 2 Number of visitors in museums (2006–2016). *Source* National Institute of Statistics, TEMPO database—time series, domain A. Social statistics, A.9 Culture, subdomain Museums, tempo-online

However, the number of visitors significantly increased in 2008, 2010, 2011, 2013, 2015, with higher values being recorded in the second half of the period, when the number of visitors to the museums has doubled. Thus, if in 2008 897,646 visitors were registered in the museums in Bucharest, in 2015 the number of visits increased to 1,710,497 (Fig. 2).

For an in-depth analysis of the official statistical data, the number of visitors to the Bucharest museums was compared with the number of visits to museums in other cities in Romania, which are known destinations of cultural tourism. Thus, Sibiu was chosen as the former European Capital of Culture (in 2007), as well as the municipalities of Timisoara and Cluj-Napoca that competed with Bucharest to obtain the title of European Cultural Capital in 2021.

Sibiu holds the second place in terms of the number of visitors to museums, with a noticeable increase in the number of tourists in the year when it held the title of the European Cultural Capital, the number of museum visits doubled compared to 2006.

However, as in the case of Bucharest, a fluctuation in the number of visits was observed, but in the second part of the analysis period the number of visitors increased fourfold: in 2013, the highest number of visits was recorded (1,313,196) compared to 2006 (297,360 visits). The high value of the visits to the museums in Sibiu is due to the fact that the city held the title of European Cultural Capital, a title that attracts visitors who are highly motivated by the culture. Another factor contributing to the explanation of the large number of visits to the museums in Sibiu is the valuable collections in the museums, some of which are of national importance (e.g. the Brukenthal National Museum).

The cities of Timisoara and Cluj-Napoca have recorded in the last ten years much lower value of visits to museums compared to Bucharest. Although no official statistics are available yet for the year 2017, it is estimated that the city of Timisoara has started to experience a special increase in the number of tourists due to the fact that it will hold the title of the European Cultural Capital in 2021.

The analysis of the number of visitors to museums also involved the use of statistical data of perception concentrated in the Cultural Consumption Barometer (2015) to highlight a series of details on visiting frequencies and tourists' motivations related to Bucharest museums. Analysis of the statistical data of perception reflects the fact that the non-consumers of museums/exhibitions are fewer than in the case of non-consumers of cinema, opera or theater. Even though the number of non-consumers has decreased, their segment is inferior (56.7%) to the other types of cultural consumption mentioned. Compared to cinema, opera or theater, the visits to museums and exhibitions are better represented in the frequency categories "once every 2–3 months" (5.2%) and "once every 4–6 months" (10, 6%) (Cultural Consumption Barometer 2015, p. 59). It can also be appreciated that the general population that opts for activities once every few months indicates only 15.8% of museums, occupying the 6th place in the top of their favorite activities. The first favorite activities of the respondents are: legal holidays (27.2%), excursions (21.5%), music/film/theater festivals (19.5%), entertainment/music performances (18%), malls attendance (17.8%).

According to the results of the statistical data of perception, the most visited museums in Bucharest in 2014 were: the National Museum of Natural History *Grigore Antipa*, followed by the National Museum of the Romanian Peasant, the National History Museum of Romania, the National Art Museum, the *Dimitrie Gusti* Village National Museum and the National Military Museum *King Ferdinand the 1st*.

Compared to previous years, there are no significant variations in the hierarchy of the most visited museums, but there is an increase in the percentage of people who selected the National Natural History Museum *Grigore Antipa* (Cultural Consumption Barometer 2015, p. 154). This situation is explained both due to the specificity of the National Museum of Natural History, the organization of temporary exhibitions, and due to an intensive promotion process.

The attraction of a significant number of visitors by the 5 museums in Bucharest is due to the ways they are used to reach the public in a diversified way, offering a wide range of cultural or leisure services: non-formal educational programs for children, organizing seasonal fairs, shopping areas (cafes, restaurants, tea shops, libraries), virtual tours, etc.

Related to the profile of visitors to museums in Bucharest, it can be appreciated that they occasionally practice this type of cultural consumption and is an activity that few respondents repeat during one year. Also, the majority of respondents are graduates of higher education, which is particularly important because the level of education indicates the preference for a particular type of museum or the existence of a certain type of visiting behavior. The share of elderly people who visited museums in Bucharest is very low. It is worth mentioning the higher share of young people who visited the Bucharest museums, which is correlated with the educational dimension of the museums (Cultural Consumption Barometer 2015, p. 149).

Regarding the respondents' system of values and their attitude towards heritage, the perception survey showed that most museum visitors indicated that education, leisure time, relaxation and culture were important (Cultural Consumption Barometer 2015).

Although the city of Bucharest records a significant number of visits to museums compared to other cities known as cultural destinations at national level, there are, on the one hand, persons who rarely visit museums. On the other hand, a relatively large proportion of people do not consume this type of cultural tourism product. The explanations are varied, these being related to the lack of a marketing strategy for most museums in Bucharest, which should have been dedicated to attracting more visitors through active promotion actions. But many museums have a limited budget, with very few of them resorting to non-budget sources to attract funds aiming at promoting the image of museums.

On the other hand, several studies mention the disadvantage related to the short program of museums or overlapping part of the work schedule, so that active people can not visit museums during the week (Dumbraveanu et al. 2014).

At the same time, almost all cultural institutions face the problem of lack of parking places, both for cars and for bicycles, which affects their attendance (Cultural Strategy of the City of Bucharest 2016–2026 2016).

Also, the fact that the museums in Bucharest are not among the visitors' first options can be a cause of problems faced by the local public administration representatives who manage the cultural system of the capital city. This aspect is also reflected by the fact that although Bucharest was included in the pre-final selection for the title of European Cultural Capital in 2021, along with three other cities (Timisoara, Cluj Napoca and Baia Mare), the title was won by Timisoara. Among the reasons why Bucharest lost its title of European Cultural Capital, one can be mentioned: the realization of the cultural strategy after the final selection. The panel members noted the gap between the cultural policy makers and the city administration situation, which can lead to implementation problems (European Capital of Culture 2021 in Romania—Final Selection Report 2016). In connection with the artistic programs proposed to be run in 2021, the panel members, who have analyzed the proposals of the candidate cities, appreciated their number (12 programs with 50 core projects and up to 200 associated projects), but considered the location of most projects (public spaces, especially in the neighborhoods) as ambitious, but that it would be a difficult task to manage the implementation of projects (European Capital of Culture 2021 in Romania—Final Selection Report 2016).

Regarding this aspect, directly related to the theme of the study, the appreciation of the artistic/cultural programs (by their number and the estimation of the social and cultural impact that it generates) is one of the criteria underlying the title of the European Cultural Capital. Although Bucharest did not win this title, the measures that were preconfigured to be implemented and which, if carried out, will increase the tourist attractiveness and, implicitly, the development of cultural tourism, are important. At the same time, the participation in this competition draws attention to the weaknesses of the cultural tourism offer of the capital city and on the urgent implementation of some active measures that contribute to the shaping of an attractive tourist offer oriented towards valorisation of the various cultural resources through projects dedicated to each category of resources; implicitly the implementation of these measures/projects will determine the increase of the cultural consumption of both the local population and the cultural tourists.

Regarding the possible solutions for the revitalization of the consumption of cultural products, in the project on the argumentation of the candidature for obtaining the title of the European Cultural Capital in 2021 of Bucharest, there is mentioned the active involvement of the museums alongside theaters and theater arts institutions as a measure of increasing the role of these cultural institutions in stimulating the cultural life of the inhabitants, especially those living in neighborhoods where the density of cultural units is low or even non-existent (Baciu et al. 2015). This measure will also lead to the development of cultural tourism as a result of the increasing number of cultural activities organized within museums and other cultural institutions to which tourists can participate.

4 Conclusions

Cultural tourism is one of the fastest growing segments of the tourism sector. The diversity of cultural heritage in the contemporary world is based on the cultural richness of multi-faceted societies. Conservation and valorisation of cultural heritage aim at creating attractive cities not only for the tourists but also for the local community. Museums are valuable cultural resources and can contribute to cultural tourism as attractions, because are themselves heritage assets. Therefore their input to the development in the field of cultural tourism is certainly valid. Also, museums and sites contribute to the wider employment effect of cultural heritage.

The large number of museums in Bucharest and their typological diversity motivated the authors to make this study as a solid argument in justifying their importance in developing the cultural tourism of the capital city.

Interpretation of available statistical data highlighted the upward trend in the number of visitors to museums, a large proportion of them being represented by the young and educated population. At the same time, the detailed analysis also revealed a series of problems in the management of the cultural system of the capital city by the representatives of the public administration, which led to the loss of the title of the European Cultural Capital in 2021 (e.g. delaying the elaboration of the cultural strategy, very few host venues for cultural events, etc.).

These include other aspects less favorable to the development of cultural tourism, such as: lack of parking spaces for both cars and bicycles, afferent to almost all cultural institutions, which affects their attendance, the lack of spaces for temporary exhibitions in many museums, etc.

It has been proven over the past few years that the cities that have won the title of European Capitals of Culture have made significant progress in terms of cultural tourism development, these positive effects being felt in the long run.

If Bucharest had won the title of European Cultural Capital, it would have enjoyed an attractive tourist image to a greater extent especially among international tourists.

In conclusion, it can be appreciated that both the cultural strategy of Bucharest and the proposal project to obtain the title of the European Cultural Capital, contain measures to stimulate cultural consumption (implicitly the one related to museums)

as well as the number of tourists. At the same time, these measures have the role of capitalizing on the cultural resources of the capital city, so that their implementation through public-private collaboration projects will lead to the development of cultural tourism in Bucharest Municipality.

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Capitalizing on Intellectual Capital Through an Intelligent Management Approach



Angela-Eliza Micu and Ramona Valentina Necula

Abstract Studies in the field reveal that intellectual capital is considered the hidden asset to organizations, giving them added value, even if this wealth is not reflected in the financial statements. Today's companies invest in intellectual capital because studies and analyzes have called it "successful business engine." Our main objective is to emphasize the relevance of investment in intellectual capital for the survival and performance of the organization, in order to determine the extent to which an organization depends on it, more than the physical asset held. The main conclusion has highlighted that a smart managerial approach takes into account the fact that, in order to exploit the potential of the organization, it is very important to attract the right combination of employees (who must have expertise in the specific field of activity) and their access to information networks, constantly adapting to the skills required by technical progress and forward-looking changes.

Keywords Capital · Investment · Personnel management · Knowledge

1 Introduction

Nowadays, an intelligent manager needs to have a smart managerial approach, and this involves a high psychological culture, with the emphasis on the skill of knowing each other, of knowing and analyzing everyone with whom they interact, as well as of the ability to communicate and conduct their behavior in order to obtain and maintain a favorable climate in the organization, in order to provide the best solutions for the fulfillment of the organizational objectives.

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The manager must be able to be sufficiently capable of maintaining the balance of domination-submission in a more balanced manner, eliminating the sources of conflict and identifying the compatibility between subordinates, in order to achieve performance. It must have the ability to influence its collaborators and subordinates so as to obtain maximum efficiency for the organization and maximum satisfaction for the socio-human component.

We must be aware of the fact that there is no perfect manager in all, but there are intelligent managers who judge deeply, knowing to compensate for their shortcomings with the pluses of their personality. As employees depend on the superior, so the manager is dependent on subordinates, and through an intelligent managerial approach, the manager acquires qualities along the way and becomes wise enough to know who to entrust increased responsibilities and who to recommend additional training, specializations and refinements.

The intelligent management approach means both professional responsibility (its professional quality in a certain field of activity), legal responsibility (fulfilling the managerial duties in compliance with the legislation in force), as well as moral and emotional responsibility (it is related to the management of the emotional climate, moral and ethical duties).

In terms of authority, this is granted *ex officio* to the manager, taking into account his/her status in the company/organization, but the intelligent manager has a kind of dynamic authority, his decisions being understood, accepted and fulfilled without the voices of his subordinates, the influence of the manager's personality being beneficial to both employees and the organization in general.

Managing intellectual and implicitly human capital is a real challenge in the context of globalization and turbulent changes in both the public and business areas, especially when it comes to gaining a competitive advantage and further transforming it into a strategic asset. A wise manager knows how to lead his team to develop competitive capabilities and capitalize on the company's intangible resources.

Intellectual capital is considered to be a truly intangible asset, a "hidden treasure", which is designed to help the company develop, improve, gain competitive advantages in this era of today's technology.

In view of the aforementioned aspects, the management of intellectual capital is certainly not a simple process, especially since solving problems in the organization is not possible by applying simple calculation formulas, but by taking very complex decisions and operates with probable events, uncertainties and associated risks, in the context of an intelligent and assumed managerial approach.

2 Current Literature Review

The meaning of the term intellectual capital can be treated both from an economic and managerial perspective. Thus, from an economic point of view, intellectual capital is not reflected in monetary or financial accounting records, and this type of reporting

to state institutions is not mandatory. Instead, voluntary reporting can be achieved from the perspective of organizational management.

By the end of the 1980s, some practitioners were intrigued by the way companies were being traded for more than their book value. Book values, that should represent the primary source of information on the value of a company, describe the company in financial terms, meaning investments, options and obligations, and in terms of its tangible assets (buildings, machinery and stocks). Still, some company transactions clearly outlined that tangible and financial aspects were not describing the whole picture. (Oliveira et al. 2018)

The performance of organizations or successful businesses is not in the importance or value of buildings or machines but in other valuable assets: intangibles, those relating to customer loyalty, intellectual property, innovative potential, technical and specialist knowledge, and personal.

The success of organizations and companies that have been highlighted by a high degree of competitiveness lie in their intellectual capital, human talent management, creativity, innovation and organizational learning.

A successful manager needs to master the intellectual capital. In this respect, it has to study and analyze available bibliographic sources and then link them with expertise in the specific field of activity.

From this perspective, we mention that the literature is concerned in particular with the distinction between human capital and intellectual capital, but with regard to the strict definition of the constitutive elements of intellectual capital, there are several alternatives available. In the present paper, we opted for approaching the notion of intellectual capital, in the opinion of Iurie Badr (whose simplified vision is exemplified in the figure below) and taking into account the questionnaire in the case study (Fig. 1).

Under current competitive conditions, more and more managers are struggling against possible financial crises, trying to find solutions for increasing the value of the company, a context in which the importance of intellectual capital and its components are very relevant or even vital to certain organizations/companies.

However, we consider it important to insist little more on the notion of human capital, which is made up of the educational capital (which refers to the sum of the skills acquired during the lifetime both in the school process and in other forms

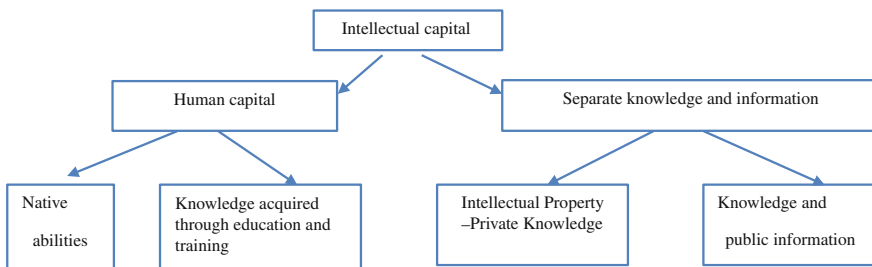


Fig. 1 The composition of intellectual capital after Iurie Badâr (Zamaru)

training and development) and biological capital (which refers to the sum of the physical and intellectual abilities of the people, somehow reflected by the state of health). From this perspective, we could conclude that no one is born manager, but becomes a manager, and formal education, personal skills and health play very important roles in this respect.

Human capital is, economically, the whole of productive resources concentrated in labor resources, skills and knowledge (human skills and abilities can only be generated by investment in education).

Something more technical, but important to mention, is the notion of aggregate human capital at national level (which in fact characterizes the level of development of a country), but also the notion of degradation of the stock of human capital (which is unable to obtain health and education services because of lack of economic resources).

In recent years, managers no longer see education programs for employees and training programs as a cost but as an investment, being aware that the organization needs trained human capital and is capable of managing resources and capabilities properly intellectual, to perform in the specific field of activity and to be truly competitive.

From this perspective, we believe that a smart managerial approach implies the capitalization of intellectual capital by initiating specific projects and knowledge management programs.

In this regard, we emphasize that the main focus of these efforts is the development of new IT applications as support systems for the identification, storage, extraction and distribution in digital form of explicitly documented and explicitly considered organizational knowledge, taking into account the field of activity referred to.

In fact, this is not just a general investment in intellectual capital; it is a significant investment in human capital. This type of investment in human capital, directed to a particular segment of activity and dedicated exclusively to the organizational environment, with implementation in the organizational culture of the company, is in fact a very well-protected investment (cannot be implemented in the same way in other competing companies).

Sustainability of competitive advantage is given by knowledge, which is, in fact, a component of intellectual capital and which is in strict dependence, another component of intellectual capital, namely human capital.

The European Commission, through the Meritum project, finalized in 2001, aims to improve the European Union's decision-making in science and technology, particularly on innovation. In this respect, intangible assets were classified and management and control systems in European companies were analyzed.

On this occasion the notions of human capital and intellectual capital were approached, and the distinction between the two concepts was made. At the same time, this study also shows that investing in continuing education appears as a priority for individuals, especially as this means investment in human capital and intellectual capital, at the same time. Investing in lifelong learning is also an insurance against the risk of unemployment and social exclusion due to poverty. From the point of view of organizational gain, achieved through the training of our employees, we emphasize

the effects on the level of labor productivity, making the employees more innovative, having greater independence in the execution of the work tasks, having a greater responsibility, optimizing their activity.

Hereby the individual's personality, lifestyle, social relations and so on are treated as parts of individuals' human capital, that is, as potential resources, but also potential risks that should be managed and cared for in the sense of a business. It is here, in particular, that human capital theory point in the direction of new forms of management. (Maravelias and Holmqvist 2016)

The management of the company must redefine, abandon old approaches and adapt to current changes, accepting that nowadays information is the central element, considered by some specialists to be "the currency of the new millennium" (Gisberto, Preda, and Rândașu).

An intelligent manager will always make a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of his organization and, with the help of it, will make it much easier to face changes and threats from the external environment. In this way, it will be easier for him to choose personalization strategies for his or her own strengths, compensate for weaknesses, take advantage of opportunities and avoid threats as much as possible.

Adapting to change and blocking the resistance of the organization to change are key issues the manager needs to control. Will Rogers said that "even if you are on the right track, you will be trampled if you stay" (Daffy et al. 2009).

"Overcoming, avoiding or resolving obstacles to change can require extraordinary energy and effort ... Since change is the primary function of leadership, the ability to generate very energetic behavior is just as important as setting direction and alignment" (Kotter et al. 2009). Change means redesigning the management approach, ambitious goals and investments in intangible assets that dominate the current market, such as research, education, IT, and so on.

In the context of these extensive discussions about human and intellectual capital, performance, competitiveness, and so on, we cannot help but recall "coaching". This concept has to be correlated with the others in our paper, especially since it does not involve a learning activity, but an educational activity that allows the development of its own mechanisms to achieve performance. "Coaching approaches psychotherapy, but it also differs from it. First of all, coaching supports and encourages personal and professional development through the changes initiated and generated by the subject in order to achieve certain goals" (Lefter et al. 2008).

In another train of thoughts, we can say that the manager sets goals, the coach increases the level of enthusiasm in the team and inspires people to achieve them. The manager monitors and controls, and the coach identifies weak points and individual strengths and facilitates the transfer of knowledge, facilitates self-knowledge and emotional intelligence, and so on. Or rather, in the context of current research, an intelligent managerial approach must be done taking into account both the perspective of the classical manager and the perspective of modern coaching, but without excluding the concept of mentoring (the mentor is being the one that inspires the individual and makes him accede to very high goals).

Even if organizational challenges are numerous (the explosion of new technologies, intense global competition, changes in revolutionary speeds), we still think that there have never been more opportunities for growth and career development as we are in the current period. Although the work is very serious (or even exhausting), a leader, through a smart managerial approach, can build a very strong company.

In the end, the difference between the very good and the mediocre organizations, the successful careers and the satisfaction of the minimum expectations, through an average career, as well as between the efficient and the poor teams, is given by the managerial approach that actually coordinates the whole activity (Falcone 2016).

Another very important aspect that is closely related to intellectual capital is the ability of the organization to build trustful relationships both inside and outside. Economic hardships, business process restructuring, global market growth, competition have created organizational patterns that expect employees to do a lot of things with few resources. The sudden constraint of resources has become the serious problem that can cause employees to have a low level of confidence in organization. Indeed, many researchers have a recognized trust in the organization as a key element for its success and continuity, as the ability to remain competitive in an increasingly turbulent environment may be dependent on the organization's ability to build trusted relationships. (Tirelli și Goh 2015). From this perspective, we believe that this last characteristic is also closely linked to an intelligent management approach.

3 Collection of Data

In order to undertake a concrete analysis of the subject, we applied a questionnaire to a number 50 respondents (of different ages and genders) belonging to both the public and the business environment. Given the theme of this paper, the questionnaire is addressed exclusively to senior management (managers, directors, executives, heads of departments, coordinating directors, department coordinators, etc.).

In this sense, we devised a number of 10 questions, elaborated in an accessible language but (the form can be analyzed within a maximum of 15 min), all of which have the answers presented in the questionnaire, for ease of completion, being prepared in such a way that the probability of refusal to go through is minimized and the applicants do not give up completing it on the way.

The questionnaires were either sent by e-mail or handed over directly to the persons concerned, with the possibility of completing them at the time of handing-in or at home, each of them being eighth. All respondents preferred to browse and complete the questionnaire in privacy, which is why they returned the next day.

4 Data Analysis and Results

The first two questions in the questionnaire refer to the notion of intellectual capital. Thus, 50% of interviewed respondents mentioned that the notion of intellectual capital is used very rarely in the field in which they work, 34% use intensively the concept in their profession, as opposed to 16%, who say they have never met the notion. Being able to define intellectual capital, it is found that 8% do not know the definition but intend to inform, 10% consider that there is equivalence between human capital and intellectual capital, 30% agree with the statement that it is the resource the basic of any organization, without which the organization does not exist, and the majority –52% declare it is more than human capital, signifies knowledge, intellect and action.

Given the answers to these two questions, we note that although there is a managerial concern over the concept studied in this paper, we cannot ignore that a relatively small proportion of those interviewed have not met the notion in their field of work and that some of them can not define it, but they want to get informed, in the near future (Figs. 2 and 3).

Regarding the statistical significance of the collected data, we consider that in both of the above mentioned questions the plausibility of the hypotheses regarding

Fig. 2 Hearing about the notion of intellectual capital. *Source* Processing of the authors

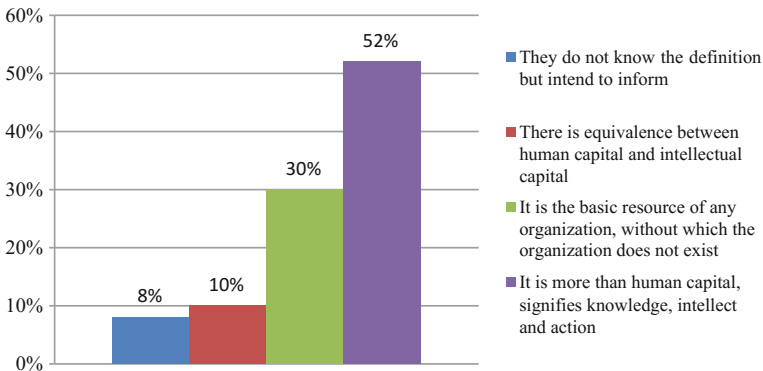
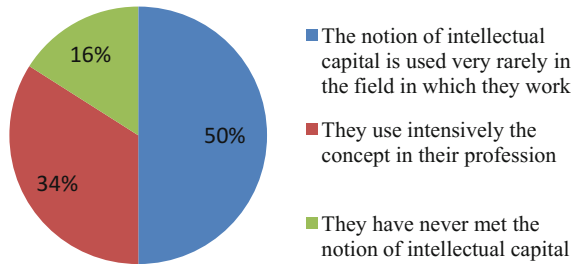


Fig. 3 Defining intellectual capital. *Source* Processing of the authors

the notions of human capital and intellectual capital, are not only known to managers, but are also considered as intensely used notions.

The next question presented to managers is about organizational IQ (organizational intelligence), and about 50% of respondents say it is a priority and 30% specify that information management is the key to improving business/organization results which resulted from the risk and performance analyzes performed). But what is worrying is that 20% of managers say they simply did not worry about it.

Consequently, the statistical significance test on organizational intelligence, starting from the assumption in the professional experience of the authors, related to the importance in the intelligent managerial approach of the phenomenon, highlighted the fact that the organizational IQ is a key factor, confessing the hypothesis.

When asked whether they were concerned with the study of managerial psychology, the managers had a relatively high percentage of 46%, that they were attracted in recent years by general psychological laws applied in management, by the psychological factors involved in the managerial activity, as well as by the psychopathology of the manager's professional behavior. This answer is a gratifying one, with management psychology emphasizing the need for the manager to have a sufficient psychological culture to get to know himself very well, to know the people he interacts with (whether collaborators or subalterns) maintain a favorable climate in the team to which it belongs, in order not to jeopardize the achievement of the objectives. To the same question, 36% responded that managerial psychology is of interest to them and that they would like to be able to analyze managerial styles. The difference of 18% is not interested in this kind of interdisciplinary approaches, which means they are refractory to study the phenomenon.

Confirming the initial assumption of managerial interest for managerial psychology was not a surprise element, matching the expectations of the authors.

The following question to those who agreed to complete the questionnaire was formulated as follows: "In your decision-making process, you think that you are acting through a intelligent managerial approach 42% opted for "I like to think so", 46% said "Sometimes yes, sometimes not" (there are a number of situations where decisions have not been taken were necessarily the happiest) and the remaining 12% preferred not to rule, given the complexity of managerial activity. Given the percentages obtained and the subsequent statistical analysis of the data, the initial assumption of the authors was not confirmed, and the belief that leaders would believe that they are acting through a smart managerial approach is being altered by the answers formulated in the case study.

Then we give to the respondents the statement of a manager (an excerpt from the national press, but reformulated): "I am not your boss because I am better than you, but because I knew to do something sustainable: make you better than me, so that I know that at any time one of you can substitute me, and you will have the autonomy and responsibility of your decisions!", asking them to take a look at it.

The responses were different and they showed the following: 28% considered it to be as democratic, so risky, 14% think it is populist and purely declarative, not having to do with reality, 16% did not agree with the statement, and most of those

who expressed their point of view, 42% say it is an ideal statement, being a smart managerial approach.

The hypothesis from which it went was that quote is an ideal approach, and the answers only confirmed this assumption.

Another question included in the questionnaire was IQ tests (Intelligence Quotient) and psychological tests, so popular outside our country. In this regard, managers were asked if this type of test is useful in the employee selection process. Thus, 52% of respondents said these tests are useful, but they are not always relevant. Another reasonably high percentage—42% responds that, unfortunately, these tests do not apply to their organization and only 6% say they do not know details and prefer not to say. As the authors initially assumed, it is clear that in Romanian organizations, unfortunately, IQ tests are neither sufficiently known nor applied (the result was confirmed by the analysis of processed statistical data).

Starting from the premise that in an existing modern society an organization can not survive without the information and communication technology component, the results obtained as a result of the variants of answers obtained with that hypothesis were compared in order to validate or invalidate it. So, managers have been asked how important it is to the “Artificial Intelligence Technology” component. What is gratifying is that only 6% said they did not meet the concept in the field in which they work. 8% believe that unfortunately, civilization forces us to be aware of this area (so I know the notion, although I do not quite agree with the phenomenon), 16% think that “a smart manager knows this is the key to performance”, 30% know that information processing by using computers is indispensable and, last but not least, 40% are convinced that an organization in the current society cannot survive without the information and communication technology component.

The validity of the assumption increased as the subjects not only agreed with the statement, but also strengthened it by saying that processing information through the use of computers is indispensable and that Artificial Intelligence Technology is the key to organizational performance.

However, 8% of respondents, who have declared that unfortunately civilization forces us to be aware of this field, are not to be condemned. In the use of Artificial Intelligence Technology, we need to adapt to the changes that will occur in the structure of social functions, become aware that we will have to learn trades, acquiring new abilities, becoming better, more conscientious, continuously improving social relationships.

But, the processes, methods and techniques underpinning the use of the AIT continue to develop and diversify exponentially, year by year, determining new characteristics specific to the social environment in which we live. From this perspective, we can assume that the 8% show a change-resistant behavior but also a preventive one, on the other hand, if we are to think about the harmful potential of the phenomenon, the risks of breaking the legislation and use, even for organizing and conducting criminal activities.

Regarding the 6% of the respondents who mention that they have never met the concept in their work, although they have assumed leadership positions, we consider

that they are superficial and ignorant, certainly taking contact with the phenomenon but not making the connection with the scientific name (Fig. 4).

If we integrate into an organizational environment in which behavioral patterns and coherent and moral thinking are induced, whose objectives are intelligent awareness and expression of emotions, empathy and the ability to manage them, then we can assert with certainty that we are evolving from it perspective and that we have the chance to become emotionally harmonized.

When we are incapable of controlling our impulses, when it is difficult to fight with frustration, when we are aggressive, emotionally detached, hypercritical, inexpressive, when we have a disharmonic relationship, we are arrogant, non-empathic, insensitive to the needs of others, proves the low emotional intelligence.

In this context, we can also say that low emotional intelligence can give birth to a series of conflicts in the organization, which is why the next question seeks to clarify this aspect (Fig. 5).

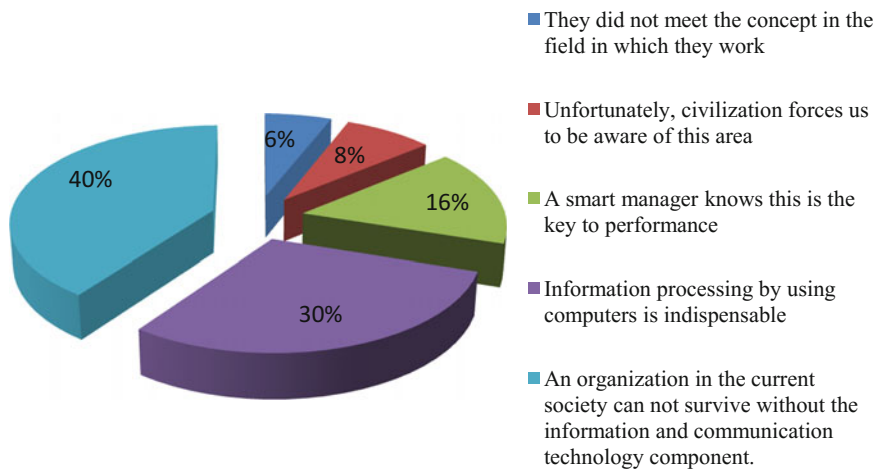


Fig. 4 The importance of the “Artificial Intelligence Technology” component. *Source* Processing of the authors

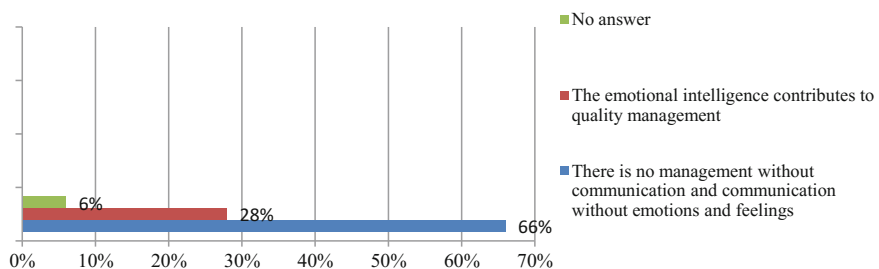


Fig. 5 Opinion regarding the fact that a smart manager focuses on emotional intelligence in the communication process. *Source* Processing of the authors

We have analyzed the hypothesis that organizational conflicts are inherent in the life of the company, the management of conflicts and crises that are born of a particularly complex nature and has been found. The vast majority of respondents (with the exception of 10% of them) confirmed the initial assumption. So, executives were asked if they believe that in an intelligent managerial approach, organizational conflicts might be tolerated.

Thus, 46% think that any conflict must be directed to the benefit of the organization and change of mentality, and 34% report from personal experience and say that these phenomena are inherent in the life of the company and it is not even easy to manage conflicts. In the same context, 10% think that some conflicts are being fuelled even artificially because progress is developing from conflicts, and another 10% contradicts this statement and opts for the categorical extinction of conflicts.

Finally, we mention that the persons who agreed to fill out the elaborated questionnaire occupy the most diverse leadership positions (of which we mention only one part: coordinating director, general manager, executive director, administrator, public manager, head of unit, chief department head, mayor, chief economist, head of department, head of office, chief pharmacist, project manager, etc.), and their age is between 36 and 68 years. At the same time, we consider it important to underline also that managers were both men and women (with the mention that the respondents had two compulsory fields in the questionnaire—the function and the age and one optional field—the identity declaration; the centralization of the questionnaires revealed the following configuration: 16 women who declared their identity, 7 men who declared their identity, and for the remaining 27 persons a gender classification could not be made for objective reasons—they refused to declare their name).

5 Conclusions

As result of our analyzes, we can declare that the new wealth of organizations is intellectual capital. If previously investments focused only on concrete things, the current society advances really attractive amounts on invisible factors (intangible assets), increasing its profit and/or performance.

The new civilization revolutionized both public and business organizations. Today, the emphasis is on a managerial approach, not just smart, but also flexible, not betting on the stability of another time. Intelligent managers include subordinate specialists in multifunctional teams, streamline work on information technology, and support the ongoing staff development component.

An organization that performs and records success can only be led by an intelligent manager who knows how to optimally combine human, financial and technological resources. In other words, the study revealed the unquestionable advantage of a smart managerial approach, regardless of the type of organization (private or only providing services of public interest) and the specific field of activity.

In this context, we emphasize that, in assuring success or recording failure (as the case may be), intellectual capital is a determining factor. From this perspective,

the capitalization of intellectual capital is a real managerial challenge, in the sense that the manager must also take into account himself, the need to improve his/her own leadership style, as well as the feedback from its employees, which must be an instrument of improving managerial style.

Although the present paper has a number of merits and contributes to the enrichment of general knowledge about the concept of intellectual capital and intelligent managerial approach, the present study has a series of limits, but corroborated with the empirical results obtained, offers the possibility of investigating some new directions for future research (which could investigate the type of links between managerial psychology, coaching and emotional intelligence in the context of the modern intelligent managerial approach).

Secondly, this study was conducted in the context of the organizational market only in Romania, on a relatively small number of respondents. In order to generalize the results obtained, the conceptual framework proposed for the study of value should be tested in other countries as well.

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Highlights in Teaching Ethical Management Applied in Achieving Economic Sciences



Liviu Mihăescu

Abstract Talking about ethical strategies for teaching economics subjects is in the same time very easy and very difficult. It's easy because the capacity of these ethical concerns of crossing the strict framework of the disciplines it is absolutely obvious. It is difficult, because the most difficult thing in the world is to talk about something that it is obvious. Moreover, the capacity of being surprises by the Obvious, the ability of questioning where most of the people see only certainty it is the genuine original impulse of philosophizing.

Keywords Ethical management · Teaching economic disciplines
Ethical strategies

1 Introduction

Education, by its nature, it is an organized action which necessarily implies the acceptance and the compliance with the requirements, rules and policies drafted and imposed from outside, in the same time with the acquisition of the control methods of acceptance and reception.

Ethical management in teaching economic disciplines, as one of the management's disciplines, deals with developing the tools that help the development of the educational process' ethics, as well as of those methods that can be used to determine in which direction should it develops.

Ethical management in education involves describing and analyzing the current ethic situation, determining the desired situation and decide the measures to be taken in order to attain it, in perfect accordance with other forms of management. The ethical management it is the result of increasingly visible impregnation of the educational process with the responsibility, but not to be considered just a decoration element, but an "indispensable condition of their existence." (Gavrilescu 2011).

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The concern for the human problems preceded educational ethics through economics subjects and made it possible and not vice versa.

Traditionally, the birth of philosophy and meditate upon the human being, begun during the VII-th century BC with Thales of Miletus and peaked around the V century BC it is related to a holistic approach of knowledge. For the first Greek philosophers, research was mainly the research of nature and of the human being as a part of nature and not primarily a subject investigation. Thales' theory is the theory of all. Plato's dialogues often start from one subject that needs to be debated and understood without an express concern of assigning it to a specific genre. The Pythagorean doctrine aims understanding the deep structure of reality. The geometry combines physics, mythology sustains ethics, and aesthetics meets rhetoric. Cognitive approach is still lacking rigor, speculation is wide, inflamed imagination, abundant preconceptions. But what is truly valuable is the genuine desire to know, the joy in front of what it is to be understood, childlike enthusiasm of the man who wants to understand. With all the shortcomings which any new beginning has, social and humanitarian antiquity places the human being and its issues in the center of its concerns.

Do not forget that the great ancient schools of philosophy, from the Pythagoreans to the Platonic, or from cynical to the Aristotle aimed at *cross-training* (*ro.mean-changing*) of the human being, shaping it deep and permanent, and not only *in-formation* (*ro.mean-in-training*). In the *VII-th Letter* to his disciples of Sicily, Plato speaks of "a light" which opens in the souls of philosophers, after a life spent in striving to know. This "light" was always the only genuine target of the socio-humanist discourse (Castaian 2013).

2 Ethics in Teaching Economic Disciplines

The ethics of teaching the economics subjects was born and grew as the knowledge volume increased and the research standards became more rigorous. It is inconceivable that the knowledge in the modern sense without a clear disciplinary delineation of the knowledge objective and without specific disciplinary methods. *But we must not forget, not even a moment, that teaching ethics is a working structure, a necessary theoretical construction scaffolding and not a purpose in itself* (McCorckle et al. 1997).

To the extent that any scientific subject it is the human being's attempt of learning from the society's interior and the use of the society's means, it is a socio-humanistic discipline (Mihăescu 2016).

There is no knowledge and therefore no knowledge subject unless the one made by individuals. There is no scientific research undetermined one way or another by the type of the society where it arises, its practice, by the interpersonal relationships. Therefore, socio-humanistic disciplines have the privileged character of an approach which aims the possibility of the subject knowledge. Teaching any subject without resorting to their human dimension it is sterile and not recommended.

Research within a scientific subject arise the need of some ethical positioning and value that cannot be formulated in terms of discipline.

As it has been repeatedly drawn attention, there is no research without research ethics. Research without questioning our common human value of what it is found or not to adopt a firm ethical position is dangerous. Just as dangerous it is also the reverse phenomenon that of a total disregard of the ethical values in scientific and creating absurd positions, fragmented from the undisputed facts of science. It is absurd and dangerous at the same time in this century, after centuries of rigorous scientific research in socio-humane disciplines still exists ethical choices and values sometimes assumed aggressive and militant which challenges the scientific facts which are beyond doubt, after testing based on the solid principles of the research's logic (Costache 2013).

The economics subjects are essentially problematized or more of their fundamental problems they cannot be closed within the boundaries of disciplines.

There is no scientific discipline in the situation of not to problematize. The subjects themselves are considered as a set of methods, techniques and strategies to solve fundamental problems means scientific research (Lăcătuș 2009). There are two categories of problems, if we consider as a criterion the ability of solving them using only the means of a discipline. On the one hand, we have problems from within a discipline, problems that can be made exhaustive in terms of discipline and can be solved in similar terms. Other problems, however, especially those with a philosophical nature, cannot be resolved or even properly delineated boundaries socio-humanistic discipline. Thus, the problem of freedom cannot be treated strictly philosophical or psychological. And even if this would be possible in principle, it will be one-sided, truncated and therefore inadvisable.

Let's take an example: the issue of human sociability, sociable nature and origin of its social behavior will undergo a partial and distorted approach if we try to solve it exclusively by means of philosophy, for example (the Aristotelian theory of state vs the social contract theory). The problem cannot be satisfactorily approached unless from a transdisciplinary perspective: given the elements of anthropology, sociology, genetics or ethology.

It should be remarked, however, that the problems that could be placed inside a discipline will not get their true value only to the extent that they open toward the most diverse and fertile approaches.

The need of ethics and transdisciplinary in teaching economics subjects has got two dimensions: economics disciplines lacking of content contribution came from other disciplines become dogmatic and reference meaningless. Universal scientific disciplines lacking of the universal perspective conferred by the human sciences become very specialized, devoid of relevance and student perspective (Mihăescu 2010).

3 Strategies of Positive Castigation

The instruments of the ethical management of teaching the economic disciplines are represented by ethic codes, ethics' committees, ethics training, ethics audit, and methods of ethic decision, ethical methods of teaching but also certain strategies for positive students' castigation (Fig. 1). These tools allow the teacher to select the teaching strategy based on the skills and experience, not on the social background (Nistor Ostipoc 2011).

These tools allow the selection of some efficient educational strategies and in the classroom where the ethics management acts it creates conditions for a climate based on respect. This climate it is determined by four dimensions: individual autonomy, the structure of rewards, the degree of respect and support (Campbell 1990).

Based on this favorable and positive school climate, the teacher applies the ethic management's strategies using positive castigation strategies that facilitate the management of certain educational crisis situation: routines, rules, rewards, natural and logical consequences, sanctions.



Fig. 1 Strategies of positive castigation

3.1 Routines

Routines are the sequences of actions that take place every day, in the same order, which gives to the student the safety and order feeling—Fig. 2—(Răduț/Taciu et al. 2015).

The transition from routine toward the learning activities, from the instruction and educational activities toward the care activities it is done by short activities called transitions.

Adequately approach of the ethical approach by the teacher provides a specific feedback regarding the students' ethical behavior, but demonstrates also the routine of "walk in line" from the first day of school.

3.2 Rules

The rules are the methods of action, conduct lines the teacher desires to be observe in the student's behavior. If the rules are respected it follows desirable consequences, clear and represents a key point in learning appropriate behaviors, desirable (Schug and Western 2005).

In order to establish the rules in teaching economy it is recommended (Lăcătuș 2009):

- identifying, first the needs and only establishing and formulating the rules;
- active and interactive involvement of the students in establishing and formulating the rules;
- clearly highlighting the benefits it brings compliance;
- establishing clear and specific consequences derived from violation of rules;
- providing necessary support in remembering the rules associated with a context in which the student needs them;
- giving time required for learning behaviors associated with complex ethical rules;
- rule capitalization as a tool which gives the students the opportunity to choose how to behave.

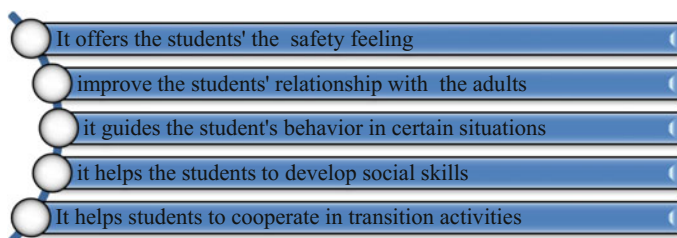


Fig. 2 The routines role in pupils' work

Among the conditions that facilitate learning rules by the students in the teaching process of economy include: the verbalization and reminding of rules by the teachers, support by the adult in the effort of updating the rules when needed, recovery easy rules by displaying them in class.

3.3 Rewards

An important role in the ethics management of teaching economic disciplines have the rewards that are correlated with reinforcements (Botiș and Tărau 2004). The latter causes an increase in the frequency, intensity, probability of ethical behavior of students. The accelerating effect can be obtained in two ways (Fig. 3).

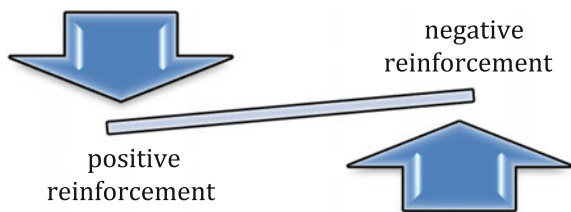
The rewards are a recompense for exercising certain desirable behaviors. Thus, the rewards are valuable to stimulate motivation to learn economic disciplines and to enhance the probability of repeating the desired behavior.

3.4 Consequences

In general, the consequences are the results of facts, effects of some actions taken by one person. One efficient way to make students responsible and accountable it is to create a contexts for them to be able to experience the consequences (logical and natural) of different facts, actions, economic situation. Some consequences arising from student's behavior without any intervention from another person—natural coincidences.

On the other hand, logical consequences are linked to the teacher or of other students' intervention. They refer to the effects which may be planned or controlled by others and arising from their actions. In time, the logical consequences are predictable and immediately followed by undesirable ethical behavior.

Fig. 3 Acceleration elements to ethical behavior of students



3.5 Punishment

In general, the punishment is an external intervention, a penalty which aims to produce a discomfort in order “to pay” for inappropriate behavior a punitive consequence. Thus, it represents how to reduce the possibility of manifesting an unwanted and undesirable behavior; it aims the effect but not its cause. Identifying the causes of inadequate ethical behavior supports their methods of delivery and eliminating on long term the problems that have caused undesirable behaviors (Stan 2004).

Thus teaching economic disciplines it is preferred a reflective dialogue during which to be identified and clarified the feelings and emotions faced by the students and which should have formative effects over them.

4 Conclusions

Learning the attitudes and general values respects a certain processuality and gradualisation required by the students’ age peculiarities. In this sense we can act in two general ways: encouraging the positive attitudes and reducing or preventing the negative ones. Thus, in order to change the students’ behavior the teacher can use a number of methods oriented towards both the desired behaviors, in order to encourage and support, and also toward the negative, to replace them with the appropriate one. Thus, ethical manager has the responsibility of establishing a safe and healthy working environment emphasizing the fact that the students are not mere numbers which are found in the final cost of the educational service, but are unique individuals that add value to every aspect of the educational process.

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The Tour-Operators' Role in the Process of Creating and Promoting Cultural Tourism Products—An Empirical Study



Silvia Muhcina and Andreea-Daniela Moraru

Abstract Nowadays, the tourism industry faces multiple challenges generated by the sudden changes in the marketing environment. The challenges of the international geo-political environment, the terrorist threats, the climate changes, the unprecedented technological development, and the transformations in consumer behavior patterns strongly influence the evolution of tourism activity. The suppliers of tourism services and products must face these challenges, create and distribute tourism products that can meet the needs of today's tourists in an adequate manner. The paper presents the means through which the tourism organizations can closely cooperate with the suppliers of cultural attractions, create, and sell attractive tourism packages. Cultural tourism products can set off tourists' interest and curiosity, and can both educate and satisfy the tourists' needs for personal fulfillment from a cultural and spiritual point of view. Subsequently, the paper includes a quantitative analysis revealing youngsters' opinions on the attractiveness of tourism products based on cultural elements.

Keywords Tourism · Marketing · Distribution · Culture · Products

1 Introduction

Tourism faces multiple challenges generated by the sudden evolution of the environment in which the specialized companies operate, and thus has become increasingly vulnerable. The trends in the political, economic and military strategies of the world countries, the issues generated by the massive migration phenomenon, and the terrorist threat represent major preoccupations for the industry. The pollution has serious and unexpected consequences not only in the long term (climate changes, changes in

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seasons, the extinction of certain species of animals or plants), but also in the short term (sudden and unpredictable weather variations, floods, landslides, hurricanes, etc.). Other elements that impact, more or less directly, the activity of the organizations that operate within the tourism domain include the technological developments that have led to various changes, including changes in the work culture and in performing professional activities, the economic crisis, the increasing aggressiveness of market competition, and the consumers' lifestyle changes. People have become more cautious in terms of allocating money between savings and consumption, trip planning, choosing tourist destinations, and thus raising increasingly serious issues regarding the marketing orientation of the organizations that operate in the tourism area.

One way of increasing the tourists' interest towards a destination can be represented by the inclusion of cultural attractions in the tourist offer, either as a stand-alone cultural product or as a part of a specific tourism product.

During the process of developing the offer of tourism products, tourism organizations must take into consideration the consumers' needs, the types of attractions demanded by tourists and the segments of consumers interested in purchasing those cultural products that can be included in the tourism product structure as elements of attraction (concerts, festivals, shows, museums, etc.).

2 Cultural Products that Can Be Included in the Structure of the Tourism Product

Based on the classical view of the product, some marketing researchers consider that the tourism product comprises a number of elements such as (Balaure et al. 2005):

- Corporal elements: tourism resources specific to the tourism destination (natural, cultural, technological etc.), the general infrastructure of the area and the tourism equipment (accommodation, food, leisure etc.);
- Acorporal elements: services and psychological elements (ambiance, comfort etc.);
- Communications referring to the product: information provided by the suppliers to present the tourism products, through various tools and approaches specific to the communication and promotion domain;
- Product image: the tourists' mental representation of the product; how tourists perceive the product.

In accordance with the above—mentioned view on the product, one can notice various types of tourist attractions within a tourism product, from natural factors such as climate, landforms, fauna, flora, etc., to anthropogenic factors such as museums, shows, monuments, religious edifices, etc.

Based on certain opinions (Kotler et al. 2001), there are several elements that can determine the attractiveness of a destination for the various categories of people, such as: the natural beauty of a place and the urban traits, the historical aspects and

personalities of the region, the commercial areas, the cultural attractions (theaters, museums, libraries, auditoriums, etc.), entertainment means and equipment (coffee shops, clubs, theme parks, casinos, etc.), sports complex and arenas, festive events and occasions, buildings, monuments and sculptures, local people's characteristics, other attractions.

By their novelty and their significant part in the enrichment through spiritual fulfillment for various people, the elements of cultural attraction can represent key factors for choosing a destination, and tourism operators must recognize these needs and satisfy them through the most appropriate tourism products.

Through their offer, the providers of cultural services can meet the public's needs to broaden its cultural horizon, to educate and to increase the level of knowledge from a cultural point of view.

Through tourism, the suppliers of cultural services and products can inform the public that represents the target market of cultural institutions of their specific offers; therefore, it meets the needs of cultural consumers, on one hand, and their own need of conducting business under highly efficient conditions, on the other.

Moreover, several societal trends indicate the increasing importance of culture as a distinct motivation behind the travel decision, such as the travelers' higher levels of education, the ageing of the baby-boom generation, as well as the changes regarding the women role in society, or the greater importance granted to culture (Silberberg 1995).

One should also take into account the financial aspect that has become a critical issue for cultural organizations. Considering the downward tendency of public spending in the cultural sector, cultural organizations have become more dependent on admissions revenue (Richards 1996). Bearing this in mind, it is only natural for cultural organizations to seek new opportunities in order to promote their products more effectively.

By acting accordingly to the principles of marketing, cultural organizations can, on one hand, pursue objectives related to the stimulation of public interest in cultural related aspects (arts, cultural events, cultural creations, etc.), thus taking social marketing approaches. On the other hand, they can pursue objectives related to profit increase, and therefore illustrate service marketing approaches (Florescu et al. 2003).

Cultural products materialize through cultural services. Based on the supplying characteristics and on the nature of the means used, these services can be categorized as (Florescu et al. 2003, Moldoveanu and Ioan-Franc 1997): performing arts domain (theater, movie, music, dance, etc.); plastic arts domain (galleries, exhibitions, collections, etc.); cultural creations offered through specific means of broadcast: film (cinemas, studios, etc.), book (publishers, salons, book fairs, public lectures services, etc.), artistic photography, audio-video media support; the institutional system of the social promotion of culture (libraries, museums, theaters, philharmonics, etc.), and mass communications (post office, radio, television, etc.). According to this point of view, cultural products are considered to be creations resulted from the activities performed by organizations which provide cultural services, through a specific process, that are afterwards delivered to the market, towards certain categories of the target market, in a specific manner.

Through marketing specific approaches, cultural products can be offered to the public either stand-alone or as attraction elements included in more or less complex tourism products.

Alongside the offers of service suppliers in the domain of written culture (such as rare books, collections of old newspapers, inscriptions on parchment, etc.), in the museum domain (art museums, galleries and exhibitions, numismatic collections, historical museums and archaeological sites, museums of natural sciences, planetariums, etc.), audio-visual domain, performing arts (theatrical performances, ballet, etc.), or cinematography (films and film festivals), one can include in a tourism product several other attraction elements of cultural and spiritual nature. These are not offered by suppliers specialized in a certain cultural segment but are open for visits (cathedrals, monasteries, historical vestiges which are not included in the actual offer of museums, traditions, and folklore acts witnessed directly, in the native environment, etc.).

From the point of view of tourism services suppliers, tour-operators, and travel agencies, the tourism product that includes certain cultural products as attractions can be structured based on the elements that raise the tourists' interest, desire and passion and that can satisfy their cultural needs.

3 Tour-Operators' Role in the Process of Distributing and Promoting Cultural Products

The tourism activity has distinctive characteristics, as it implies supplying certain specific services, which once properly assembled, can provide a high degree of capitalization of the tourist attractions. Based on these attractions and services, tourism organizations are responsible for configuring various types of tourism products, for promoting and selling them, in order to satisfy the needs of the consumers of tourism products and services and to conduct their business under optimal conditions.

In accordance with the opinions from the specialized literature, tour-operator and travel agencies play a significant part in the tourism activity, as they represent the link between the service suppliers and final consumers of tourism products. Under this position, the tourism intermediaries provide access to the tourism market for the various categories of tourism services suppliers and also provide tourists with access to products through different categories of distribution channels.

According to the worldwide accepted classifications within the tourism domain (Stănculescu 1998; WTO 1991), the main categories of economic agents representing direct suppliers of tourism services are: suppliers of transportation services, suppliers of hotel accommodation and food services, suppliers of balneary treatments services, suppliers of leisure-entertainment, sports, cultural, entertaining services, suppliers of complementary services for tourists, and tourism agents.

Alongside these direct suppliers, several other categories of economic agents with partial tourism activity can perform activities, such as certain suppliers of cul-

tural, sports and entertainment services that provide services to both tourists and local inhabitants. The agents whose main activity is represented by the promotion and commercialization of tourism arrangements within the country and abroad are the intermediaries between direct suppliers of tourism services and tourists. They can specialize either in organizing tourism arrangements which are commercialized through other tourism agents, either in the reselling of tourism arrangements of tour-operators, either they can perform mixed activities, of both tour-operating and direct selling to tourists their own tourism products or tour-operators' products.

Their role is all the more important as through their suggestion of attractions they can raise tourists' interest in a certain tourist destination.

Moreover, marketing specialists (Kotler et al. 2001) mention that, in urban marketing, during the process of promoting the image of a location, the categories of people that can form the target market include:

- Visitors (traveling with or without business purposes, such as tourists and travelers);
- Inhabitants, residents, and workers;
- Business and industry;
- Export markets.

According to this opinion, there are cities that, through their cultural heritage, attract not only the attention of visitors that want to admire elements of artistic, historical and cultural treasure, but also certain categories of professional parties, such as specialists in art, history and culture (collectors, curators, librarians, etc.), businessmen from the domain (for instance, artwork traders or impresarios, etc.) or other categories of entrepreneurs which, by the nature of their firm's activity, can run businesses in domains related to arts and culture.

Based on the concepts of value chain, value supply network and demand chain, met in the marketing literature (Armstrong and Kotler 2015), it can be stated that in tourism also, the concerns of all the participants in the system of value creation and its distribution to the client must start from the market pulse and target-clients' needs.

Tour-operator travel agencies, direct suppliers of tourism services, suppliers of complementary services, distributing agencies, all the other categories of indirect participants, must strongly cooperate so that the clients can obtain the maximum satisfaction.

By the nature of their activity, the cultural services suppliers can contribute to the promotion of a tourism destination's image, alongside the other categories of participants and collaborators. On one hand, they engage in great efforts to promote their own offer, independently, through different marketing communicational tools and techniques. On the other hand, by collaborating with tour-operator travel agencies, the promotion of cultural products is achieved through mutual efforts, as attractions that mostly and distinctively represent the specific of a tourism destination.

Based on tourists' needs and motivations, the tourism products suppliers must configure those products that best meet the consumers' needs.

Tour-operators, as makers of tourism products, have a key role in the process of interconnecting different offers of basic and additional tourism services, in the value chain and value supply network for tourism consumers.

Regarding the process of developing successful tourism products, which include cultural attractions, one must start from the profile of the consumers' needs, from recognizing and distinguishing among the segments of consumers interested in the aspects of cultural life.

From the marketing point of view, the producers and distributors of tourism products must start from the configuration, distribution, and promotion of those products that include in their structure as attractions the cultural products that different categories of tourists demanded. The role of tourism intermediaries in the distribution and promotion of cultural products as elements of attraction within the tourism product can be observed from two points of view. On one hand, based on the offers suggested by the cultural services suppliers, tour-operator can include in tourism products certain cultural products as attractions of a cultural nature (which means that cultural services suppliers engage in marketing efforts in order to distribute and promote their own offers through this intermediary mean). On the other hand, based on tourists' demands regarding the intention to visit certain attractions, tour-operators can themselves suggest cultural services suppliers that they facilitate tourists' access to certain cultural products, which can be consequently adapted to the demanded tourism product. In other words, the tour-operators, in order to meet the demand and to satisfy the tourists' needs better, must convince and co-interest the cultural services suppliers to allow access to those cultural products.

Based on the types of consumers and the specifics of the demand, tourism operators can cooperate with various categories of suppliers of cultural services and products. In the written culture domain, they can cooperate, for instance, with prestigious publishers or libraries. Thus they can configure tourism products that are offered to a distinctive category of target-public, such as certain professional categories (researchers, bibliophiles, people who study rare texts, which under special conditions, can be photocopied for a thorough study later), certain categories of readers that can visit exhibitions of rare books, or can participate in organized meetings with famous authors. They can cooperate with authorities from the educational domain (for instance, school inspectorates, the management of educational institutions, representatives of parents associations, etc.) which can suggest trips and camps to pupils to put them in touch with representative elements of written culture treasure (thus contributing to achieving the requirements specific to the social marketing approaches). In order to create tourism products based on cultural elements, tourism operators must maintain strong relations and permanent contact with the specialized cultural services providers. They should be aware of the events that would take place, in order to "produce", distribute and promote them in due time, so that the target-public is informed and can purchase the suggested products under optimal conditions. The purchase of such a product can be more advantageous for consumers, because the price of the offer (package) includes basic and/or complementary services, which, if purchased individually, would be more expensive, and also the leisure-entertainment opportunities can make the trip much more enjoyable. In the museums domain,

tour-operators can collaborate with different categories of cultural product suppliers, such as museums, galleries, exhibitions, etc., which display works from areas such as: plastic arts, folklore and ethnography, history, technology, natural sciences, etc. or sites, monuments and buildings of heritage which represent special tourism attractions. In the audio-visual media domain, performing arts and cinematography there can be offered tourism packages that contain cultural products that can, on one hand, represent an attraction of cultural nature, and on the other hand, can meet the needs of leisure-entertainment (participating in certain theatrical performances, ballet or contemporary dance, participating at film festivals, folklore festivals, etc.).

The products can be promoted through the various marketing communication tools and techniques: advertising (through media, prints, and adverts), sales promotion (special offers, price discounts for certain categories of tourists, loyalty cards), marketing events (specialized fairs and exhibitions), direct marketing (websites, social media, text messages), or public relations approaches (press conferences, interviews, philanthropic events).

4 A Case Study on the Views of Youngsters Regarding the Attractiveness of Tourism Products Based on Cultural Elements

4.1 The Research Methodology

A survey was conducted between May, 8th and June, 30th 2017 among youngsters (18–29 years old) in Constanta County, Romania. The research tool employed was a questionnaire. 100 questionnaires were distributed among students from the “*Ovidius*” University of Constanta and 82 filled in questionnaires were returned, thus yielding a 0.18 rate of non-responses. The data were processed using IBM SPSS Statistics 23.

The main objectives of the research included:

- to reveal the frequency of travel, the preferred tourism products, and the main travel motivation;
- to reveal the information sources youngsters use when deciding to purchase tourism products;
- to gain information regarding the cultural attractions youngsters prefer, and the most suitable means of promoting cultural products for young people.

4.2 Data Analysis

The structure of the sample is presented in Table 1.

The research revealed that most of the respondents travel once (40.2%) or respectively, twice a year (36.6%), while 22% stated they travel more than twice a year.

The preferred types of tourism products seem to be the tourist stays (40.2%), city-breaks (29.3), and circuits (25.6%), while only four respondents indicated cruises as their favorite type of tourist product.

The main sources of information the respondents use when choosing a particular product are as follows: tourism agencies websites (28%), colleagues and friends (23.2%), family (18.3%), media (11.0%), blogs (9.8%), tourism agents (8.5%). The most unpopular source of information among youngsters seems to be represented by tourism catalogs; none of the respondents indicated tourism catalogs as the main source of information, and only three respondents indicated tourism catalogs as a second option, while four respondents chose them as a third option.

Regarding the motivation behind the travel decision, most respondents indicated natural landscapes (38.0%), history and culture of the tourism destination (24.4%), followed by the entertainment facilities such as clubs or theme parties (20.7%). Other travel motivations included season sports (8.5%), cultural and religious customs and traditions (3.7%), and gastronomy (3.7%).

When asked if they would consider buying tourism products that include visits to cultural attractions at moderate prices, almost half of the respondents indicated they would be very interested (43.9%) or interested (26.8%). 24.4% would be little

Table 1 The structure of the sample

Socio-demographic variable	Number	%
<i>Environment</i>		
Urban	71	86.6
Rural	11	13.4
<i>Average monthly income per family member</i>		
Less than 1000 Lei	8	9.8
1001–1500 Lei	18	22.0
1501–2000 Lei	16	19.5
2001–2500 Lei	17	20.7
2501–3000 Lei	2	2.4
3001–4000 Lei	5	6.1
Over 4001 Lei	15	18.3
<i>Study program level</i>		
Bachelor	57	69.5
Master's degree	25	30.5

Source Authors' processing

interested or indifferent to such offers, and only four respondents indicated they would not be interested at all.

The cultural attractions they would be most interested in seeing included in tourism products are visits to historic sites (36.6%), music festivals (24.4%) and museums (18.3%). Art museums and galleries were indicated as a first choice by only 11.0% of the respondents, while the least attractive cultural sites would be the religious ones and theaters.

The vast majority of the respondents (76.8%) considered that tourism agencies should offer and promote more intensely cultural products. Regarding communication and promotion, the respondents indicated that the most effective means are the social networks (54.9%). The results are in line with the results obtained in other studies (Muhcina and Moraru 2014). They also suggested that price cuts and special offers would make cultural products more attractive for youngsters (24.4%). Respondents considered TV spots, billboards in places frequented by youngsters, and promotion activities conducted in clubs as being less efficient.

Two research hypotheses were formulated and tested.

H₁. There is a statistically significant difference regarding the intention to purchase products including cultural elements at moderate prices function of the average monthly income level per family member.

The hypothesis was tested using the Chi-Square Test. The results $\chi(28) = 23.21$, $p = 0.722$, thus leading to the acceptance of the null hypothesis.

H₂. There is a significant association between the frequency of travel and the preferred type of tourism product.

The hypothesis was tested using the Chi-Square Test. The results $\chi(12) = 9.785$, $p = 0.635$, thus leading to the acceptance of the null hypothesis.

5 Conclusion

By including them as elements of attraction within the tourism offer of tour-operators and travel agencies, the cultural products can be distributed and promoted more effectively and can be made known to a wider public. The efforts of the cultural services suppliers are not singular but are part of an ensemble of efforts made by each participant in the value chain, at the end of which tourists can obtain the maximum satisfaction. The tour-operators suggest and commercialize differentiated tourism products, which meet certain tourism specific needs, and the tourists, through the perception of those cultural products representing the elements of attraction that form the tourism product, can enrich their knowledge base and broaden their own cultural-spiritual universe.

The research conducted and presented in this paper focused on the youngsters' views on cultural tourism products, on their intention to purchase tourism products including cultural elements, and the means and tools of promotion they consider as most effective. The research results revealed that youngsters are interested in cultural and historical traits of the destination they visit and would be interested in tourism products that include cultural elements at moderate prices. They are most interested

in visiting historic sites and museums and participate in music festivals. Not at all surprising, they find social networks as most suitable and effective communication vehicles and consider that tourism agencies should engage more intensely in promoting cultural products.

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Industrial Policies and Institutional Sustainability. The Case of Inner Areas in Italy



Fabio Musso and Gaetano Fausto Esposito

Abstract The principal aim of this study is to develop a model for analyzing and assessing industrial policies based on the concept of institutional sustainability. Institutional sustainability should inform public policies in order to improve the productive structure of a country or a region, thereby contributing to its economic and social development. For this purpose, a two-step assessment model has been developed and tested on a case study. The case analyzed is that of the inner areas in Italy, for which a development strategy has been planned at the national level. Results show an influence of the institutional system on market functioning and also the influence of a dominant culture in favor of institutional mechanisms, which are still affected by individualism and closure to collaborative market relationships. Based on this analysis, the main measures to be implemented in the case analyzed have been identified, with the objective of stimulating the expansion of business opportunities, improving market functionality and thus reducing delay in the industrial development.

Keywords Industrial policy · Regional development · Planning policies
Entrepreneurship · Institutional sustainability

1 Introduction

One of the effects of the recent cycle of economic stagnation has been the return of attention to industrial policies (Aghion et al. 2011). Compared to the tendency—typical of the neoclassical thought—to interpret these actions as a form of market distortion, the events of recent years in the global economy show that market

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failures are at least as dangerous as government failures. Several authors (Stiglitz et al. 2013; Greenwald and Stiglitz 2013) stated that by a proper use of public policy tools, the negative effects of economic stagnation could be reduced. The debate of the last years has been developed on two sides:

- demonstrate that industrial policies and policies for competitiveness are not in contrast—the latter seen as actions to reduce all possible obstacles to the free expansion of markets (Warwick and Nolan 2014)—to the point that industrial policies can strengthen the impact of policies for competitiveness (Aghion et al. 2011);
- highlight the link between institutional structures and industrial policies, by examining not only the results of interventions, but also the paths followed to achieve results (Rodrik 2004, 2008).

According to this view, industrial policies should be seen as strategies to achieve objectives that go beyond the growth of gross domestic product (Aiginger and Böheim 2015). Among these objectives is the promotion of a sustainable development, which can be the result of an institutional strategy (Hausmann and Rodrik 2006; Hausmann et al. 2008; Rodrik 2004).

The objective of this paper is to develop an analysis model of industrial policies based on the concept of institutional sustainability that should inform institutional policies in order to provide a contribution for improving the productive structure of an area or industry. In this sense, the concept of sustainability has not been sufficiently developed, being generally associated with a complex dimension that combines environmental issues (quality maintenance and reproducibility of natural resources), economic issues (ability to generate income and employment) and social issues (ensuring conditions of human well-being and reduce inequalities). The wide literature on this subject (Pfahl 2005; Coblenz 2002; Brinkerhoff and Goldsmith 1992) mainly concerned the concept of environmental sustainability, as well as that of economic and financial sustainability. Less attention has been paid to the concept of institutional sustainability.

Previous studies did not seize the wideness of links between institutions and development processes, especially in the case of industrial policies. If the aim of a public policy is to enable the transformations of specific industries or geographic areas, it is firstly necessary to check the existing conditions characterizing such industries or areas in order to verify if they allow pursuing the objective. Indeed, setting the institutional action with the objective of balancing various interests and coordinate human actions is not sufficient (Pfhal 2005, p. 84). Several factors come into play, among which is the ability of institutions to address egoistic behaviors towards a common interest. According to this approach, what must be avoided is that once the initial stimulus has stopped, the process stops, or even have opposite effects.

Recent studies (Easterly 2005; Rodrik 2010; Rodrik et al. 2002; Stiglitz et al. 2013) have emphasized that “dropped from above” industrial policies, without enhancing the existing endowment and the behavior of individual actors, and which ignore the history of the single contexts and people, may risk of having

harmful effects. The risk is that of expanding the gap between more advanced areas and less advanced ones, not only in terms of income, but also of business opportunities and social conditions (Esposito and Musso 2016).

For our purposes, we define the institutional sustainability as a self-sustaining circuit in which the institutional frame (historically established) enables the deployment of individual freedoms/abilities to grasp the opportunities offered by the market, modelling itself in a manner consistent with the nature and degree of evolution of these opportunities.

Accordingly, the institutional sustainability of industrial policies can reduce the “inequalities of opportunities” (Rothstein and Ulaner 2005, p. 42) that is the possibility (and expectation) to progress both economically and socially. This perspective emphasizes the close connection between institutional policy and the development of entrepreneurial freedom, with the objective of increasing growth opportunities, on one side, and improving the access to tangible and intangible resources, on the other (Bjørnskov and Foss 2012; Mogollón et al. 2010; Belasen and Hafer 2013; Esposito and Spirito 2013).

Therefore, sustainability can be considered as an ongoing process, rather than as a static situation (Brinkerhoff and Goldsmith 1992; Coblentz 2002). As a social process it involves a variety of dimensions.

This contribution is inserted in the area of studies that criticizes the use of general intervention models regardless of local situations, and stresses the need to define analysis schemes in order to identify priorities for action and promote better functioning of the market in well-defined situations (Rodrik 2015; Rodrik 2010; Hausmann and Wagner 2008; Hausmann et al. 2008). Thus, the pursuit of the institutional sustainability must be assessed with reference to specific conditions, which are influenced by local factors (economic, social, and cultural) that change over time, including the role of the market itself (Esposito and Musso 2016).

There is a continuous interaction between types of institutional frames, on one side, and the capacity/freedom to exploit the potential offered by the market, on the other. It is important, in such a context, that institutional actors avoid the risk to become “extracting” institutions, i.e. transforming the added value created into a parasitic revenue (Acemoglu and Johnson 2005). At the same time, it must be avoided the creation of a dependency condition that requires continuous and indeterminate external intervention.

In the following paragraphs, we will focus on the relationship between institutions, entrepreneurial freedom and market, to outline the concept of institutional sustainability for industrial policies and identify a proper assessment model. The specific case of a policy strategy will be then analyzed and assessed in the light of the model proposed.

2 Institutions and Market. A Literature Review

With the term institutions, we mean the frame (both formal and informal) that draws the rules of the political, economic and social interaction for all societies (North 1991, p. 97; Trento 2012, p. 36; Spangenberg 2002, p. 107).

Institutions can be divided into formal institutions and informal institutions (North 1991). Formal institutions are established by governments and fix the “rules of the game”. The fundamental concepts of liberal capitalism, such as private property and its protection, are based on this structure, which allows market exchanges, investments, technological innovation and entrepreneurship (Acemoglu and Johnson 2005). Informal institutions do not arise as a result of an external system of rules and they are characterized by a high level of flexibility and adaptability, being the result of local knowledge based on experience, which brings to social and moral norms.

Social norms are not oriented to a specific result; they stem from approval or disapproval processes and are the result of social shared values (Elster 1989, p. 100). They can be seen as a reaction of the society to compensate for market failures and enable the achievement of a more efficient condition (Arrow 1970, p. 20). However, they are not usually evaluated in their contribution to produce income or consumption (Hirschman 1983, p. 38). The more institutions—even those more formal—are close to the common awareness, the more their sustainability and their ability to function as stable rules will be enhanced (Esposito and Musso 2016).

Alongside social norms are moral norms, associated with well-defined cultural bases. In the case of moral norms, there is no social sanction in case of violation, but the failure in complying them results in a sense of guilt of the offender (Bruni and Zamagni 2015, p. 42; Altobelli and Esposito 2014, p. 14). They are internal rules that push people to conform to virtuous behaviors, followed not because of fear of other people’s disapproval, but for specific belief.

Institutions play an essential role for development, because they are the cumulative result of a continuous learning process, mediated by the culture of a society (North 1994, p. 360; Jones and Romer 2009, p. 25), through an ongoing process (Hall et al. 2010).

Culture can be defined as a setting of social norms, convictions and beliefs of individuals, which favor social harmony and represent the focus of repeated social interactions (Greif 1994, p. 915).

Others scholars (Guiso et al. 2006, p. 23; Fernández and Fogli 2009, p. 147) define culture as concerns, beliefs, preferences, values that ethnic, religious and social groups transmit from generation to generation, with adjustments dictated by historical contingencies. Indeed, culture influences identity and the sense of belonging of a people, affecting interactions with others (Akerlof and Kranton 2000; Akerlof and Kranton 2005). In this sense, culture has an influence on entrepreneurship and the degree of cooperation/interaction between businesses.

For our purposes, we can adopt the concept of culture proposed by Porter (2000, p. 14): “culture expresses beliefs, attitudes and values that sustain the economic

activities of individuals, organizations and other institutions". Values also refer to morality (Harari and Tabellini 2009; Tabellini 2008) of human behavior, as well as honesty and fairness in business (Kahneman et al. 1986).

According to Williamson and Mathers (2011), we can identify four elements that interact with the economic behavior: trust, respect/esteem, self-determination (individual motivation) and obedience. These aspects drive social norms on economic and social relationships. They may have ambivalent effects on the role of informal institutions, and this must be taken into account when introducing metrics of institutional sustainability.

The historically established character of institutions affects the possibility of reproducing policy models in different contexts (Greif 1994; Boettke et al. 2008; Dobler 2009; Rodrik et al. 2002). Well-functioning institutions in certain contexts and historical moments may not work in other contexts or moments (Williamson and Mathers 2011; Williamson 2009; Rodrik 2008; Tabellini 2006; Dobler 2009).

By the point of view of sustainability, two characteristics are common to institutions: the ability to facilitate (explicitly or implicitly) the decision making process related to political choices, and the ability to stimulate and support the putting into practice of decisions (Spangenberg et al. 2002, p. 71). If the institutional system fixes clear rules, then it also enables the freedom of human behavior, being therefore a key incentive factor of such freedom (Easterly 2005, p. 30).

In the field of economics, institutions are typically considered for their ability to protect economic freedom, as a prerequisite for other forms of freedom (Bruni and Zamagni 2015, p. 115). Moreover, a capitalist system cannot exist without the recognition of private property and its protection. When the protection of property rights is weakened, an unproductive entrepreneurship is encouraged, because investment in intangible assets (for which a protection is more difficult) are discouraged. Thereby opportunities for not productive (or "destructive") entrepreneurial actions increase (Baumol 1990). In addition, an adequate level of financial development and credit access promotes freedom for entrepreneurship, as well as a stable rate of inflation and an adequate monetary policy. Of particular note is the degree of openness to international markets, both for trade and investments, since the increased competition is a strong incentive for the optimization of the productive structure and innovation.

Entrepreneurial freedom must express itself not only in the start-up phase of a firm, but also in its growth. Therefore, it is possible to distinguish between constitutive freedom and evolutionary freedom (Esposito and Musso 2016).

Another factor of entrepreneurial freedom is the degree of regulation of the economy, which depends on the regulatory level: if the regulation is not strict an enforcement of entrepreneurial initiatives results; when the regulation increases the burden for businesses, and particularly for start-ups, increases (Bjørnskov and Foss 2012, p. 251; Nyström 2010; Rodrik 2004; Hausmann and Rodrik 2003).

The concept of freedom is closely linked to the historical, social and economic environment, having the institutions different levels of effectiveness depending on the different context in which they operate (Boettke and Coyne 2003, p. 14). Since an interdependence between policies and individual political positions exists (Hoff and Stiglitz 2004), it should be taken into explicit account the existence of "local"

elements—such as lack of experience of a market economy, historical ties of corruption, strong tendencies towards self-interested behavior, etc. (Hoff and Stiglitz 2004, p. 754)—can counteract the institutional action.

The relationship between institutions and market is tight, and both are considered as faces of the same coin (Rodrik 2015, p. 330). According to the traditional approach, market is a kind of technical instrument to achieve—through a spontaneous coordinating action—a higher level of well-being, through the mechanisms of competition. However, the concept of market is a social concept (Trento 2012, p. 37), a place where impersonal actors meet and where actions, plans, processes, information/communications meet and compare themselves, by the use of price as a principal regulating tool. Even competition, which should be ensured by the market, is increasingly seen as a social construction, based on collective action justified by moral and economic principles (Steiner 2012, p. 78). Thus, market is a kind of social device to generate connections between people and between people and things (Steiner 2012, p. 84), and its structure assumes a network shape (Leibenstein 1968). However, as a network, the market has its rules and often rests on trust and the sense of belonging, unlike the supposed impersonality of economic actors.

The market itself cannot ensure a balanced process if information asymmetries or coordination failures emerge (Hausmann and Rodrik 2006). In this case, the role of industrial policies can contribute to reduce such disorders, also pushing towards increasing business opportunities.

With reference to the role of institutions in influencing market mechanisms, Rodrik et al. (2002, p. 32) propose a classification. At a first level are market creating institutions (such as those protecting the private property and introducing contractual laws), that are fundamental for the existence of a market. They guarantee the fundamental rights and ensure the respect of law. However, these formal institutions are not sufficient due to an increasing complexity and uncertainty. In order to ensure a proper functioning of markets, at least two other types of institutions are necessary: market regulating institutions, for the use of externalities and the reduction of information asymmetries, and market legitimizing institutions, to enable forms of social protection, reduce inequalities and manage conflicts.

By connecting what has been said about the role of institutions, it is possible to identify a framework (Table 1) to be used for defining institutional sustainability assessment modes.

When market freedom increases, it is necessary to switch from market creating institutions to market legitimizing institutions, in order to allow the transformation of market from a demand-offer matching tool to a knowledge circulation tool. This requires institutional rules, both formal and informal, in order to enhance opportunities for firms.

Table 1 Institutions and role of market for industrial policies to reduce inequality

Typologies of freedom	Typologies of institutions	Role of market
Constitutive freedom	Market creating	Tool for demand-offer matching
↓	Market creating + market regulating	Tool for demand-offer matching and knowledge circulation
Constitutive freedom + Evolutionary freedom	Market creating + market regulating + market legitimizing	Tool for knowledge circulation and comparison between actions and projects of individual and communities

3 A Model for Assessing Industrial Policies

Generally speaking, the literature on the assessment of institutional sustainability (Brinkerhoff and Goldsmith 1992; NORAD Programs 2000; Spangenberg 2002; Warwick and Nolan 2014) considers single measuring indicators, which evaluate the ability of an institution to achieve certain objectives. The focus is therefore on the institutional organization in relation to a specific purpose, only taking a part of the complex operation system of the institution (Spangenberg et al. 2002, p. 75).

This approach has some limitations, since, on the one hand, it provides no information on the possibility that the objectives will be achieved in the long term, and on the other, it does not take into account the context and actors involved in the sustainability process (Pfahl 2005, p. 87). Therefore, the verification of the role that the broader systems of rules (formal and informal, explicit and implicit, inclusive and extractive) play in structuring the human behavior is deactivated. The assessment procedures should then recognize the uncertainty and the difficulty in identifying causal links. For this purpose, the usual quantitative techniques demonstrated many limits and more qualitative tools, focused on the role played by institutions, are necessary (Warwick and Nolan 2014, p. 50).

A qualitative approach is not primarily addressed to examine the direct and immediate impacts of a certain institutional organization, but rather to consider the development of the decision making process and its implications (Pfahl 2005, p. 88). Therefore, the most recent analyses in this regard tend to include in the evaluation criteria issues such as the accountability, the participation, and the flexibility in ensuring the achievement of different interests of a society (Pfahl 2005; Spangenberg et al. 2002).

All these issues bring to an assessment model similar to what we have outlined, characterized by a qualitative nature and a focus on processes. For the evaluation of policies, a two-step assessment process can be adopted:

- the first step refers to the preconditions, in order to verify if the industrial policy intervention can be successful by the institutional sustainability point of view;

Table 2 Preliminary analysis scheme (check list) of institutional sustainability

Assessment of the current status of the capabilities/freedom of economic actors		Stage and level of functioning of the market		Institutional factors	
	Score		Score		Score
<i>Constitutive freedom</i>				<i>Organizations</i>	
(a) Freedom of entrepreneurial discovery	Tool for comparison between prices and opportunities	.....	– Inclusive	.....
				– Extractive	.....
(b) Freedom to co-operate, associate and connect to networks	Tool for comparison between prices, knowledge circulation and best practices	.....	<i>Institutional mechanisms</i> (formal rules structuring and addressing individual and collective behavior)	
(c) Freedom of full use of the market			– Inclusive	.....
				– Extractive	.....
<i>Evolutive freedom</i>	Tool for learning and comparison between projects and actions of individuals and communities	.....	<i>Informal institutions/culture</i> (social and moral norms that inform individual and collective behavior) <i>stimulating:</i>	
(a) Freedom of equal access to strategic production factors (human capital, knowledge, energy, logistics and finance)					

(continued)

– the second step refers to the types of action to be implemented to ensure that the expected impact of the policy will produce sustainable effects.

Table 2 outlines the elements that should be assessed when running a preliminary analysis of the institutional sustainability for industrial policies.

Table 2 (continued)

Assessment of the current status of the capabilities/freedom of economic actors		Stage and level of functioning of the market		Institutional factors	
	Score		Score		Score
(b) Freedom of being involved into growth drivers (internationalization, innovation, etc.)			– Confidence	.....
				– Respect and esteem	.....
				– Self-determination	.....
				– Obedience	.....

The assesment should be placed in the dots area, ranging from + (lowest intensity) to +++ (highest intensity).

Starting from the objective of a sustainable industrial policy, it is necessary to check what is the current situation in terms of the ability to achieve goals (i.e. freedom) by the actors (firms), by looking at the current level of formal institutions and the type of culture (as a synthesis of informal institutions). At the same time, it must be checked the real possibility that market mechanisms can be activated (and at what level), and which is the best market structure to aim for, taking into account of the active support that institutions can provide for ensuring equal conditions to all the actors involved. The scheme places an emphasis in the evaluation of the features of institutional organizations: being the latter, on one side, inclusive, when they promote an extensive process of participation and when they tend to favor the constitution of open social groups. On the other side organizations are extractive when they reduce participation, promote the formation of closed social groups and, as a result, they build or consolidate privileged positions, transforming a social profit into a rent.

The characters of inclusiveness or extractivity of organizations is closely linked to the three aspects mentioned by Rodrik (2008, p. 19), which should be considered when designing the institutional role: the attention paid by policies to social issues; the contrast to bureaucratic behaviors to avoid unequal market conditions, and; a strict accountability of interventions.

The proposed scheme assesses whether there are ex ante conditions that can allow a self-sustainability of the intervention, without counting on continuous external support. The assessment can be expressed in qualitative terms and it can be used to identify the intervention boundaries.

In case of positive result of the analysis, it is necessary to decide which are the most appropriate policies to guarantee a continuing (and self-sustaining) process. Otherwise, it should be decided if continuing the existing policy or making it in other directions, following a “try an error” path, which is increasingly emerging in the field of policies for development (Rodrik 2010).

For example, if the characteristics of the local culture, in terms of trust, mutual respect and esteem, self-achievement, etc., are antagonistic to a market improvement process, formal institutions will fail to affect the context. In this case, the preconditions for an institutional sustainability will be lacking. However, it may also happen that a strong presence of specific conditions, that theoretically could positively influence the market development, can on the contrary act as a brake because of a particular local situation. This is the case of an excessive degree of mutual trust within an economic-social network, which could lead to relationships that are closed to other operators, and it would therefore represent a barrier to market opening policies. In such situations, it may be convenient to keep temporary market control measures.

Once the analysis of the institutional sustainability preconditions has been completed, a framework to define adequate actions can be used, with the aim of expanding freedom and capacity building. This scheme (which takes up what has been developed by Esposito and Spirito (2013, p. 199) is described in Table 3.

According to the taxonomy of Rodrik et al. (2002), Table 3 indicates the institutions that can support and sustain the different types of skills/freedom, bringing to a market development. They are not institutions to be established ex-novo, but rather the existing institutional support should be primarily enhanced, making it evolve to the desired direction.

The ultimate goal is to try assessing how the institutional support will strengthen the industrial policy, improving the ability of the market to act as a development environment (see Table 1). In particular, it is necessary to consider the existence of feedback processes from the market to institutions, triggering a self-sustaining process of social and economic development (Fig. 1).

In our research, the analysis model proposed has been verified by analyzing a specific case of a planning policy aimed at stimulating the economic recovery of disadvantaged areas. The case chosen was that of the Strategy for Inner Areas adopted by the Italian Government as a national plan that was designed with the objective of producing a development process whose duration would go beyond the period of the intervention.

Since the focus of this analysis is on industrial policies, no social, demographic and environmental aspects, and related factors, will be considered at this stage. However, they should be taken into account in a wider analysis for an overall development strategy.

Table 3 Scheme for institutional interventions according to the policy strategy

Type of freedom/development for capabilities improvement	Institutions for guarantee protection and promotion of the market		
	Market creating	Market regulating	Market legitimizing
<i>Constitutive</i> (a) Freedom of entrepreneurial discovery (b) Freedom to co-operate, associate and connect to networks (c) Freedom of full use of the market (citizenship in the market)			
<i>Evolutive</i> (a) Freedom of equal access to strategic production factors (human capital, knowledge, energy, logistics and finance) (b) Freedom to be inserted within growth drivers (internationalization, innovation, etc.)			

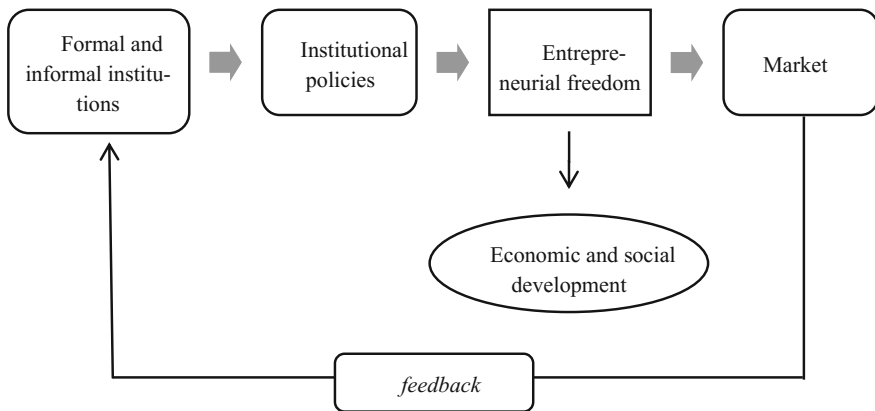


Fig. 1 The institutional sustainability process for industrial policies

4 The Strategy for Inner Areas in Italy

The Italian territory is characterized by a polycentric system, with cities, rural areas and municipalities linked by a sound network of relationships, on one side, and large towns and cities, which attract people because of their offer of employment in industrial and tertiary sectors and the provision of public services, on the other. The opportunity to access essential services like education, mobility and health care is critical to ensure an adequate level of citizenship among the residents in inner areas.

Inner or inland areas are defined as substantially away from the cities that offer essential services and, therefore, characterized by decrease in population and degradation. Demographic trends, access to health care and the provision of appropriate education are just some of the essential criteria for defining and classifying inner areas. These areas currently include 53% of Italian municipalities (4261) and are home to 23% of the population (almost 13.540 million people, according to the 2011 census), and account for about 60% of the Italian territory (Uval 2014). Inner areas in Italy are characterized as follows:

- are at a significant distance from the main service centers (education, health and public transport);
- contain major environmental resources (water, agriculture, forests, natural landscapes) and cultural resources (archaeological sites, historic settlements, abbeys, small museums);
- are highly heterogeneous, being the result of both differentiated natural systems dynamics, and historical anthropization processes.

Remote rural areas have historically been deprived of many services and they have experienced a long period of steady abandonment in favor of urban areas. As a result, high social costs in terms of hydro-geological instability and deteriorating soil conditions occurred. The population decline has been accompanied by a reduction in services to people and a weak functioning of market mechanisms. Because of this situation the opportunities for businesses and the degree of entrepreneurial freedom are very low if compared to those of urban areas. However, inner areas contain a great potential in terms of natural resources and human capital, and they are seen as a strategic resource for the growth of the whole Italian economy. For these reasons, the development of inner areas is considered a national issue, also because the social costs associated with their dropout rates are particularly high. Interventions designed to preserve and revitalize inland areas are then necessary to overcome the gap with urban areas.

The National Strategy for Inner Areas (NSIA) was designed in 2014, relying on the financial support of the Community grant program for the seven-year period 2014–20, along with dedicated funding provided by national laws. The project was carried out in close interaction with the Regions and an intense dialogue with Municipalities and Provinces, taking into account that local communities have a fundamental role in the development of a national strategy.

At the center of the NSIA is the quality of life of people, by improving the welfare of the inhabitants and, at the same time, increasing the level of social inclusion,

the latter considered as a mean for reducing inequalities in terms of wealth and development opportunities. In short, the strategy has five medium-term objectives (Uval 2014):

1. improving wellbeing of local populations;
2. increasing labor demand (and employment);
3. increasing the use of territorial capital;
4. lowering social costs of de-anthropization;
5. bolstering local development factors.

Growth and social inclusion are mutually interdependent. Summarizing the ultimate objective, a reference point of the strategy is to reverse and improve demographic trends (cutting emigration from these areas; attracting new residents; raising the birth rate). These outcomes and the land use recovery, in particular, are what will serve to counteract the hydrogeological instability and the degradation of the cultural capital in the inner areas.

The above five mid-term objectives can be pursued through two types of action (tools), each of which has a national and a local dimension. The two types of action are:

- upgrading the quality/quantity of essential services provision (education, health, mobility, connectivity);
- promoting local development projects.

As regard the second point (local development projects), it should be kept in mind that every inner area has some kind of diversity to offer: lifestyle, air quality, food and human relations. Interventions for triggering development processes need to focus on these specificities, therefore for each geographical area focal points of development must be identified among the following (Uval 2014):

1. local communities and territory;
2. natural, cultural and sustainable tourism resources;
3. agri-food systems and local development;
4. energy saving and local renewable energy networks;
5. manufacturing know-how and craftsmanship.

The package of interventions will be formally recognized by appropriate Framework Agreements to be signed between local Municipalities, Regions and Central Government.

At the current stage, the strategy is rolling out with pilot projects on a limited number of areas, one per Region. It is operating through two interrelated classes of funding: European funds, and Regional/National funds for ensuring adequate public provision of financial support. Planning packages will be put together onsite and therefore the prime actors are the territorial communities and their regional contacts. They will only become wider ranging where there is a powerful strategy, real intent and national scope.

In order to ensure effectiveness and sustainability of the strategy, a binding time frame has been established, with a careful monitoring of the outcomes and comparison of the experiences and outcomes by a project coordinating network.

All the objectives will be measured at pre-set intervals by one or more performance indicators and related target values. The correct tie-in between the expected outcomes of the Strategy, the expected results of the programs and the expected results of the individual Area Projects must be achieved. All Area Projects are expected to provide an ongoing Assessment.

Relaunching Inner Areas naturally means relaunching local systems as production areas, which requires consolidated demand for locally produced goods and services. Demand is a fundamental development factor, and national and European policies have a decisive role to play in guaranteeing that this is sparked and remains steady.

5 The Assessment Model Applied to the NSIA in Italy

The application of the assessment model proposed in this paper has been made with to the case of the Strategy for Inner Areas in Italy. This case is particularly significant because it represents a typical situation in which a sustainable development process is pursued. Indeed, this condition characterizes all those geographical areas with a delayed development, or those with structural disadvantages. For these areas, solutions that could bring to a self-sustaining process of development, without having to permanently dependent on government assistance, are required.

In order to pursuit an effective development process over time, entrepreneurial opportunities should be accompanied by the strengthening of market mechanisms as a guarantee condition for “inequalities of opportunities” reduction (Rothstein and Ulaner 2005, p. 42).

The application of the model covers only the first of the stages considered—the preconditions assessment (Table 4)—being not yet implemented the design phase of the strategy. The assessment is made based on a qualitative approach in terms of evaluation of the intensity of each single item analyzed.

Despite the NSIA has not yet been developed, we have hypothesized the application of the second phase of the model by identifying possible policy tools to be adopted in the case analyzed (Table 5).

Therefore, Table 4 identifies the priorities for action, while Table 5 identifies the type of institutions and interventions for the exploiting market potential, according to institutional sustainability criteria.

After having analyzed the preliminary conditions, what emerges from the case analyzed is an influence of the institutional system on market functioning and also the influence of a dominant culture in favor of institutional mechanisms, which are still affected by individualism and closure to collaborative market relationships. This is a major obstacle to the development of sustainable policies. Facing this problem requires solutions characterized by the activation of processes that improve collaboration, inclusion and ease in market access. In addition, information flows and

Table 4 Preliminary analysis (check list) of institutional sustainability applied to the current condition of inner areas in Italy

Assessment of the current status of the capabilities/freedom of economic actors		Stage and level of functioning of the market		Institutional factors	
	Score		Score		Score
<i>Constitutive freedom</i>				<i>Organizations</i>	
(a) Freedom of entrepreneurial discovery	+	Tool for comparison between prices and opportunities	+++	– Inclusive	++
				– Extractive	+++
(b) Freedom to co-operate, associate and connect to networks	+++	Tool for comparison between prices, knowledge circulation and best practices	++	<i>Institutional mechanisms</i> (formal rules structuring and addressing individual and collective behavior)	
(c) Freedom of full use of the market	++				
				– Inclusive	++
				– Extractive	+++
<i>Evolutive freedom</i>		Tool for learning and comparison between projects and actions of individuals and communities	++	<i>Informal institutions/culture</i> (social and moral norms that inform individual and collective behavior) <i>stimulating</i>	

(continued)

Table 4 (continued)

Assessment of the current status of the capabilities/freedom of economic actors		Stage and level of functioning of the market		Institutional factors	
	Score		Score		Score
(a) Freedom of equal access to strategic production factors (human capital, knowledge, energy, logistics and finance)	+				
(b) Freedom of being involved into growth drivers (internationalization, innovation, etc.)	++				
				– Confidence	+
				– Respect and esteem	+
				– Self-determination	++
				– Obedience	+

+ = lowest intensity; +++ = highest intensity

circulation of knowledge should be favored, so that a cumulative learning process could be activated and local values enhanced.

Based on the analysis in Table 4, we identified the main measures to be implemented in inner areas, with the objective of encouraging the expansion of business opportunities, improving market functionality and thus reducing disadvantages in the industrial development (Table 5).

The actions indicated are a mix of interventions on the areas of intangibles (such as human capital and entrepreneurial skills), finance (incentives) and infrastructures (transports, logistics and telematics), which fall into the more recent priorities of industrial policies, focused on improving the circulation of knowledge and the learning processes of enterprises (Greenwald and Stiglitz 2013; Stiglitz et al. 2013). At the same time, these interventions can contribute creating a cooperative climate between

Table 5 Scheme for institutional intervention applied to the Strategy for Inner Areas in Italy

Type of freedom/development for capabilities improvement	Institutions for guarantee protection and promotion of the market		
	Market creating	Market regulating	Market legitimizing
<i>Constitutive</i>			
(a) Freedom of entrepreneurial discovery (b) Freedom to co-operate, associate and connect to networks (c) Freedom of full use of the market	<ul style="list-style-type: none"> - Business incubators and Spin-off programs by Universities - Integrated programs for entrepreneurship development - Projects and legal frameworks for network agreements among firms - Regulatory legislative interventions for reducing bureaucracy and for legal management of disputes 	<ul style="list-style-type: none"> - Information on the opportunities regarding production factors - Regulatory legislative interventions - Trade and industry associations - Finalized funding and tax credits - Access to bank credit 	<ul style="list-style-type: none"> - Training for entrepreneurship - Continuous training - Programs for generational turnover - Training programs for inter-firm co-operation - Interventions on mobility infrastructures and intermodality
<i>Evolutive</i>			
d) Freedom to be inserted within growth drivers (internationalization, innovation, etc.)	<ul style="list-style-type: none"> - Supporting program for foreign market selection and international marketing promotion - Innovation projects in co-operation with Universities - Projects, for innovative start-ups 	<ul style="list-style-type: none"> - Finalized funding - Support to e-commerce - Export and internationalization consortia - industrial property rights 	<ul style="list-style-type: none"> - Broadband and ultra-broadband telematics networks

the institutional system and companies (Rodrik 2008). All actions should be organized according to a medium-long term action plan, avoiding one-off measures that would not have a significant effect on sustainable development.

6 Conclusions, Limitations and Future Research

In this paper, we proposed a model for the assessment of industrial policies aimed at stimulating the economic development and entrepreneurship opportunities of the

disadvantaged areas of a country. The model is based on a circular pattern (Fig. 1) which enhances the development of entrepreneurial resources within an institutional frame.

The model can be considered as a starting point to be further developed at both qualitative (making a distinction between the current status of an area/region and the expected status) and quantitative (by identifying specific indicators for the planned interventions) level. It is worth highlighting that this model aims at identifying well focused actions which could activate or re-activate market mechanisms, thus reducing inequalities and, at the same time, affecting in turn the institutions.

At this stage, the level of functionality of the institutions must be carefully assessed, taking into account the historical and local context. As a matter of fact, institutional models that can be effective and sustainable in every place and cultural context, do not exist, and each model must be adapted to the characteristics and the culture of each context.

Considering that the focus of the model is on active policies, the institutions on which interventions can be based are formal ones. Possibly, the way in which they operate within a social and moral context should be evaluated, in order to manage solutions that could be suitable for the specific context and maximize results.

The application of the model on the NSIA in Italy did not include the identification of the institutions to be involved. However, given the local level of most of the actions, we can hypothesize a primary role of local institutions, with a leading position of municipalities and unions among them, Universities, Chambers of Commerce and Regional Governments.

Those institutions that are more close to a territory are called into question, especially for market creating interventions, in order to stimulate cooperation among firms. The interaction between local, national and supranational institutions applies for market regulating and market legitimizing interventions, which often require a wide scale of action, and at the same time a firm closeness to enterprises' needs.

In any case, a general principle that has always to be respected in order to permanently activate the institutional sustainability process, as for Fig. 1, is the accountability of the actions, accompanied by a monitoring and evaluation process on ongoing effects.

When the first results of the single actions within the NSIA in Italy will be available, it will also be possible to make more accurate evaluations on the effectiveness of the project.

Once completed and improved, the model proposed can be useful to policy makers for defining complex strategies, particularly for their ex-ante and ongoing assessment. The possibility of separately analyzing the types of freedom to be developed, on one side, and the phases of development of market mechanisms, on the other, and then crosswise evaluate them, allows to accurately identify the purpose, recipients and the means of intervention for each measure of a policy strategy.

This paper has some limitations. Firstly, the application of the ongoing evaluation is missing, being the NSIA Italy not yet started. This made it impossible to verify and test the policies adopted.

Related to this issue is the fact that evaluation parameters have not been identified for an objective assessment of both the current conditions of an area, on one side, and the effects of the interventions to be identified, on the other. An objective assessment would allow a more strict application of the model.

Even considering the limitations of this study, further research developments may relate to the definition of performance indicators to be applied to single actions.

Finally, in addition to the issues related to industrial policies, a further stage of analysis and model development could be that of extending the investigation to other areas of policymaking, such as social, environmental and those related to planning/control of industrial, commercial and housing settlements. In particular, as regards the social aspects, an important role is primarily played by health and education services, which especially in the case of inner areas are essential to ensure favorable conditions to prevent depopulation and stimulate the location or permanence of economic activities.

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Street Food and Street Vendors, a Culinary Heritage?



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Abstract This paper examines the theoretical discourse surrounding street food and tells how street food is multidimensional and spatially contingent, but also tackles food safety and aspects related to street vendors' issues. The street food sector offers to the guests various dishes and drinks prepared at the place of sale or only marketed by itinerant merchants or by vendors with stationary carts, either on the streets or in other public places that may be of interest for tourists. Fast food is generally associated with globalization, so present in high income per capita countries. This paper aims to present a radiography of street food marketing, an image that defines a particular region or country.

Keywords Culinary heritage · Gastronomic tourism · Street-food · Street vendors

1 Introduction

Tourist practices are shaping today's urban life in an unprecedented way. Urban tourism has, among other benefits, the ability to generate income and jobs, and to be a promoter of social development through the impact that the redistribution of income creates in a city, at the same time acting as a catalyst for new jobs (Timur and Getz 2009). Consequently, established dichotomies such as tourism/everyday, visitors/residents, day/night, work/leisure or global/local become increasingly blurry, losing their power to explain recent developments in urban tourism. The desire of tourists to know and experience the lifestyle of local people, combined with the desire

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of local people to become tourism producers, has stimulated the promotion of a new trend in international tourism that has been channeled towards creative tourism based on experimenting with urban life as a local citizen (Richards 2017).

The street is seen as a place of exchange, sociability, and a symbol of local and (informal) economic culture and of the everyday tourism. Street vendors are part of the food system that is present in a city. For the economy of the city or the host region, local food is one of the sectors with the greatest potential of maximizing the benefits of tourism and increasing the impact of the visitors' spending (Pratt 2012). The concept of street as public kitchen and dining room is quite old and the vending of street food creates an environment that is similar to a formal market space, though in a more ephemeral way and on a smaller scale (Newman and Burnett 2013).

In the field of tourism research, the interest in a topic such as gastronomical tourism, which considers the close link between food and tourism, has increased over the last thirty years, but its unprecedented growth and fame in the literature dedicated to tourism has only recently become obvious. Food and gastronomy are essential for a local community, defining the uniqueness of the place/tourist destination (Kim and Iwashita 2016), but much depends on the perception of the local food as being authentic and easily identifiable as a resource belonging to that specific destination (Sims 2016; Privitera et al. 2018). Local gastronomy can become the particular emblem of a tourist destination, region or country, and can also represent a powerful tourism marketing tool, aspect which must be taken into account in the sustainable development strategies that a certain region adopts (Henderson 2004).

This paper examines the theoretical discourse surrounding street food and tells how street food is multidimensional and spatially contingent, but also tackles food safety and aspects related to street vendors' issues.

2 Heritage and Street Food—Informal Trade and Street Vendors

Urbanization and globalization bring challenges to development related to cultural change. Food patterns borrowed from international fast-food gastronomy, for example, tend to replace traditional dishes, this being particularly noticeable among young people. Food provided by an expanding, but largely informal food chain, even if it has the disadvantage that it does not necessarily follow local tradition, has the benefit of providing jobs for urban residents (Nicolas et al. 2007).

2.1 Street Food as a Heritage

The definition of street foods (FAO 2015) is: “street foods are ready-to-eat foods and beverages prepared and/or sold by vendors and hawkers especially in streets

and other similar public places”. Culture, ethnicity, and religious beliefs influence the type and nature of street foods and of the way in which they are prepared and served, thus varying from fresh fruits and vegetables, to processed foods prepared following traditional recipes. Even though the food is most of the times typical for a specific place or area, in some cases diversity may lead to losing the cultural link with the original territory, losing the identity, and uniqueness. Typically, street food is prepared and served as per the local recipes and in accordance to the gourmet tradition of the region. This might change as many food products become common at country level, and in the conditions of globalization there may be influences from other countries, neighboring or more distant, on how to prepare a certain dish (Steyn and Labadarios 2011).

The lived culinary heritage is closely linked to the collective memory of a region and to the ancestral roots that promote a sense of belonging to a territory characterized by a certain gastronomic footprint (Bessi re 2013), confirmed by anthropological approaches dedicated to the immaterial heritage of food and its evolution concerning the tourism (Jolliffe and Aslam 2009; Kim and Ellis 2015). It adds value to a place, and may be part of the explanation for the increased interest in a destination or even the reason for the attractiveness of that specific place (Lew 2017). The awareness of the many opportunities that street culinary products offer to visitors is important, but the same is true also for the local communities and small entrepreneurs. Street food products can be found in almost every corner of the world. Currently, they play a central role, especially in places like the South American urban areas, Asia, and not only there, but throughout the world (Marras 2014). Consuming food produced and marketed in street stalls is an alternative to globalization, a tool for socializing, a means of communicating with young people, a way to educate consumers.

An extensive list of street culinary products related to certain cultural environments now comprises several examples of globalized food products like the Turkish kebab and pizza. In this case, the definition attributed to street food refers to the way in which it is used, but also to the concept that slow-food and its values do not reside in the way of using the food itself, but in the ingredients, their connection with tradition, the stories about the making and processing of food components, the connection with the people who prepare it and the socialization and communication that develops where the finished culinary product is sold and served (Petrini, www.slowfood.it).

Events dedicated to food are growing in number and importance all over the world and their global significance is underlined by the relevance of UNESCO recognizing them as playing a prominent role in the building process of intangible cultural heritage. Culinary tradition is closely linked to identity and it has brought forward a style of food that is full of symbols, tastes, and memories—both imaginary and real (Hwang et al. 2004).

Sibiu Street Food contributed to the success of food festivals in Romania and to Sibiu’s image of desirable tourist destination. The restaurants participating in such festivals and events are also gaining ground in Sibiu. These are businesses that are most of the times at the beginning of their journey, exploiting the gourmet curiosity

of both locals and tourists and the novelty of the concept, and proving more often than not to be a profitable bet.

Of the dozens of food alternatives that visitors have at their disposal, Sibiu Street Food is certain to offer to everyone at least a few favorite dishes, and many more that are at least worth tasting. At the “Foodie—street food cuisine”, citizens and tourists alike, have the chance to really test the concept of “street food”. And thus, Sibiu once again shows that it has great potential when it comes to cultural, artistic, and even culinary events.

Organized on the street and in the Fortress Park, Foodie is a “mix” of good food and good music, perfect for both the gourmet lovers of Sibiu and visiting tourists, and for the lovers of high quality music.

2.2 *Street Vendors: Trade Figures*

Suppliers and traders of street food represent a tourist attraction in most regions, their presence bringing life and color to the areas where they are located (Bah and Goodwin 2003).

Across the world, an important part of the informal workforce can be found on streets, sidewalks, and various other public spaces (Isaacs 2014). The term “street vendor” can be used either in a narrow sense, referring to the ones who sell goods in public spaces, or in a broader sense, referring to those who provide or sell services in public spaces, and in this category, we can include the hairdressers, shoe repairers, but also the mechanics who repair bicycles, motorcycles, cars, and trucks (Ilo-Wiego 2013). Even when considering the narrower sense of informal traders whose main activity consists of selling goods on the street or in other public spaces, street vending is by no means a type of business that lacks diversity: from manufacturing or transforming goods at home and selling them in the streets, to sourcing from wholesalers and selling at diverse locations, to providing easy access to a variety of goods and services. In Italy, for example, street food respect the link with a region, the history and tradition and contain typical ingredients produced in that region (Fig. 1).

The people whose activity consists of selling either a single product or a range of products on the streets often do so under very diverse types of economic arrangements: some of them are self-employed and thus independent, some are semi-dependent (e.g. those selling products for companies and getting a commission), while some are paid employees that are fully dependent. Some have a fixed selling spot, while others are mobile street sellers. Current official statistics indicate that this type of activity is mostly prevalent in sub-Saharan Africa, where in many urban areas it represents 12–24% of the total informal employment. For example, in Ghana, it is difficult to have a comprehensive view on the number of street food sellers. This piece of information is not known although there are available official records, but the problem with them is that they do not incorporate a significant part of the unregistered vendors (Marras and AgBendechein 2016). Street vending in India represents almost 11% of the non-agricultural employment in the urban areas, and 14% of the total

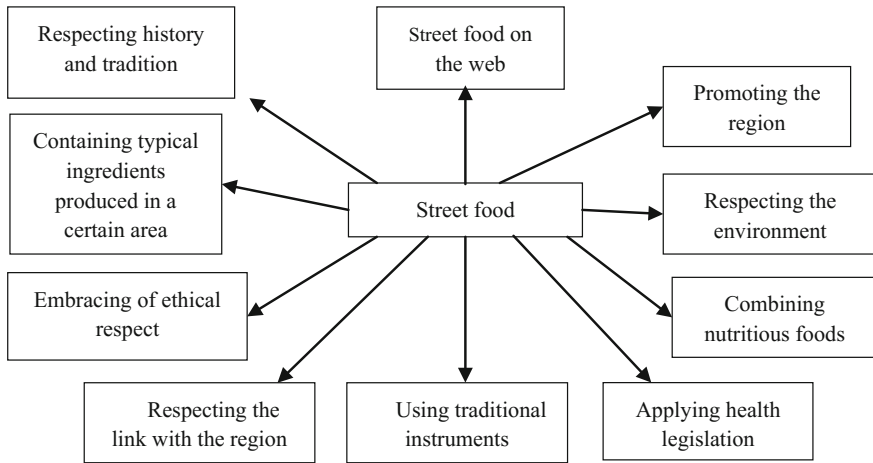


Fig. 1 Street food characteristics (Italian Street Food Association)

(non-agricultural) informal employment in the urban areas. Also in Latin America, cities also experience large concentrations of street vendors (Ilo-Wiego 2013).

Street trade is a cornerstone of the urban retail economy in many cities, particularly in those with few opportunities for formal employment, or during times of economic crisis in the developed countries (Privitera and Nesci 2015).

In fact, for street vendors, the street is where they earn their living, a place that is the witness of their struggles and hopes, and where social relations are being built every day. At the same time, the street is also a space that helps them bring their own contribution to the economy of the city or of the region (Boonjubun 2017). In most of the emergent economies, central governments and local authorities bear the responsibility of designing and implementing food hygiene and food trading regulations (Tinker 2003). However, the probability of getting food poisoning after eating street food still represents a real health risk in many areas of the globe, especially when it comes to microbiological contamination. Particularly, FAO (2009) has identified the following key factors in street food contamination: poor storage conditions (exposure to dust, insects, pests, etc.), insufficient cleaning of raw materials, ingredients, and utensils before cooking, or of tableware used by customers, the use of utensils (saucepans and other recipients) likely to release toxic or dangerous substances into the food, inappropriate handling of ingredients and raw materials, of food during preparation, or of finished products, and the prolonged holding of prepared food at inappropriate temperatures.

The available literature suggests that street vending is not only an important income source for many people in the business, but it also contributes to the food security of the poor and lower middle-class, especially in the developing urban society. Street trade often generates conflicts in urban planning debates, but many cities currently view street vending as a means of providing their citizens with diverse,

inexpensive, and easily accessible food options. However, recent research has suggested the existence of a link between the formal and informal sectors (Ward 2004), and this has led to the situation in which informal settlements in the cities were often viewed as being different from the ‘normal’ urban considerations (Roy 2007), but not even informality can be generalized: there are various shades to it (Boonjubun 2017).

Many times, the street vendors themselves are seen as an important tourist attraction for the foreigners looking to have an authentic local experience. Especially among Western tourists, street food has generated a substantial number of followers (Chang et al. 2000). The experience of buying street food or locally produced goods from a crowded open-air market allows tourists and residents to immerse in the vitality of urban public life, where the people’s relationship with the city space is active, complex, and multi-sensorial (Marovelli 2013).

Outside the cities, street sellers are a dynamic part of a country’s retail distribution network, especially in the more remote areas. Street food provides an entrepreneurship opportunity that requires a whole lot less start-up capital than traditional businesses. It plays a primordial role in creating new opportunities, both social and economic, and contributes to the development of not only the local tourism, but also the regional and national one. Street merchants and their cuisine have been saluted as landmarks of local flavour and uniqueness, embodying various characteristics representative for the nations and cultures that shaped them. Street food vendors mostly offer “zero-food-miles” menus. Their food products are generally made with fresh, locally sourced food products. By doing so, vendors support local economies and play an important role towards the achieving food sovereignty, food security, and a rural–urban sustainable food chain (Marras 2014). Distinctive and captivating performances represent a special attribute of street vendors through which they differentiate themselves from other service operators. Street food vendors’ attributes include presentation, empathy, receptivity, and courtesy (Chuang et al. 2014).

On the one hand, they deserve to be sustained and guarded against the negative aspects of globalization and internationalization (Consumers International 2011), but they are also a result of a complex combination of oppression, tolerance, rigid guidelines and strong advertising (Bromley 2000).

A recent street food rejuvenation in North America (e.g. Portland) and Europe has stirred the interest of consumers and new debates regarding the role that city authorities should play in the matter of regulating street vending (Smith-Bedford 2011). *Food truck*, a new street food movement, emerged as a consequence of the economic recession that made it increasingly hard for entrepreneurs to afford start-up investments in traditional restaurants (Pill 2014). While sellers of hot dogs, chips, etc. have taken to the streets for decades, the recent movement has integrated fashionable gourmet food trucks, as well as street food divisions from large restaurants. They are driven by both economic advantage and socio-cultural appeal. Food trucks are an example of street food, and by seeking to meet sustainability criteria and a good balance between quality and price, this growing sector has started challenging long-standing fast food chains (Corvo 2014). Many operators are using only local products and have long-term relationships with local farmers, who supply them on a daily basis.

Furthermore, they strive to meet sustainability standards for energy use, production, and the recycling of waste. American cities have seen a huge growth of mobile street food vending in the last few years with great social and economic success and positive environmental repercussions shared by all parties—consumers, food truck owners, and local authorities. In Italy, this movement has even stimulated the apparition of web-based tools that help consumers to track in real-time the whereabouts of street food carts and vans (see www.foodtruckfiesta.com).

Online communication technologies, and most importantly social media, facilitate and promote fast interactions, on the one hand between sellers and consumers, and on the other between consumers themselves. As a result, many food sellers have incorporated the use of communication technologies into their marketing strategies (e.g. social networking). Blogs and varying websites dedicated to street food and mobile food offering are an important tool in strengthening the acceptance of the food truck culture in urban environments. Of course, this innovative concept has its own booking applications.

Community-oriented and authentic interactions help users organize events, share recommendations, and listen to diverse opinions, as well as engaging with different consumer groups, thus expanding and enriching their experiences. A rather recent example of a mobile application is *Street Food MApp*. It is designed to promote and facilitate the sharing of information regarding street food vending all around the world. It is designed as a showcase for street food chefs and an interactive guide for consumers. Consumers can find a specific street food business, its location, schedule, menu, and even description through search and filter functions.

3 Conclusions

There is currently an increased interest in gastronomic tourism, a trend that will certainly continue in the future. Street food products stir curiosity, and street vendors have greatly improved their offerings and presentation. Future development of street gastronomy seems strongly influenced by urban and commercial policy choices and local authorities' decisions. However, many street vendors are not exactly familiar with the urban and commercial planning regulations, which is why more attention should be paid to their accountability. It is important to conquer urban space, which provides many street food vendors with the daily means of survival, but this must be properly regulated and verified. Some comments on food safety and possible street food threats show a concern regarding the information on products sold on the street and their production conditions, which implies the need for hygiene and food preservation controls and clear regulations on the marketing of these products.

The phenomenon of street shopping for culinary products in well-established places, usually of tourist interest, is related to cultural, regional, and ethnic traits and is a direct result of the deruralization process. The tradition of street food trade has survived throughout the centuries despite the developments in society and economy and has reached its highest point in the fast food restaurants sector

in North America. In most of the developing countries, local authorities have the responsibility of adopting regulations on matters concerning food hygiene and security, but also the trading of culinary products.

Although it is a largely spread phenomenon, street gastronomy is generally linked to a specific territory and uses ingredients traditional to the area of origin, thus respecting in most cases the traceability of the products. Among its particularities are the skills with which food is prepared, the use of original recipes, the traditional way of preparing or serving the product, in other words, a multitude of elements that are perceived as authentic and therefore reflecting the local footprint and differentiating a tourist destination. In Italy, street food is generally popular in the itinerant markets that can be found in most city centers or during annual festivals. It can be described as a mix between holy and earthly, a reason for the tourists to come back following the taste of certain foods to the birthplace of many American emigrants. Prepared by chefs, culinary products are marketed from vans specially equipped for this purpose, with little local spread, predominantly in historical centers. In fact, given the “street” feature, a matter of concern for consumers is the perception of hygiene and food security, which partially limits the successful selling of such food products, despite national and local food safety laws that are meant to protect the consumer.

Currently, street food turns out to be more than just a passing fashion, as the consumers of this type of culinary sale are part of the culture of the last few generations. It is a growing necessity, because the consumers are looking to eat well and inexpensively (given the not-so-high incomes of young tourists), and at the same time in a flexible way (reducing the time allocated for consuming the food).

This type of street gastronomy offers first of all the opportunity to discover new tastes, given the fact that the tourist can come into contact with those places he does not yet know, becoming familiarized with the traditional taste of the places he visits and enjoying the excitement of being an integral part of the tradition and customs of the visited area.

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Sustainable Innovation as Competitive Advantage in the Era of Sustainability



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Abstract The challenges that sustainability raises in front of companies are nowadays bigger than ever, as their actions and performances are increasingly scrutinized and evaluated (by a plethora of different stakeholders) against a variety of sustainability-related expectations and standards. The paper aims to explore the universe of the most sustainable corporations—based on an analysis that corroborates these companies’ engagements towards sustainability (as declared on their websites) with their sustainability-related performances (as reflected in their scores—based on relevant KPIs—according to Corporate Knights’ *Global 100 Most Sustainable Corporations*)—in order to find relevant insights on the ways these companies have managed to overcome the challenges of sustainability. The results suggest that sustainable innovation is starting to crystallize as the main competitive advantage of these companies—which demonstrates not only that the challenges of sustainability can be overcome, but also that they can be transformed into opportunities and capitalized on as sources of (sustainable) competitive advantage.

Keywords Competitive advantage · World’s most sustainable corporations
Paradigm shift · Sustainable innovation · Sustainability

1 Introduction

Although sustainability has been a perennial desideratum (more or less consciously internalized, declared and pursued as such, and rather due to the instinct of self-preservation) since humankind has emerged as the Earth’s driving and transformative force (Caradonna 2014), it took it millennia to become “truly mainstream” (Haywood and Van der Watt 2016), “the new dominant logic” of nowadays (Watson et al. 2012), and a strategic “imperative” for companies and their managers (Lubin and Esty 2010).

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The well-known UN's 1987 Brundtland Report, pleading, at the highest international level, the cause of sustainable development—one that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations 1987)—is generally considered the wake-up call needed by humankind in order to make a real turning point towards addressing the challenges of sustainability. Despite the critics it has raised as regards the vagueness of the term (Barbier et al. 1990) or the difficulties related to its implementation (Lélé 1991), the Report has acknowledged and legitimated sustainability as a global concern and aspiration, whose materialization is asking “for a convergence between the three pillars of economic development, social equity, and environmental protection” (Drexhage and Murphy 2010).

Since then, sustainability has become an important issue on the global agenda, and a “new era of sustainability” (Laine 2011; Lacy et al. 2012) has emerged, bringing with it a plethora of new (sustainability-related) challenges (Georgescu-Roegen 2002; Crews 2010; Zink 2008) for all the actors of the global arena. The 17 UN's Sustainable Development Goals (together with their 169 specific targets)—part of a new sustainable development agenda for the next 15 years (<http://www.un.org/sustainabledevelopment/development-agenda/>), and came into force on 1 January 2016—not only reconfirm the general concerns regarding an “unfinished and unfinished business”, but they also provide guidance for a variety of stakeholders (from governments and businesses to NGOs and individuals) in implementing these fundamental goals.

But, if talking about businesses, this is not an easy job at all—considering (at least):

- the (sometimes) conflictual, yet interrelated and interdependent nature of the “«triple bottom line» of economic prosperity, environmental quality and social justice” (Elkington 1997)—as all the three endings are fighting over the same (always scarce) resources, and a zero sum game (with quick, visible and positive economic/financial results) is easier to play than a multiple winners one (with uncertain, long term aggregated results);
- the (traditional) reluctance of decision makers towards considering the interests of all of a firm's (present and especially future) stakeholders when strategizing—as sustainability presupposes “meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders as well” (Dyllick and Hockerts 2002);
- the inherent difficulty and complexity of designing and (effectively and efficiently) executing—based on a multi-level and multi-purpose integrative approach—“a bottom-line strategy to save costs, a top-line strategy to reach a new consumer base, and a talent strategy to get, keep, and develop employees, customers, and your community” (Werbach 2009);
- the executives' (quite frequent) inability to come with an “overarching vision or plan” able to concretely address the sustainability challenge and to adequately guide the sustainability journey—accompanied by a tendency to waste efforts and

resources on scattered initiatives that (probably) give them—aware that “how they respond to the challenge of sustainability will profoundly affect the competitiveness—and perhaps even the survival—of their organizations” (Lubin and Esty 2010)—the illusion of control.

However, despite these difficulties—and driven by the “pressure of stakeholders (investors), legislation (...), building reputation, competitive advantage, reducing risks” (Haywood and Van der Watt 2016), while (positively) challenged by “declining resources, radical transparency, and increasing expectations” (Laszlo and Zhexembayeva 2017)—an increasing number of companies have embraced (through their strategic leadership) the sustainability challenge, making the shift towards a long-term holistic approach of businesses, able to contribute not only to their sustainable competitiveness, but also to the fulfilling of the old commandment regarding the reconciliation between businesses and society at large.

Fuelled by both its palpable rewards—measurable in terms of increased positive social and environmental impacts (Young and Tilley 2006; Epstein and Buhovac 2014; Doppelt 2017) and improved overall performance and competitiveness of firms (Willard 2012; Lopez-Valeiras et al. 2015; Morioka et al. 2017)—and its image and reputation related ones (Nakra 2000; Czinkota et al. 2014; Alon and Vidovic 2015)—this shift towards sustainability has increasingly gained legitimacy and consistency.

Basing their strategic approaches on the “classical” search for competitive advantage—which distinguishes “a firm that achieves superior performance relative to other competitors in the same industry or the industry average” (Rothaermel 2017)—and aware that: (a) “sustainable competitive advantage is possible only by performing different activities from rivals or performing similar activities in different ways” (Dess et al. 2014), on one hand, and (b) innovation is “one of the basic determinants of success achieved by economic entities” (Okreglicka 2016), on the other hand—these companies have (progressively) realized that “sustainability is now the key driver of innovation” (Nidumolu et al. 2009), and “embedded sustainability: the next big competitive advantage (Laszlo and Zhexembayeva 2017).

Against this background—and in order to bring together, under a single roof, all the new endeavors (initiatives and actions able to provide competitive advantages) firms put into practice in search for sustainability—the concept of sustainable innovation (Achterkamp and Vos 2006; Foxon and Pearson 2008) has emerged—as “a process where sustainability considerations (environmental, social, financial) are integrated into company systems from idea generation through to research and development (R&D) and commercialization. This applies to products, services and technologies, as well as new business and organization models” (Charter and Clark 2007)—and an entire literature on the subject has flourished, emphasizing on aspects such as: “drivers and barriers” of sustainable innovation (Dearing 2000), “evolutionary approaches for sustainable innovation policies” (Nill and Kemp 2009), “facilitating sustainable innovation through collaboration” (Sarkis et al. 2010), “managing innovation for sustainability” (Seebode et al. 2012), “business models for sustainable innovation”

(Boons and Lüdeke-Freund 2013), and “sustainability-oriented innovation” (Adams et al. 2016).

Considering all the above, the main research questions the paper aims to address refer to the ways the worlds’ most sustainable companies have managed to overcome the sustainability challenges, and the role sustainable innovation has played in this process; thus, in the following sections the paper will explore the universe of the most sustainable corporations—as it is configured by the Corporate Knights’ 2018 *Global 100 Most Sustainable Corporations*—from multiple perspectives, in search of relevant insights: the second section of the paper is performing an overview on the 2018 *Global 100 World’s Most Sustainable Corporations* (in terms of represented countries and industries), followed by a closer look at the *Top 10 Companies in 2018 Global 100 World’s Most Sustainable Corporations* (focusing on: geographies, industries, sectors and dynamics—on one hand, and on the comparative analysis of the “universal”, “industry neutral” sustainability-related KPIs—on the other hand); the third section of the paper is analyzing how the *Top 10 Companies in 2018 Global 100 World’s Most Sustainable Corporations* are implementing sustainable innovation—the solution they found to the challenges of sustainability—by corroborating these companies’ engagements towards sustainability (as declared on their websites) with their sustainability-related performances (as reflected in their scores—based on relevant KPIs—according to Corporate Knights); the fourth section of the paper is dedicated to its main conclusions, and at the final one: to the references.

2 The Universe of the World’s Most Sustainable Corporations

Since 2005, Corporate Knights annually releases—in Davos, when and where the *World Economic Forum Annual Meeting* takes place (aspect that certifies the global interest regarding the advancements registered in the field of corporate sustainability, on one hand, and the high reliability on the Corporate Knights’ endeavor and results in revealing these advancements, on the other hand)—the list of the *Global 100 Most Sustainable Corporations*. Unlike other globally renown (more or less similar) benchmarks—developed based on the *perceived legitimacy* of companies, as it is seen *through the eyes of their stakeholders* (Ogreaan 2014)—Corporate Knights has embraced an “*objective, data-driven approach* for assessing global sustainability performance”, aiming “to measure as much positive and negative corporate impact as possible” (Corporate Knights 2018c). Thus, its (continuously improving) methodology for ranking the *Global 100 Most Sustainable Corporations* “is based on up to 17 key performance indicators (KPIs) covering resource, employee, financial management, clean revenue and supplier performance” (Corporate Knights 2017).

The 2018s (aggregate and objective) results regarding the *Global 100 World’s Most Sustainable Corporations* have legitimized Corporate Knights to declare that the “*Most Sustainable Corporations outperform and outlive*” (Corporate Knights

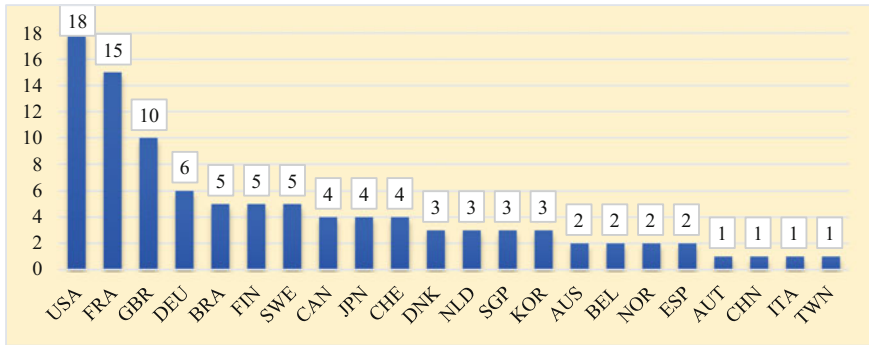


Fig. 1 Number of companies in 2018 Global 100 World's Most Sustainable Corporations—by country. Source of data <http://www.corporateknights.com/>

2018a)—as these companies, beside their sustainability related performances, also register strong financial results and a propensity towards long lasting; all these three features together basically prove the viability of the core philosophies and business models the sustainability leading companies have chosen, while suggesting their strategic commitments towards (continuous) innovation.

2.1 A Quick View on the 2018 Global 100 World's Most Sustainable Corporations

Granting that “all industries and geographies are automatically considered” (Corporate Knights 2017), the overall analysis of Corporate Knights' 2018 Global 100 World's Most Sustainable Corporations (Corporate Knights 2018b) reveals the following:

In terms of represented countries (Fig. 1):

- out of the 22 countries represented by their companies in 2018 Global 100 World's Most Sustainable Corporations, three of them—United States, France and United Kingdom—not only are making the Top 3 contributions, but they count for almost a half of the Global 100 (43 companies in total). Adding to these three countries the remain of Top 10 represented countries—Germany, Brazil, Finland, Sweden, Canada, Japan, and Switzerland—will make more than three quarters of the Global 100 (76 companies). The last “quarter” gathers 12 countries—encompassing three groups of countries counting with three, two, and one company respectively in the Global 100;
- by continents: 59 companies from Global 100 are originated in European countries (Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, and United Kingdom being their home country), 22 companies have their headquarters in North America (United States and

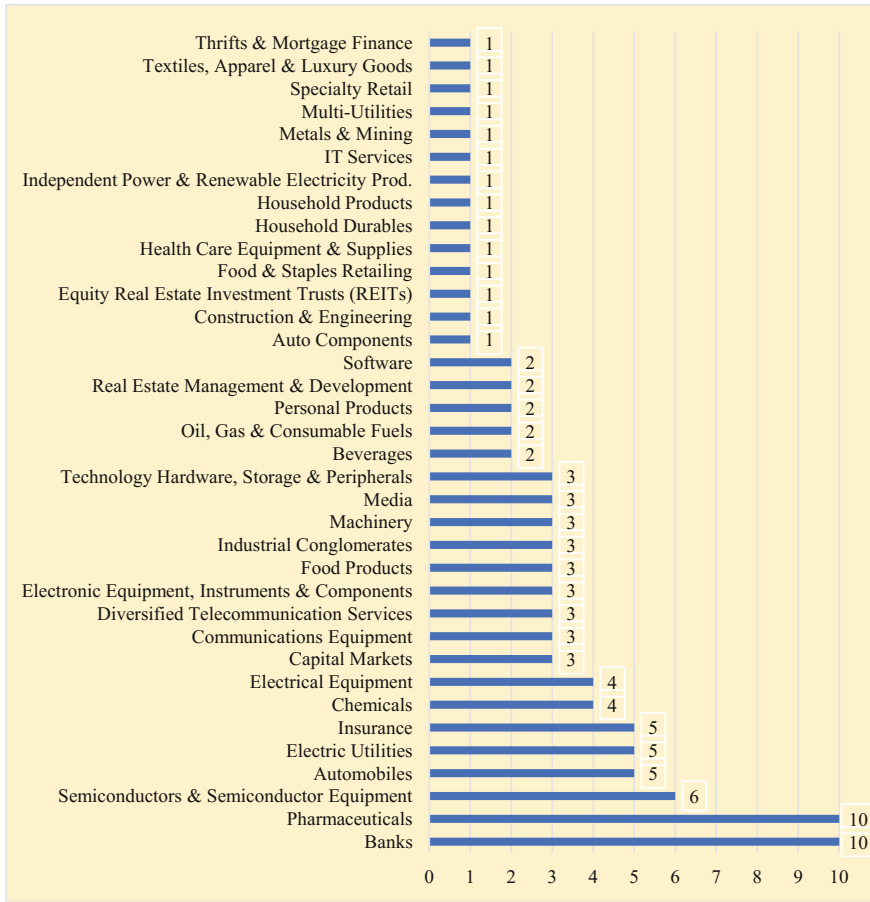


Fig. 2 Number of companies in 2018 Global 100 World’s Most Sustainable Corporations—by industry. *Source of data* <http://www.corporateknights.com/>

Canada), 12 companies in Asia (China, Japan, Singapore, South Korea, and Taiwan), 5 in South America (Brazil), and 2 in Australia.

In terms of represented industries (Fig. 2):

- the 2018 *Global 100 World’s Most Sustainable Corporations* gathers companies from 36 industries, the best represented ones being: Banks, Pharmaceuticals and Semiconductors and Semiconductor Equipment; these Top 3 industries are counting together for more than a quarter (26 companies) out of the total number of companies;
- a half of the *Global 100* is covered by (5, 4, or 3 respectively) companies operating in the following industries: Automobiles, Electric Utilities, Insurance, Chemicals, Electrical Equipment, Capital Markets, Communications Equipment, Diver-

- sified Telecommunication Services, Electronic Equipment, Instruments and Components, Food Products, Industrial Conglomerates, Machinery, Media and Technology Hardware, and Storage and Peripherals;
- the last “quarter” of the *Global 100* is made of (1 or 2 respectively) companies belonging to the following industries: Beverages, Oil, Gas and Consumable Fuels, Personal Products, Real Estate Management and Development, Software, Auto Components, Construction and Engineering, Equity Real Estate Investment Trusts (REITs), Food and Staples Retailing, Health Care Equipment and Supplies, Household Durables, Household Products, Independent Power and Renewable Electricity Prod., IT Services, Metals and Mining, Multi-Utilities, Specialty Retail, Textiles, Apparel and Luxury Goods, and Thrifts and Mortgage Finance.

2.2 A Closer Look at Top 10 Companies in 2018 Global 100 World’s Most Sustainable Corporations

The analysis of the best performers overall in terms of corporate sustainability—Top 10 Companies in *2018 Global 100 World’s Most Sustainable Corporations* (Corporate Knights 2018b) (Table 1)—brings some interesting insights as regards:

- geographies: three companies are originated in France, while two companies are originated in Finland and in the United States, and one in: Belgium, Germany, and South Korea respectively; Europe dominates Top 10 with seven companies, followed by North America (US) with 2 companies and Asia (South Korea) with one company;
- industries: Software is the only industry represented by two companies, while all the other industries in Top 10 (Oil, Gas and Consumable Fuels, Auto Components, Pharmaceuticals, Construction and Engineering, Capital Markets, Communications Equipment, Industrial Conglomerates, and Electronic Equipment, Instruments and Components) are represented by just one company;
- sectors: four companies belong to Information Technology (Dassault Systems, Cisco Systems, Autodesk, and Samsung SDI), two companies belong to Industrials (Outotec and Siemens), while the other four companies belong to: Energy (Neste), Consumer Discretionary (Valeo), Health Care (UCB) and Financials (Amundi);
- dynamics—comparative to 2017: three companies have jumped straight to Top 10 from outside the *2017 Global 100 World’s Most Sustainable Corporations* (Valeo—the 3rd company in Top 10, Amundi—the 6th, and Siemens—the 9th); five companies have improved their 2017 position (some of them quite significantly) and penetrated the Top 10 (Autodesk: from the 100th position to the 8th; Outotec: from the 90th to the 5th; UCB: from the 66th to the 4th; Neste: from the 23rd to the 2nd; and Dassault Systemes: from the 11th to the 1st), while two companies have lost some positions, but have still managed to remain in Top 10 (Siemens: from the 1st to the 9th; and Cisco Systems: from the 3rd to the 7th).

Table 1 Top 10 companies in 2018 Global 100 World's Most Sustainable Corporations

Rank 2018	Rank 2017	Company	Country	GICS Industry	Overall score (%)
1	11	Dassault Systemes	France	Software	86.13
2	23	Neste	Finland	Oil, Gas and Consumable Fuels	85.19
3	–	Valeo	France	Auto Components	83.59
4	66	UCB	Belgium	Pharmaceuticals	79.52
5	90	Outotec	Finland	Construction and Engineering	78.27
6	–	Amundi	France	Capital Markets	77.85
7	3	Cisco Systems	United States	Communications Equipment	77.02
8	100	Autodesk	United States	Software	76.92
9	1	Siemens	Germany	Industrial Conglomerates	76.71
10	–	Samsung SDI	South Korea	Electronic Equipment, Instruments and Components	75.77

Source of data <http://www.corporateknights.com/>

If comparing the Top 10 Companies in terms of their “universal” (“industry neutral”) KPIs—as they are defined by Corporate Knights (2017): “Leadership Diversity, Sustainability Pay Link, Pension Fund Status, Percentage Tax Paid, and Clean revenue”—the analysis of the 2018 Global 100 dataset (Corporate Knights 2018b) (Fig. 3) brings to light a series of quite interesting features, considering:

- Cash taxes paid ratio: Autodesk (37.3%) ranks the first amongst *Top 10*, and Neste (7.8%) ranks the last; *Top 10*'s average is 23.7%, while *Global 100*'s average is 19.1%;
- Pension Fund Status: Samsung SDI registers the highest score amongst *Top 10* (89.8%), and Valeo registers the lowest one (59.3%); *Top 10*'s average is 70.2%, while *Global 100*'s average is 62.5%;
- Leadership Diversity: (a) as concerns Women on board—Dassault Systemes has the highest score amongst *Top 10* (45.5%), and Samsung SDI has the lowest one (0.0%); *Top 10*'s average is 30.9%, while *Global 100*'s average is 28.2%; (b) as concerns Women executives—Cisco Systems scores the best amongst *Top 10* (36.0%), and Samsung SDI scores the least (3.0%); *Top 10*'s average is 20.4%, while *Global 100*'s average is 19.5%;
- Sustainability Paylink: seven companies out of *Top 10* have “mechanisms that link senior executive pay to sustainability targets” (Corporate Knights 2017)—Dassault

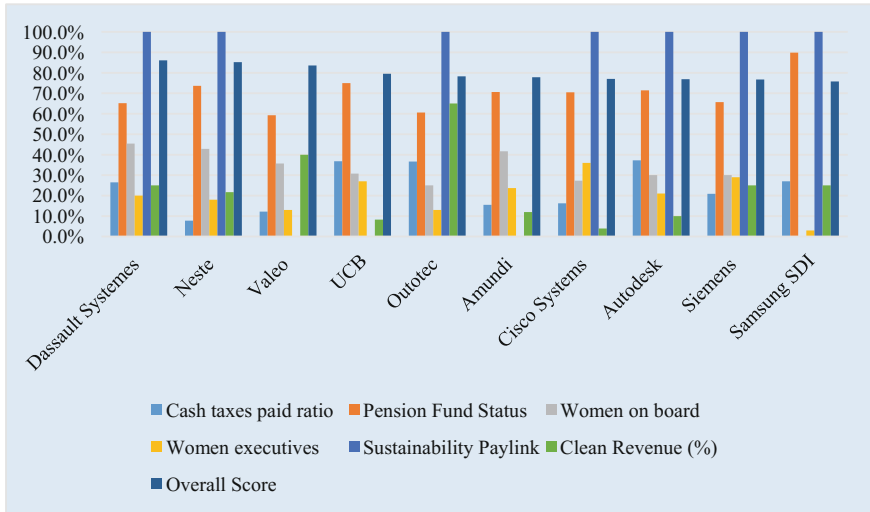


Fig. 3 Top 10 companies in 2018 Global 100 World’s Most Sustainable Corporations—Universal KPIs (% scores). *Source of data* <http://www.corporateknights.com/>

Systemes, Neste, Outotec, Cisco Systems, Autodesk, Siemens, and Samsung SDI—while three of them don’t—Valeo, UCB, and Amundi; as regards the entire universe of the *Global 100*, there are 59 corporations having implemented these kinds of mechanisms;

- Clean Revenue (%)—expressed as “percentage of (...) total revenue derived from products and services that are categorized as «clean»” (Corporate Knights 2017): Outotec ranks the first amongst *Top 10* (65.0%), and Cisco Systems the last (3.9%); *Top 10*’s average is 23.6%, while *Global 100*’s average is 17.5%.

3 Implementing Sustainable Innovation—The Cases of Top 10 Most Sustainable Corporations

An in deep focus on the Top 10 performers in 2018 Global 100 World’s Most Sustainable Corporations shows a strong relationship between their vision and/or mission statements and approaches on sustainability—as declared on the companies’ websites—on one hand, and their sustainability-related performances—as reflected into the scores these companies have got, based on the relevant key performance indicators, according to Corporate Knights (2018)—on the other hand. Internalizing the (globally proclaimed) sustainability imperative and transforming it into a corporate goal have determined a paradigm shift in the ways these companies (through their strategic leaderships) think about their businesses and search for success/performance: although facing different sustainability-related challenges and

constraints (due to their different industries and geographies), the solution they all have embraced is innovation.

Thus, sustainable innovation—in all its forms: products, processes, technologies, materials and business models—has become a (sustainable) competitive advantage for these companies, helping them: (a) to proactively adapt their businesses to an increasingly complex and challenging global business environment; (b) to transform their industries (and the related ones as well) and shape new riverbeds for them—while rising new challenges in front of their competitors; (c) to contribute to the (re)conciliation between businesses and society (at large) on the long run—in terms of both real and perceptual impacts on “people” and “planet”.

A concise content analysis of the vision/mission statements, strategies and approaches to sustainability employed by the Top 10 Companies in 2018 Global 100 World’s Most Sustainable Corporations supports and illustrates the above mentioned paradigm shift:

For the France-based software corporation *Dassault Systemes*, ranked the first in *2018 Global 100 World’s Most Sustainable Corporations*, “leading sustainable innovation”—by providing specialized solutions in fields such as “energy transition, sustainable mobility, and in the creation of intelligent cities”—is not only the way it approaches sustainability, but it also is a commitment embedded into the company’s vision/mission statement and a way of contributing “to the improvement of society and quality of the environment” (<https://www.3ds.com>).

The Finland-based corporation *Neste*, operating into the oil, gas and consumable fuels industry (which is quite a sustainability “challenged” one) and ranked the second in *2018 Global 100*, has assumed for itself a vision of “creating responsible choices every day”, complemented with a mission emphasizing on industry-innovation—through “business transformation towards renewable solutions”; positioning sustainability and “cleaner solutions” at the core of its strategy has helped Neste to operationalize its vision and mission statements—and to make them real, by providing a “global range of products and services (... which ...) allows customers to lower their carbon footprint” (<https://www.neste.com>).

By placing itself “at the heart” of the three revolutions that disrupt the automotive industry nowadays, and having sustainability “embedded in its DNA”, the France-based corporation *Valeo*—ranked the third in *2018 Global 100* (and the first in terms of water productivity, with a 100% score)—is also a global innovator and a sustainability promoter, in the same time; striving to “create innovative products and systems that help protect the environment, reduce CO₂ and other greenhouse gas emissions and promote the development of intuitive, connected and more autonomous driving”, Valeo is also “committed to a growing in a sustainable way that is beneficial for (...their...) employees, the environment and society as a whole” (<https://www.valeo.com>).

The Belgium-based corporation *UCB*, representing another “sensitive” industry—pharmaceuticals—and ranked the fourth in *2018 Global 100* (while being the second in terms of innovative capacity, with a 26.2% R&D/revenue 2014–2016 score), is devoted to innovatively address “the radical changes (...that...) are taking place in the eco-system of care”; guided by a vision that places “the patient at the

center of its activities of identifying innovative and sustainable solutions through a socially responsible approach”, the strategy USB is following in order to accomplish its vision/mission and to be successful in the highly competitive and challenging industry of pharmaceuticals encompasses innovation and sustainability in both the ends it pursues and the means it employs in order to reach them (<https://www.ucb.com/>).

Aware of the global megatrends affecting its business (as well as the industry it belongs to), *Outotec*, the Finland-based construction and engineering company ranked the fifth in *2018 Global 100*, has decided to transform the “increasing urbanization of the world and subsequent need for resource efficiency and sustainability” into its business opportunities; this ambitious sustainability-driven endeavor (which has the potential of creating significant spillover effects) is encapsulated into Outotec mission—aiming for the “sustainable use of Earth’s natural resources”—and supported by the history of “breakthrough technologies” and “innovative solutions” the company has been developed and provided to its clients (<https://www.outotec.com/>).

Operating into the highly competitive, volatile and sensitive industry of capital markets, *Amundi*, the France-based company ranked the sixth in *2018 Global 100*, has set for itself the corporate ambition “to be in the top 5 of global asset managers”—recognized as such not only based on the quality of its expertise and services or its “solid earnings growth and profitability”, but also based on its “commitment as a responsible firm”; Amundi’s innovative approach on sustainability has been continuous and consistent—as “Amundi has made of social commitment one of its fundamental pillars since its creation”, and it is projected to be coherent and integrated also in the future—by bringing together three main dimensions: “mainstreaming ESG (...environmental, social and governance...) criteria in its investment policies, in addition to financial criteria; strengthening its impact investing policy; (... and ...) continuing its engagement approach towards issuers and its specific initiatives focused on climate change)” (<http://about.amundi.com>).

For *Cisco Systems*, the United States-based communications equipment company ranked the seventh in *2018 Global 100* (and the first in terms of energy productivity, with a 100% score), the mission “to shape the future of the Internet by creating unprecedented value and opportunity for our customers, employees, investors, and ecosystem partners” reveals the company’s engagement towards continuous and accelerated innovation—as strategy for both corporate success and industry transformation; a variety of sustainability-related areas (that concern the company, its stakeholders, and the society and the environment at large) and specific targets (to be met in these critical areas) are driving the approach the company embraces in search for success—subsumed to the idea that “what is good for the world and what is good for business are more closely connected than ever before” (Chuck Robbins, CEO) (<https://www.cisco.com/>).

Autodesk, the United States-based software company ranked the eight in *2018 Global 100* (while being the first in terms of innovative capacity—with a 32.4% R&D/revenue 2014–2016 score, and also the first in terms of carbon productivity—with a 100% score) is another leading innovator and industry transformer, aim-

ing—through the strategy it pursues—“to lead the industries (... it serves...) to cloud-based technologies and business models”; inspired by the mission of “helping people imagine, design, and create a better world”, Autodesk’s approach on sustainability is both visionary—considering its goal of “designing a sustainable future”—and realistic—if taking into account the company’s (declared and pursued) commitments towards the specific areas it “can have the greatest impact” (<https://www.autodesk.com>).

The Germany-based *Siemens* corporation, an industrial conglomerate whose “portfolio ranges from power plant construction and wind turbines to rail vehicles and medical technology”, and that’s ranked the ninth in *2018 Global 100*, has a powerful innovation-driven mission—stating that “Siemens impresses with innovations that make real what matters”; aiming to set the benchmark in the fields it operates (therefore having no alternative to innovation), the company integrates sustainability—as “core principle”—into its businesses approach, being concerned not only for “the sustainable use of natural resources”, but also for “the sustainable development of businesses, communities, and countries” (<https://www.siemens.com>).

For Samsung SDI, the South Korea-based corporation ranked the tenth in *2018 Global 100* and that represents (through its two main business areas: energy solution and electronic materials) the electronic equipment, instruments and components industry, the mission/management philosophy is “to create superior products and services which can help bring about a better global society”; in order to accomplish this mission—that expresses the company’s aspiration and engagement towards innovative industry leadership, and also a strong concern for the impacts it generates—Samsung SDI has developed a complex approach to sustainability, that encompasses, under the umbrella of its Sustainability Management System, various dimensions and performance targets to be proactively met, in accordance with the “ever-changing sustainability issues” (<http://www.samsungsdi.com/>).

4 Conclusions

The Corporate Knights’ annual ranking of the Global 100 Most Sustainable Corporations (Corporate Knights 2018a)—developed based on a complex, objective and transparent methodology (Corporate Knights 2017) and which is also disseminated and analyzed by a series of other leading media and/or portals: Forbes (<https://www.forbes.com/>), Newswire (<https://www.newswire.ca/>), Eco-Business (<http://www.eco-business.com/>), Markets. Business Insider (<http://markets.businessinsider.com/>)—proves that: (a) sustainability no longer is an adjuvant (or, worst, a “proclamation” helping you “to look good”) for the companies that are leading the “sustainability game”—it is now encapsulated in the ways they think about and act on their businesses (otherwise they would not have been capable to realize the KPIs able to position them amongst the most sustainable corporations); (b) innovation, on the other hand, (re)confirms its vocation of being the generic/ultimate source of competitive advantage—this time applied to solving the sustainability-related issues (as all

the companies in 2018 Global 100 have gained their spot and particular KPIs scores based on innovative successful initiatives and actions aiming for sustainability).

The in-deep analysis of the Top 10 companies in 2018 Global 100 World's Most Sustainable Corporations—based on Corporate Knights' data and indicators, corroborated with the companies' vision and/or mission statements and approaches to sustainability—certifies: (a) the strategic commitments these companies have made towards sustainability and the role of sustainable innovation as catalyst for competitive advantage under the new circumstances—as all the companies' statements are backed by concrete actions and palpable results; (b) that sustainable innovation has started to crystallize as the main competitive advantage of these companies—which demonstrates not only that the challenges of sustainability can be overcome, but also that they can be transformed into opportunities, capitalized on and transformed in sources of (sustainable) competitive advantage in the new era of sustainability.

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Business Models in the International Banking System—From Traditional to Innovative Banks



Ramona Orăștean 

Abstract The international banking system after the global crisis is a system different from the one before, as a result of the crisis itself and global developments (shifts in global economic power, demographic and social change, new regulations, advances in technology and new customer behaviors). This paper analyzes the developments in the banks' business models, showing the diversity of them at the global level: from retail-funded and wholesale-funded commercial banking models to investment and digital banking business models. The study continues by presenting a performance assessment of top banks from 2008 to 2018 in terms of capital, assets and profit, using The Banker's database. The results reveal that the international banking system has been reconfigured and it is no longer dominated by the United States but by the China, while Europe's banks are starting now to recover.

Keywords Banks' business models · Traditional bank · Digital bank
International banking system

1 Banks' Business Models—A Literature Review

For many years, the concept of “business model” has been neglected by the economic and finance theory. For banks, most studies use cluster analysis to identify certain patterns in the banking industry while some of them examine two periods, ante and post global financial crisis.

Martel et al. (2012) analyze the impact of the financial crisis on the business models of 22 largest systemically important financial institutions for the period 2006–2010. They found that commercial banking oriented business models proved more resilient during the crisis compared with the investment banking due to their relatively modest exposures to trading and derivatives activities, their greater reliance on stable sources of funding and larger diversity of business lines. Wehinger (2013) thinks that major

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European banks have adjusted their activities and business models and when the capital rules become more important in risk management, the risk capital models have become more sophisticated. Gehrig (2015) discusses the evolution of banking business models over the past two decades, assessing that globalization, regulation and monetary policy have contributed to a massive shift in banks' business models from long-term relationship based banking to short-term trading of securitized derivatives. He calls for restoring resiliency that requires the strengthening of market forces.

Roengpitya et al. (2014) consider that institutions engaging mainly in commercial banking activities have lower costs and more stable profits than those more heavily involved in capital market activities and that retail banking has gained ground post crisis. Using a clustering method based on the Ward's algorithm, they tested on 1299 indicators from 222 banks operating in 34 countries for the period 2005–2013, identifying three main business profiles: a retail-funded commercial bank, a wholesale-funded commercial bank and a capital markets-oriented bank. Their results for 2013 were: the North American banks had either a retail-funded or trading profile while 33% of the European banks had a wholesale-funded model; 90% of banks from emerging market economies preferred the retail-funded model; the distribution of business models of the global systemically important banks was split between the retail-funded (14), wholesale-funded (2) and trading models (12). Roengpitya et al. (2017) continue their research using a panel of 178 banks for the period 2005–2015, classifying them into four business models: a retail and a wholesale commercial banking model, a trading model and a model that combine the other three characteristics. They concluded that banks switching into the retail-funded model have registered a return on equity improving by 2.5% and those switching into the wholesale-funded model deteriorated by 5% on average.

There are studies that explore the banks' business models in Europe and Eurozone. In December 2014, Ayadi and De Groen (2014) released the first pilot exercise monitoring the business models of 147 European banks (Banking Business Models Monitor—Europe) that are classified into four groups: investment, wholesale, diversified retail and focused retail. Ayadi et al. (2015) extended data to 2542 banks that cover more than 95% of total assets of the European Union plus EFTA countries from 2005 to 2014. They identified five business models: 1—focused retail; 2, 3—diversified retail; 4—wholesale; 5—investment. It is highlighted that investment and wholesale banks tend not only to accelerate the accumulation of risk at system level, but also to be less resilient to extreme shocks and that a large number of small and medium-sized banks (focused retail) will most probably be facing high compliance costs as a result of the implementation of the new banking regulations. Peters and Duchesne (2017) examined the impact of EU banking supervisions, low interest rate environment and digital revolution on the banks and explained why banks must reconsider their business models in order to remain viable and sustainable. They have suggested the digitalization of banking activities for widening financial services supply using a strategy of profit diversification. For the Eurozone banking sector, Farne and Vouldis (2017) identified four business models using a cluster analysis: traditional commercial, complex commercial, wholesale funded and securities holding

banks. Farkas (2018) thinks that EU banks have significantly strengthened their capital positions and European banking sector are perceived as more stable and resilient. For finding the adequate business model, he recommends to look at macroeconomic developments, structural changes and banks' focus, rationalization and improving efficiency, and technology. As regarding the rapid technology evolution, banks need to get closer to their customers by creating a completely virtual experience.

Various researchers and institutions talk about structural changes in banking industry after the global crisis and possible response to the new demands and behaviors.

Căpraru (2011, p. 159) has felt that future trends of international banking activity will be under the sign of reforms that follow the effects of the crisis. Draghi (2016), President of the European Central Bank, declared the need for banks to change their range of activities in the new macroeconomic environment: "banks may have to do more to adjust their business models to the lower growth/lower interest-rate environment and to the strengthened international regulatory framework that has been put in place since the crisis". Scardovi (2016) believed that the global financial system is far from fully stabilized and there are threats coming from shadow and digital players that will challenge the traditional banks and will determine major disruption in the prevailing business model of the banking industry. Bratu (2016) presents the regulation of banking activity in the context of global crisis from a methodological and critical perspective. McCauley et al. (2017) remark that a decade prior to the financial crisis, banking became increasingly global and grew faster than world economic activity and trade. Geva (2018) paper examines the banks possible response and their adaptation to new demands, needs, and requirements, considering that banking has good odds of survival in the digital era.

PricewaterhouseCoopers (PwC 2014) has identified five global 'megatrends' that are re-shaping the business world: demographic and social change; shifts in global economic power; rapid urbanization; climate change and resource scarcity; and technological breakthroughs. For the banking industry, demographic and social change will determine new customer demands and stakeholder expectations, while technological breakthroughs will change everything from customer relationships to business models.

Committee on the Global Financial System of the Bank of International Settlements (BIS 2018) assumes that the global financial crisis, the post-crisis market environment and changes to regulatory frameworks have had a marked impact on the banking sector globally. In response to their new operating landscape, banks have been re-assessing and adjusting their business strategies and models.

In recent years, banks' business models evolved in response to new regulations, changes in the economic and financial environment, and advances in technology, very different ante and post global crisis. Most post-crisis movements were towards retail-funded commercial banking comparing to pre-crisis period, when the dominant model was the wholesale-funded. The group of trading-oriented banks maintained relatively constant throughout the period.

2 International Banking System—Post-crisis Evolutions

During the global financial crisis, the banking activity has contracted and banks' profitability has declined at the international level. A decade on from the first signs of crisis, the international banking system seems to consolidate its position. It has experienced a constant change, with the top 5 positions occupied in 2018 by four Chinese banks and one from the United States.

According to The Banker's Top 1000 World Banks (The Banker 2018), in 2018 banks recorded a double-digit growth in both Tier 1 capital (11.7%) and pre-tax profits (15.6%) marking the biggest annual increase since 2009. In other terms, the global banking sector holds 80% more capital than at the outbreak of the global financial crisis in 2008 and the capital is growing faster than assets (11.7% respectively 9% in 2018 comparing to previous year).

Aggregate total assets of the Top 1000 World Banks represented USD 96.4tn in 2009 and USD 123.7tn in 2018. The geographical spread remained stable for many years (Toma 2011). In 2009, the first position was held by European Union (USD 46.4tn) followed by United States (USD 12.7tn), Japan (USD 9.8tn), United Kingdom (USD 9.6tn), China (USD 8.6tn) and Brazil (USD 1.3tn). Power shift in the international banking system can be observed in recent years, accelerating by the crisis: from Europe, United States and Japan towards emerging markets, especially China. In 2018, bank assets have reached USD 29.1tn in China, USD 26.1tn for Eurozone, USD 13.5tn in Japan, USD 16.1tn for the US and USD 7.5tn in the UK.

China's banks are the biggest in the Asia-Pacific region, continuing to dominate the ranking, both in number, assets (23.5%) and in terms of capital (25.0%) in 2018. Industrial and Commercial Bank of China (USD 324bn), Bank of China (USD 272bn), China Construction Bank (USD 224bn) and Agricultural Bank of China (USD 218bn) hold the top four places in the *Tier 1 capital* ranking for the first year while ICBC remains the first for the sixth year running. Banking industry in China has grown rapidly over the last years closely tied to the development of the Chinese economy and the technology explosion, moving on innovative business models. A PricewaterhouseCoopers Report (PwC 2011) suggests that China's banking sector could become the world's largest asset value by 2023, surpassing the US 20 years earlier than anticipated before the crisis. A Financial Times analysis (Financial Times 2017) shows that China overtakes Eurozone as world's biggest bank system: the value of China's banking system is more than 3.1 times the size of the country's annual economic output, compared with 2.8 times for the Eurozone and its banks.

Europe's banks are starting to recover after several bad years, Western Europe holds the power in the region's banking systems and increases the share of global banking profits to 20% in 2018. Therefore, the international banking system is no longer dominated by the United States but by the China (Table 1).

In times of low interest rates (2009–2016), the banking industry's return on equity (ROE) falls to 8–10% and it is growing to 10–20% in 2018. Global banking *profits* are now approaching their 2007 pre-crisis peak. In 2018, global share of profits is as follows: Asia-Pacific 43.38%; North America 24.28%; Western Europe 20.25%;

Table 1 Top 10 banks by Tier 1 capital in 2016–2018

Rank 2016	Rank 2018	Bank	Tier 1 capital (USD mn.)	Pre-tax profits (USD mn.)	Assets (USD mn.)	ROE (%)	ROA (%)
1	1	ICBC	274,432	55,968	3,422,154	20.39	1.64
2	2	China Construction Bank	220,007	45,993	2,827,348	20.91	1.63
3	5	JP Morgan Chase & Co	200,482	30,807	2,351,698	15.37	1.31
4	3	Bank of China	198,068	35,681	2,591,001	18.01	1.38
5	4	Agricultural Bank of China	185,607	35,571	2,741,355	19.16	1.30
6	6	Bank of America	180,778	22,150	2,147,391	12.25	1.03
7	8	Citigroup	176,420	24,801	1,731,210	14.06	1.43
8	7	Wells Fargo	164,584	33,641	1,787,632	20.44	1.88
9	10	HSBC	153,303	18,867	2,409,656	12.31	0.78
10	9	Mitsubishi UFJ	131,753	13,307	2,648,521	10.10	0.50

Source www.thebanker.com, accessed July 2018

Latina America and Caribbean 4.51%; Middle East 3.90%; Central and Eastern Europe 1.88%; Africa 1.80% (The Banker 2018). The highest losses were in India where the banks turned a USD 7.9bn profit into a USD 9.2bn loss, the largest in the world.

Changing in the ranks of the Top 25 banks by assets in 2016 compared to 2009 can be observed in Table 2.

The Top 25 banks accounted 46% of total assets of the Banker's Top 1000 World Banks in 2009 and 36.3% in 2016.

3 A Digital Banking Business Model

In a world where everything moves quickly, banks' clients are expecting more than basic products and services. In an environment where customers demand goods and services with a simple click of a smart device, banks have to run faster to meet new needs and behaviors. Now, many banks focus on innovation, start to implement a digital transformation strategy and launch a new *digital banking business model*.

Global Finance's Best Digital Awards honor banks, by country and regional sub-category that have pushed boundaries in meeting challenges with digital solutions

Table 2 Top 25 banks by assets in 2009 and 2016 (USD bn)

Bank	Country	Assets 2009	Rank 2009	Assets 2016	Rank 2016
BNP Paribas	France	2965	1	2168	8
Royal Bank of Scotland	UK	2750	2	1217	20
Credit Agricole	France	2441	3	1847	10
HSBC Holdings	UK	2364	4	2410	6
Barclays	UK	2235	5	1672	15
Bank of America	US	2223	6	2147	9
Deutsche Bank	Germany	2162	7	1771	12
JP Morgan Chase	US	2032	8	2352	7
Mitsubishi UFJ Financial Group	Japan	2026	9	2649	4
Citigroup	US	1857	10	1731	13
Industrial Commercial Bank of China	China	1726	11	3422	1
ING Bank	Netherlands	1677	12	911	26
Lloyds Banking Group	UK	1665	13	1204	21
Banco Santander	Spain	1600	14	1457	17
Mizuho Financial Group	Japan	1557	15	1717	14
Groupe BPCE	France	1482	16	1268	19
Société Générale	France	1475	17	1450	18
China Construction Bank	China	1409	18	2827	2
UniCredit	Italy	1338	19	935	25
UBS	Switzerland	1300	20	952	24
Bank of China	China	1281	21	2591	5
Wells Fargo	US	1244	22	1788	11
Sumitomo Mitsui Financial Group	Japan	1220	23	1657	16
Commerzbank	Germany	1216	24	–	–
Agricultural Bank of China	China	1026	25	2741	3

Source www.thebanker.com, accessed January 2018

and providing their customers with exceptional digital experiences (Global Finance 2017). Winners are selected based on the strength of the digital measures implemented both within and outside the company with an aim to increase operation efficiency and online customer satisfaction. For 2017, Citi was declared 'Best in Mobile Banking' and 'Most Innovative Digital Bank' in Central and Eastern Europe, North America, Latin America, Asia-Pacific, Africa and Middle East and 'Best in Mobile Banking' in Western Europe.

In the same time, Euromoney (2017) announced Citi 'best digital bank' in 2017. In 2016, Citi clients initiated or authorized transactions with a total value of approximately USD 1.84tn via mobile platforms, representing 240% growth from 2015. Corporate and institutional users of CitiDirect BE Mobile and Tablet have increased from 900 in 2013 to 25,540 in 2016. Mobile usage is up 46% in North America, 35% in Asia and 59% in Mexico and the bank was adding 5 mobile users a minute/6500 every day in 2016. Forwards, Citi aims to develop new banking apps.

According to World Finance (2017), top five most innovative digital banks include:

1. DBS—the world's best digital bank in the Euromoney awards, thanks to its simultaneous embrace of biometrics, artificial intelligence and intuitive tech.
2. Atom—an app-based bank that uses a low-cost digital model, providing face and voice biometrics.
3. Nutmeg—one of the most established mobile-based wealth management platforms that offers a user-friendly interface for investment portfolio management.
4. Mondo—an app-based bank that can be used to open an account without a human conversation, focusing only on the digital experience.
5. Barclays—a traditional bank that speed its entry into the digital world, having a top-rated banking apps for both Apple and Android.

Barquin and Vinayak (2016) consider that the digital revolution in banking has only just begun, discussing about a new model—*digital-only banking business*—that can meet an evolving set of customer expectations quickly and effectively. They have identified six success factors to build such a model: (1) focus on where the real value is; (2) constantly test to refine the customer experience; (3) organize for creativity, flexibility, and speed; (4) create an ecosystem of partnerships; (5) build a two-speed IT operating model; (6) get creative with marketing.

Business Insider (2016) reveals that banking is a rapidly changing industry and there is a moving to digital-only banks, in particular by Millennial generation. On the one hand, traditional powers such as Bank of America, JPMorgan Chase, Wells Fargo and more have released mobile banking apps to let customers manage their accounts from their smartphones, finding resources to digitize the businesses. In fact, more than 40% of North American banks have dedicated more than 25% of their IT budget to digital transformation. On the other hand, new players have created digital-only banks that provide innovative services more easily tailored to individual customers' needs.

Digital-only banks assure banking facilities exclusively through digital platforms, such as mobile, tablets and Internet, having activities around the whole world—from United States to United Kingdom and from Europe to Canada or Asia—a short list

including: Ally Bank (US 2008), Fidor Bank (Germany 2009), HelloBank (BNP Paribas, Europe 2013), Monese (UK 2013), N26 (Germany 2013), Simple (US 2013), Soon Banque (2013), Tandem (UK 2013), Atom (UK 2014), EQBank (Canada 2014), Starling Bank (UK 2014), Monzo (UK 2015), Digibank by DBS (Asia 2016), WeBank (China 2015), BankMobile (US 2015), MYBank (China 2015), CBD NOW (UAE 2016), K-Bank (South Korea 2017).

RFi Group (2018) shows that although digital usage in banking around the globe continues to grow (the proportion of consumers using digital channels rose from 58% in the first half to 68% in the second half of 2017), consumers are moving more towards the digital channels of traditional players rather than the digital-only providers (global appetite dropped from 74% in the first half to 63% in the second half of 2017).

Millennial—a new type of client—needs modern financial products and services and financial institutions have to develop a new generation of banking products and services. In the banking industry there is a moving to digital-only banks, in varying shares and with different speeds (from biometric identification through fingerprint or face detection, artificial intelligence, block-chain, crowdfunding and cloud computing to intuitive tech).

4 Conclusions

Ten years on from the first signs of global financial crisis, the international banking system seems to consolidate its position, with the top 5 places occupied by four Chinese banks and one from the United States in 2018.

In recent years, banks' business models evolved in response to new regulations, changes in the economic and financial environment, and advances in technology, very different ante and post global crisis. Most post-crisis movements were towards retail-funded commercial banking comparing to pre-crisis period, when the dominant model was the wholesale-funded. The group of trading-oriented banks maintained relatively constant throughout the period.

In a world where clients demand goods and services with a simple click of a smart device, banks need to run faster to meet new needs and behaviors. Now, many banks focus on innovation, start to implement a digital transformation strategy and launch a new digital banking business model. Some traditional banks are digitalizing their businesses while new players create digital-only banks that provide innovative products and services.

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Theoretical Aspects of Evaluating Antitrust Regulation Institutions Efficiency



Sergey Petrov 

Abstract The paper proposes an interpretation of the concept and evaluation criteria of antitrust regulation institutions efficiency which are based on the prerequisite of maximizing public welfare. Using the proposed approach it is shown that the goal of efficient antitrust regulation institutions is to increase public welfare and that they should be provided with resources necessary to implement them. Based on the proposed approach the efficiency of the Russian antitrust law in the sphere of revealing the availability of collective dominance of economic entities on goods markets is analyzed. Using the wholesale market of electric energy and the Russian oil-refining industry as an example it is shown that the current legislative criteria do not make it possible to reveal any possibility for separate economic entities to affect the conditions of market functioning. This in its turn results in the escalation of operation costs of both market participants and the antitrust authority.

Keywords Institution efficiency · Antitrust regulation · Industrial organization

1 Introduction

Modern economics is a complex mechanism of interaction of economic agents possessing a mutual impact potential. It is generally believed that one of the most negative forms of such an impact is that economic entities possessing a monopoly power use their dominant position. An unlimited market power of economic entities results in the redistribution of consumers' gain in favor of companies dominating in the market. A possibility of abuse of the dominant position makes it necessary to curb economic entities' activities related to the limitation of competition. To solve these problems antitrust regulation institutions aimed to counteract economic entities' opportunist behavior and to support the competitive market basis were set up. On the other hand, antitrust regulation itself can hamper competition turning into not an instrument of

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its development but into a mechanism of weaker market participants' protection from those who attain their positions by competitive methods. It should be remembered that the target goal of antitrust regulation is retaining the balance of competitive and monopoly-regulating forces in order to maximize public welfare but not to eliminate monopolies. The above propositions dictate the need of evaluating the efficiency of antitrust regulation institutions.

Economists supporting the institutional economic theory paid great attention to the issue of antitrust regulation efficiency. Beginning with T. Veblen economists belonging to this school treat an economic agent as restrictedly rational and taking decisions under conditions of imperfect information. T. Veblen wrote that consumers were exposed to various public and psychological effects which urge them to make decisions beneficial for large companies (e.g. conspicuous consumption). J. Commons considered that the main task of any government was to provide mutual understanding among various strata of society in implementing the demonopolization of economics (Raskov 2010). J. K. Galbraith divided capitalism into two systems—planned and market economies—and showed the need to control the planned system as a family of big businesses affecting market operation. O. Williamson proved the importance of transaction cost accounting when analyzing problems of competition. According to O. Williamson (1996) restrictions on concluding institutional agreements between economic agents imposed by antitrust law may lead to increasing transaction costs and, as a consequence, to decreasing public welfare. As a result, institutionalists showed that an institutional medium was one of the major conditions of market functioning. Establishing efficient institutions promotes the development of competition due to specification and protection of property rights. Followers of the economic theory of law which is a direction of the neo-institutional economic theory have proved that creation of purely competitive market results in decreasing public welfare as benefits of antitrust regulation instruments become lower than the costs of their use. R. Posner (2001) emphasized the importance of introducing the criterion of economic performance for monopolies. W. Kovacic (1999) pointed out the absence of modern institutions of antitrust regulation. R. Bork (1993) came to the conclusion that only some kinds of economic activity could be treated as anti-competitive ones as the goal of antitrust regulation is increasing public welfare and not supporting individual rivals. F. McChensey (1991) revealed possible negative consequences of the policy of downsizing for society and pointed out the absence of effective instruments of determining the competitive and anticompetitive behavior of economic entities. It is worth mentioning that the majority of researchers studying antitrust regulation institutions considered only certain aspects in an attempt to find their most effective form. Thus, while analyzing the efficiency of antitrust regulation institutions it is important to take into account a number of factors.

2 An Economic Approach Towards the Evaluation of the Antitrust Regulation Institutions Efficiency

2.1 Theoretical Approach

The economic theory development has proved the possibility of obtaining benefits by both consumers and producers, with markets deviating from a perfect competition to the point when economic entities attain a dominant position. Under these conditions antitrust regulation plays an important role by affecting the performance of market functioning. Therefore, the efficiency of antitrust regulation institutions also influences the level of public welfare.

The efficiency of an institution is determined by the way this institution realizes its functions. A maximum efficiency of the institution is achieved when the best result is obtained within specified costs or when the desired result is obtained with minimum costs. It can be seen that efficient institutions suit society's needs as they help generate additional wealth which is distributed between individuals in different ways. As a rule, this effect is achieved by expanding the possibility of exchanges between economic entities. The use of the concept of efficiency in the analysis of institutions makes it possible to use various criteria of evaluation, for example, the Pareto, Kaldor-Hicks and Rawls criteria of utilitarianism. The common feature of these criteria is the necessity to maximize public welfare. Efficient institutions are to increase public welfare and to optimize the distribution of resources by creating additional incentives and enhancing possibilities for economic entities to carry out activities, to make investments and to conduct transactions.

In analyzing the efficiency of institutions, an analysis of their feasibility seems important. It is necessary to assess the possibility of introducing an institution as the activity of even an efficient institution can be blocked in the course of some political process. The feasibility also includes an opportunity of bringing an institution into service. An institution is feasible if costs of its functioning do not exceed the budget restrictions of the state. If the costs of functioning of an institution are higher than budget restrictions, it either won't operate at all or will function only partially.

As a result, to provide the institution efficiency two conditions should be fulfilled: (1) increasing public welfare be enhancing possibilities for economic entities; (2) availability of conditions for an institution to function. Thus, an efficient institution is an institution which is provided with a resource potential, which leads to raising public welfare due to increasing incentives and enhancing opportunities for economic entities to function (Petrov 2013).

Institutions of antitrust regulation should also meet these conditions of efficiency. A strategic goal of antitrust policy with respect to particular markets is retaining the balance between competitive and monopoly-regulating forces in effective competition. According to J. Schumpeter (1995) and J. M. Clark (1940), efficient competition is a dynamic process leading to changing the structure of markets and increasing the power of entities by inventing new technologies, improving production organization modes, creating new goods, etc., which helps to create the most significant incen-

tives to carry out economic activities. Based on the antitrust policy goal and the concept of an institution's efficiency it can be said that an efficient antitrust regulation institution is an institution which facilitates maximizing public welfare by creating conditions for efficient competition and which possesses a resource potential sufficient for implementing this institution (Petrov and Shmakov 2014). The antitrust regulation institution efficiency can be evaluated by analyzing their conformity with the following two conditions:

I. "Tendency to optimality". The activities of antitrust regulation institutions are to result in increasing public welfare by generating additional wealth and by optimizing resource allocation. In doing so, implementation costs including losses caused by their activities should not exceed the amount of the wealth created. In other words, efficient antitrust regulation institutions promote maximization of public wealth.

To determine the level of institutions' compliance with this condition, we will use the Kaldor-Hicks criterion which makes it possible to claim that if public benefits derived from actions of an antitrust regulation institution exceed costs caused by the implementation of this institution, the institution is recognized to be efficient.

$$TR_S^L + TR_M^L > TC_S^L + TC_M^L, \quad (1)$$

where TR_S^L is expected public benefits from activities of an antitrust regulation institution excluding benefits of potential violators; TR_M^L is expected private profits of potential violators from activities of an antitrust regulation institution; TC_S^L is expected public costs caused by activities of an antitrust regulation institution excluding costs of potential violators; TC_M^L is expected private costs of potential violators from activities of an antitrust regulation institution.

Public benefits from activities of antitrust regulation institutions include increasing consumers' welfare, creating favorable conditions to run business and creating conditions for an antitrust agency to operate efficiently. Public costs include public losses caused by decreasing the level of procompetitive activity, changing transactional costs of economic entities and costs of an antitrust agency spent on ensuring the observance of the antitrust law norms.

II. "Resource sufficiency" is the availability of sufficient resource capability for the function of antitrust regulation institutions. In the process of institutions' activities lack of resources or inefficient usage of them leads to occurrence of the first and second types errors, which mainly occur at realization of such institution as antitrust law and closely deal with sanctions for antitrust violations. The efficient functioning of antitrust law norms requires reducing the probability of such errors.

The usage of sanctions for antitrust law norms violations leads to reduction of expected private profits of potential violators by the amount of expected sanctions, which apply with some probability:

$$TR_M^L = TR_{M-}^L - p \cdot F \quad (2)$$

$$TR_S^L + (TR_{M-}^L - p \cdot F) > TC_S^L + TC_M^L, \quad (3)$$

where TR_{M-}^L is expected private benefits of potential violators from antitrust regulation institutions activities without applying of sanctions; p is the probability of antitrust law norms violation (which equal to the probability of punishment in the absence of first and second types errors); F is the amount of sanctions for antitrust law norms violation.

First type errors, that are an event omission, are manifested by recognizing as not guilty an economic entity which is guilty of infringing the antitrust law. Second type errors, that are false positive, are manifested by recognizing an honest economic entity guilty of infringing the antitrust law which it did not violate. When penalties are imposed for violating the antitrust law, first type errors result in reducing expected sanctions for violating the antitrust law while second type errors result in the growth of costs of economic entities which observe the law. A possibility of occurrence of the first and second types errors result in the distortion of the condition “tendency to optimality”.

$$TR_S^L + (TR_{M-}^L - p \cdot (1 - p_I) \cdot F) > TC_S^L + (TC_M^L + (1 - p) \cdot p_{II} \cdot F) \quad (4)$$

$$TR_S^L + (TR_{M-}^L - p \cdot F + p \cdot p_I \cdot F) > TC_S^L + (TC_M^L + (1 - p) \cdot p_{II} \cdot F) \quad (5)$$

$$TR_S^L + (TR_{M-}^L - p \cdot F) > TC_S^L + (TC_M^L + (1 - p) \cdot p_{II} \cdot F - p \cdot p_I \cdot F) \quad (6)$$

$$TR_S^L + TR_M^L > TC_S^L + TC_M^L + ((1 - p) \cdot p_{II} - p \cdot p_I) \cdot F, \quad (7)$$

where p_I is a probability of first type error, p_{II} is a probability of second type error; $-p \cdot (1 - p_I) \cdot F$ is an expected value of reducing benefits of potential violators as a result of imposing sanctions with taking into account a probability of first type errors; $(1 - p) \cdot p_{II} \cdot F$ is an expected value of costs rising of economic entities which did not violate the law as a result of occurrence of second type errors.

First type errors make it necessary to intensify activities of an antitrust agency as a result of reducing costs of potential violators. On the contrary, second type errors leads to the need of reducing an antitrust agency’s activity as a result of increasing costs of economic entities which do not violate the antitrust law norms. Thus, both types of errors lead to weakening the restraint of violators by means of antitrust regulation and as a result of decreasing public welfare i.e. the efficiency of antitrust regulation institutions’ activities.

In terms of changing the probability of errors an ambiguity of treating the concepts and criteria introduced by antitrust law norms is determining in the analysis of the efficiency of antitrust regulation. In doing so it is impossible to fully avoid these errors. That is why the goal of legislators is to maximally reduce the losses of public welfare when they occur. The simpler the statement of a norm, the higher the probability of errors is as simple norms establishing general frames increase the range of possible versions of interpretation of this norm. The more rigorously a norm is formulated the stronger the limitation of market participants’ activities is because even precompetitive behavior can be viewed as a violation of antitrust law.

Thus, while designing and analyzing the efficiency of antitrust regulation institutions it is necessary to account for both the condition of “tendency to optimality”

determining the efficiency of these institutions to implement the goal of increasing public welfare and the condition of “resource sufficiency” which determines the efficiency of these institutions while implementing the above institutions or institutions being developed. An insufficient account of any of these conditions leads to the adoption and implementation of institutions which do not contribute to the development of competition but on the contrary hamper it reducing public welfare.

2.2 Approbation: The Efficiency of Institutions Regulating Revealing Collective Dominance on Russian Goods Markets

Determination of the availability of dominant economic entities is one of the basic tasks of modern antitrust law. The correctness of determining the dominant position directly affects the competition level of individual markets because it helps to establish correctly any facts of violating antitrust law relating to the abuse of the dominant position: establishing monopoly prices, creating discriminatory conditions and barriers to the market entry, imposing terms and conditions of agreements, etc. Clearly defined criteria for determining the dominant position make it possible to reduce an uncertainty level for economic entities, which facilitates increasing the efficiency of economic decisions made by them. Therefore, in economic terms a correct approach to determining dominant economic entities is a guarantee of efficient functioning of antitrust regulation institutions.

Article 5 of Federal Law No. 135-FZ of July 26 2006 “On competition protection” (Federal’nyj zakon Rossijskoj Federacii 2006) stipulates 3 criteria of revealing dominant economic entities which are to be executed in the aggregate are specified:

- (1) High level of market concentration. Economic entities are recognized as dominant if a combined market share of 3 entities exceeds 50% or an aggregate share of 5 entities exceeds 70%. The position of entities is not recognized as dominant if the share of at least one of them is lower than 8%.
- (2) Stability of economic entities’ shares. The position of every economic entity is recognized as dominant if their shares remain stable in the long period.
- (3) Absence of substitute goods and a low elasticity of demand. To recognize economic entities as dominant it should be revealed that “the goods being sold or purchased by economic entities (market participants) cannot be substituted by another goods when consumed (including consumption for production purposes), the growth of a good’s price does not result in reducing demand for this goods corresponding to this growth, information about a good’s price, conditions of selling or purchasing this goods on the corresponding goods market is available to a wide group of people”.

Let us consider each of the legislative criteria in terms of its correspondence with the conditions of “tendency to optimality” and “resource sufficiency” on the example

of the wholesale market of electric energy and the oil refining industry in Russia to show their influence on economic entities' activity.

(1) High degree of market concentration. This criterion accounts for only a combined share of economic entities without regard for distribution of shared among them. In this case a market with a small number of participants with a uniform distribution of market shares can have the same level of concentration as a market with a big number of participants, with some of them having a large market share. Moreover, in a number of industries a high market share leads to minimizing average costs, which demonstrates a positive economy of scale.

For the wholesale market of electric energy high concentration is an optimal structure as an increasing economy of scale is revealed. After the 2008 reform as a result of the RAO UES restructuring the market became competitive and the concentration value level remained quite high in the power generation industry though it decreased. Ninety-two electric power suppliers—owners of power generating facilities (Reestr subektov 2017) operate on the market. According to the criterion of Article 5 of Federal Law No. 135-FZ of July 26 2006 “On protection of competition” the concentration ratios calculated for 3 and 5 entities (CR3 and CR5) in 2011 and 2013 made it possible to make a conclusion that dominant economic entities were available in both price zones (Tables 1 and 2).

Based on the concentration ratio value the industry is highly concentrated in both price zones. Power generating industry in Russia is highly concentrated for objective reasons, namely, due to high objective entry barriers which include high initial capital investment, high capital intensity, a long term of return on investment, dependence

Table 1 Concentration ratio for 3 entities (CR3) on the Russian wholesale market of electric power in 2005–2013, %

Price zone	2005	2006	2008	2009	2010	2011	2012	2013
First (territory of Europe and the Urals)	97	96	40	50	41	59	57	60
Second (territory of Siberia)	100	94	54	70	56	71	67	70

Source Doklad o sostojanii konkurencii (2014), Reviews of the competitive situation (2012)

Table 2 Concentration ratio for 5 entities (CR5) of the Russian wholesale market of electric power in 2005–2013, %

Price zone	2005	2006	2008	2009	2010	2011	2012	2013
First (territory of Europe and the Urals)	–	–	52	64	54	74	71	75
First (territory of Siberia)	–	–	67	87	71	83	82	83

Source Doklad o sostojanii konkurencii (2014), Reviews of the competitive situation (2012)

of cost price of power generation on the type of power station and legislative barriers. A structure that does not allow individual economic entities to control the market has been established in the industry as among generating companies there is competition for the possibility of selling power to sales companies which are not bound to generating companies geographically. As a result, the position of economic entities on the wholesale market of electric energy cannot be recognized as dominant based on the economic content. In this case the percentage of infringement of the antitrust law by the participants of the wholesale market in power engineering makes up less than 1% (Golomolzin 2014). The disaggregation of entities will lead to a decrease in their efficiency, degradation of customers' service, and a decrease in the level of public welfare, which is ineffective according to the condition "tendency to optimality".

On the other hand, there are industries whose concentration ratios depend on a real possibility of economic entities to affect the market. Table 3 shows that the concentration ratio in the oil refining industry for 3 entities exceeds 50% in 2007–2013, which demonstrates a high concentration of the market.

A sharp increase in the concentration ratio in 2013 is explained by the acquisition of the TNC BP-Holding OJSC once one of the leading producers of oil products by the PC Rosneft OJSC. As a result the Rosneft share increased by 9%, which enhanced the market concentration. According to analytical reports of FAS Russia 9 economic entities operate on the average in the period under review (Analytical report 2014).

The concentration ratio in the oil refining industry makes it possible to single out economic entities which in fact dominate on the market. It is proved by a high level of abuse of the dominant position in the industry. Thus, in 2008 more than 150 administrative cases were opened in the fuel and energy complex, 95 of them were related to abuse of the dominant position, namely, by establishing high monopoly prices for oil products, creating discriminatory conditions, by a groundless refusal of concluding agreements, etc. In 2009, the number of cases related to abuse of the dominant position reduced to 65, but still remained the highest of all abuses in the fuel and energy complex (Golomolzin 2012). Therefore, the legislative criterion "a high level of market concentration" used in the analysis of the oil refining industry reveals the availability of dominant entities.

The criterion "a high level of market concentration" showed the availability of dominant economic entities on the wholesale market of electric energy and in the oil refining industry. If we compare the concentration on the power market and in the oil refining industry, we won't see any essential differences (Fig. 1). However, oil

Table 3 Concentration ratio for 3 entities (CR3) in the Russian oil refining industry in 2007–2013, %

Ratio	2007	2008	2009	2010	2011	2012	2013
CR3	51	57	61	60	60	63	71

Source Konsolidirovannaja finansovaja otchetnost' OAO «Gazprom neft'» (2014), Konsolidirovannaja finansovaja otchetnost' OAO «NK «Rosneft'» (2014), Konsolidirovannaja finansovaja otchetnost' OAO «NK Lukoil» (2014)

industry subjects contrary to power generating entities can have a substantial effect on the market in particular due to the current industry structure in which vertically integrated oil companies governing a big share of oil refining. Hence, concentration ratios cannot help to unambiguously determine the availability of the dominant position. They do not reflect the entities' potential to effect market conditions, which leads to an erroneous judgment to consider economic entities dominant. In this case, incentives to use competitive methods to run business which can be treated as abuse of the dominant position decrease. This does not agree with the criterion "tendency to optimality" and results in increasing the probability of second type errors, i.e. does not agree with the criterion "resource sufficiency".

(2) Stability of economic entities' shares. According to Clause 6.6 "The procedure of analysis of the competitive situation on the goods market" approved by the FAS order No. 220 of April 28 2010 (Porjadok provedenija 2010), an economic entity's share on the goods market is considered stable if this share has not changed more than 10% or the ranking order of the largest economic entities has remained unchanged on the market over a long period. This criterion does not take account of industry characteristics of the markets based on which it is necessary to incur high costs to create fixed assets and where an essential overrun of fixed costs over variable costs occurs. This objectively leads to a relative stability of market participants' shares over a long period of time. Hence, economic entities will be recognized as dominant even if they cannot affect the market situation.

The enhancement of production capacities and an increase in a subject's share on the wholesale electric energy market are associated with huge investments, a long period of time of commissioning and recoupment of investments. Thus, economic entities cannot substantially change market shares (Tables 4 and 5), which according to the legislative criterion indicates a possibility of recognizing wholesale market participants as dominant on the market. But in practice there is not any potential of influence of these economic entities on the market, which is caused by market functioning in the twenty-four hours-ahead mode. The commercial operator ATC

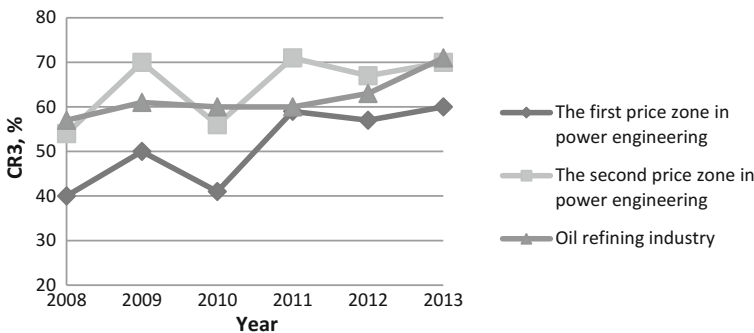


Fig. 1 Concentration ratios for 3 subjects on the wholesale market of electric power and in the oil refining industry of Russia. *Source* Tables 1 and 3

PLC carries out marginal pricing in this mode, which means that price is established by balancing demand and supply, is the same for all market participants and is determined based on the settlement procedure fixed by law (Reglamenty rynka 2014). Besides, sales companies are not connected to generating companies geographically and if the latter carry out the policy of overpricing, they can stop supplies from them and change the supplier.

At the same time, subjects of the oil refining industry can be recognized as dominant on the market based on this legislative criterion. However, market shares of the oil refining industry subjects similar to shares on the wholesale energy market are subject to small changes (Table 6), which is caused by a need of high investments to create fixed assets. But unlike wholesale energy market participants, subjects of the oil refining industry have an opportunity to affect the market, which is proved by the current market structure and statistics of antitrust legislative violation. The criterion shows the availability of dominant subjects on both markets, which contradicts the existing practice.

Subjects with a high share of fixed assets can be automatically recognized as dominant by the criterion “stability of economic entities’ shares”. Initial capital investments in these industries are high, which leads to small changes of both subjects’ market shares and their ranking order. Recognizing any subjects with high fixed assets as dominant restrains them from using competitive methods of running business and increases costs of market monitoring by the antitrust authority. This does not agree with the condition “tendency to optimality”. Recognizing dominant any subjects having no opportunity to affect conditions of market functioning leads to increasing the probability of second type errors and does not agree with the condition “resource sufficiency”.

Table 4 Distribution of market shares in the first market zone of the Russian power industry in 2009–2013, %

Subjects of wholesale market of electric energy and power	Generation of electric energy				
	2009	2010	2011	2012	2013
Concern “Rosenergoatom” OJSC»	24.30	24.58	23.83	24.26	23.72
Gasprom group	23.00	25.25	23.21	21.91	21.50
KEC group	9.00	8.48	7.72	7.54	7.53
INTER RAO PG group	7.50	8.46	12.01	11.25	15.41
“RusHydro” OJSC»	7.20	6.26	5.82	6.24	6.93
The rest	29.00	26.97	27.41	35.04	24.91

Source Doklad o sostojanii konkurencii (2014), Reviews of the competitive situation (2012), Mery po sovershenstvovaniju konkurentnyh otnoshenij (2013)

Table 5 Distribution of market shares in the second market zone of the Russian power industry in 2009–2013, %

Subjects of wholesale market of electric energy and power	Generation of electric energy				
	2009	2010	2011	2012	2013
EvrosibEnergogroup (RUSAL up to 2010)	43.10	43.90	42.08	39.2	37.04
SUEK group	18.10	19.10	17.30	17.7	–
Kuzbassrazreugol group	7.40	8.19	6.48	8.37	–
“RusHydro” OJSC»	10.60	7.36	11.58	10.62	15.78
Concern “Rosenergoatom” OJSC	2.00	2.11	2.16	2.15	–
The rest	18.80	19.34	20.40	21.96	47.18

Source Doklad o sostojanii konkurencii (2014), Reviews of the competitive situation (2012), Mery po sovershenstvovaniju konkurentnyh otnoshenij (2013)

Table 6 Distribution of market shares in the oil refining industry of Russia in 2007–2013, %

Subject	2007	2008	2009	2010	2011	2012	2013
Rosneft	16.77	20.92	21.03	20.20	19.63	22.81	32.07
Gaspromneft	11.44	11.98	13.30	14.26	15.69	16.05	15.17
Lukoil	23.16	24.49	26.73	25.48	24.39	24.48	23.59
TNC BP	10.00	9.87	9.20	9.72	9.50	9.26	–
Others	48.63	42.61	38.95	40.06	40.29	36.66	29.16

Source Konsolidirovannaja finansovaja otchetnost' OAO «Gazpromneft'» (2014), Konsolidirovannaja finansovaja otchetnost' OAO «NK «Rosneft'» (2014), Konsolidirovannaja finansovaja otchetnost' OAO «NK Lukoil» (2014), Statisticheskoe obozrenie (2014)

(3). Absence of substitute goods and a low elasticity of demand. The estimation of the market concentration level is conditioned by a need to determine market boundaries. A well-known approach proposed by J. Robinson (1969) is used to determine market boundaries. According to this approach it is necessary to consider not only the goods sold on the specific market but also substitutes of these goods while determining market product boundaries. Therefore, with market boundaries properly determined, goods may not have substitutes as they are included in these boundaries and the subjects will be erroneously recognized as dominant. The latter increases a probability of second type errors, which does not agree with the condition “resource sufficiency”.

The second condition of the criterion of revealing dominant subjects is a low elasticity of demand at the market price, that is, growth of the commodity price does not result in decreasing demand for this commodity corresponding to this growth. However, the law does not stipulate an order of determining an admissible value of the price demand elasticity. Under these conditions even a low price elasticity of demand won't be treated as a proof of a dominant position. The absence of a normative value of the elasticity indicator makes it impossible to use this criterion.

Thus, it is not easy to use the criterion "the absence of substitute goods and low elasticity of demand" in practice. According to the legislative criteria "a high level of market concentration" and "stability of market shares of economic entities" there are dominant economic entities on the wholesale electric energy market and in the oil refining industry. However, subjects of the wholesale electric energy market are not able to control the market contrary to subjects of the oil refining industry. As a result of recognizing economic entities of both industries as dominant leads to an excessive control of the antitrust authority and decreasing incentives to use competitive methods, which decreases public welfare and does not agree with the conditions "tendency to optimality" and "resource sufficiency".

3 Conclusions

Based on modern approaches to antitrust regulation a tendency for its institutions to achieve efficiency is formulated. The efficiency of antitrust regulation institutions' can be evaluated by analyzing their compliance with two conditions: "tendency to optimality" and "resource sufficiency". According to the first condition—"tendency to optimality"—an institution is recognized as efficient if it promotes maximizing public welfare. The second condition—"resource sufficiency"—shows the availability of a resource potential sufficient to support activities of antitrust regulation institutions. Nonconformity of an institution with any of these conditions leads to decreasing the level of public welfare.

Legislative criteria of revealing collective dominance of economic entities that are considered based on the proposed approach do not satisfy the proposed criteria of evaluation the efficiency of antitrust regulation institutions. The criterion "high degree of market concentration" may lead to an erroneous recognition of economic entities as dominant on the market. The existence of industries with high initial costs limits the possibility of using the criterion "stability of economic entities' shares" because there is no redistribution of market shares in these industries for objective reasons. This results in increasing costs of monitoring for antitrust authorities and restrains the subjects' activities beneficial for society. These activities may be treated as abuse of the dominant position, which does not agree with the proposed criteria. The legislative criterion "the absence of substitute goods and low elasticity of demand" is practically not applied in practice.

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Specificity of the State Regulation of the Service Sector: Structural Approach



Vladimir Plotnikov , Albina Volkova  and Yury Nikitin 

Abstract In the modern economy there is a tendency for state intervention to intensify. Crisis phenomena in the economic systems of many countries and the world as a whole determine the need for state economic policy to take a more proactive turn. The purpose of the article is to consider the specifics of regulating the services sector of the economy in the modern conditions. The urgency of this purpose is due to the fact that the services sector is one of the most important system-forming sectors of the modern economy. During the analysis, the authors used the data of the World Bank and national statistics. As a result of the research, it was proved that economic regulation in the sphere of services has its own specific features that are determined by the nature of services, industry-specific features of service processes, uneven regional development, etc. Accounting for these aspects is possible through structural changes in economic policy. Measures of state regulation of the services sector should be coordinated with instruments of regional, industrial, structural, innovative and other branches of state economic policy.

Keywords Sphere of services · Economic policy
State regulation of the economy

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1 Introduction

From the perspective of theories of long-term socio-economic development, the modern economy is post-industrial. This vision is shared by many scholars (Linhart 1988; Dean and Kretschmer 2007; Drucker 1969; Gerbery 2011; Masuda 1983; and other). The most obvious manifestation of post-industrialism is the change in the structure of production. Instead of having the secondary (industrial) sector as the dominant one, the tertiary (service) sector of the economy dominates. This trend finds statistical confirmation. This is shown in Fig. 1. Despite some slowdown in growth rates, the share of services in world production is steadily increasing. Moreover, this is characteristic of all countries in the world.

Despite the abundant evidence pointing to the progressive nature of post-industrialism, the authors of this article share the view that its concept needs to be improved (Urbanek 1980). In particular, we are cautious about the thesis that the importance of industry in the economy of the future is bound to decline (Plotnikov and Bodrunov 2017). Yes, it is true that we are seeing a percentage decrease in the contribution of the secondary sector to the global GDP, but the significance of this contribution is not becoming any less important. The industry is being transformed, becoming more intellectually capacious, more technological, but it is not disappearing. It is still playing an important role in the economy (Vertakova et al. 2016). The sphere of services cannot fully replace it. However, these two sectors of the economy are “intertwined”, forming a new industrial-service system.

In this system, services account for most of the value created. But, in the absence of the industrial component, the service component cannot exist. Even if it does exist,

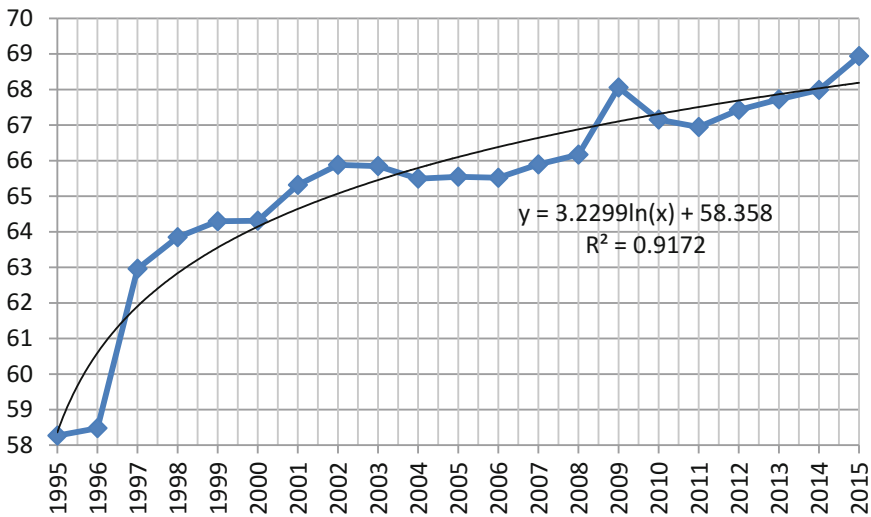


Fig. 1 Share of services in world GDP, %. Source World Bank, <https://data.worldbank.org>

it will not ensure a high level of efficiency of economic resources use. This requires a more thorough analysis of the approaches to the management of the services sector and its enterprises, to which we drew attention to in our earlier publications (Volkova and Plotnikov 2015; Plotnikov and Volkova 2016). The purpose of this article is to consider the specifics of regulating the services sector of the economy in modern conditions.

2 The Influence of Ownership Structure on the Choice of Regulatory Instruments

An important sign of a developing economy is the growth of the public sector. This, according to the authors, epitomizes the idea of a gradual socialization of the means of production, which was expressed by Karl Marx in the 19th century. This socialization, albeit at an uneven pace, gradually increases with the passage of time. For example, according to the available statistics, over the past 40 years, around one-fourth of the world’s GDP was redistributed through public budgets in the world (Fig. 2). Importantly, this share has a long-term tendency to grow.

Note that in this dynamics there have been medium-term ups and downs, but its general trend (long-term) is the upward one. At the same time, the value of the indicator under consideration differs significantly in different countries (data for the year 2015). For example, in Switzerland it is 17.2%, with 22.7% in the USA, 30.6% in Russia, 32.7% in Romania, 38.3% in the UK, and 46.2% in Austria. According to

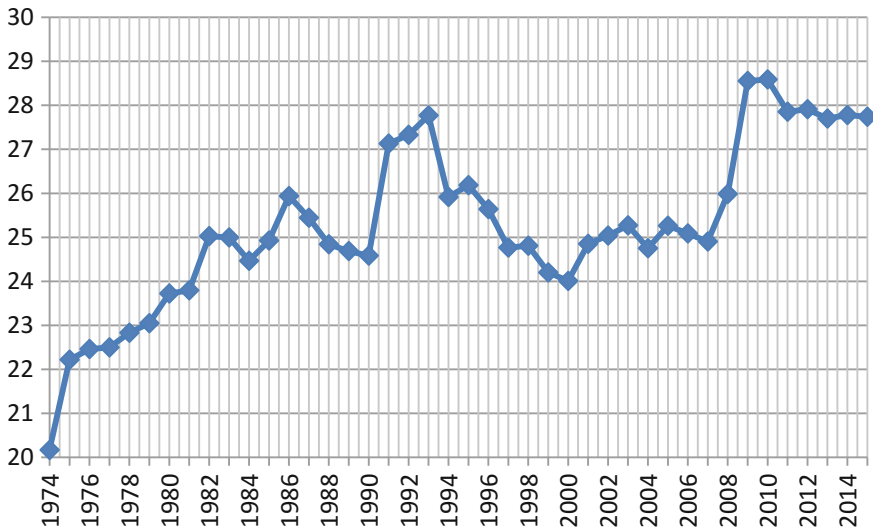


Fig. 2 Expense in the World, % of GDP. Source World Bank, <https://data.worldbank.org>

our estimates, the period of global domination of the liberal approach in economic policy is coming to its end, and a trend towards an increase in state intervention is gaining momentum. A typical example of this is found in one of the largest economies of the world—the American economy—consider the recent protectionist measures, the revival of industrial policy, as well as the highly telling fact that, in order to curb the financial crisis caused by the collapse of the mortgage market, the US authorities nationalized the largest US mortgage agencies Fannie Mae and Freddie Mac on September 7, 2008.

Thus, in the modern economy there is a trend for the share of state property to increase. This leads one to conclude that the toolkit of state policies for regulating economic processes should be differentiated depending on the structure of ownership. In those types of activities where state property ownership prevails (for example, railway transport services), there is the possibility for the government to directly manage the development of the respective productions, their locations, selling price terms, the structure of the product/service ranges, etc. Whereas in such spheres as the sphere of services, where private business predominates, being economically independent, separated from the state, it is necessary to use indirect levers in the state economic policy.

At the same time, state support of private business is required not only in the sphere of services, but also in various sectors of industry, which, as we indicated earlier, experience something we can call “servicization”. In this regard, the policy of regulation of the services sector should be coordinated with the industrial policy. This effect of convergence of directions of the state economic policy is caused by the ongoing technological changes and the active informatization of the processes of economic activity.

In addition, the development of such a phenomenon as outsourcing leads to the fact that production and service processes in companies are divided and some of them are moved beyond the scope of the company’s activity by being outsourced to third-party partner organizations. Networked associations of enterprises are formed, within the framework of which service and industrial companies of various forms of ownership are united.

The requirement of effectiveness and comprehensiveness of economic policy leads to the fact that when regulating the activities of such networks, it is necessary to combine administrative and economic methods, as well as to take into account the specifics of sectoral regulation. As a result, economic policy acquires a complex structure. At the same time, the need to take into account the specifics of public and private companies leads to the spread of regulation instruments based on indicative planning, which combines elements of voluntariness and directivity, allowing to harmonize private and public economic interests (Polterovich 2015; Naidoo and Mare 2015).

3 Territorial Specificity of Service Activities

An important feature that determines the specifics of using measures of state regulation of the services sector is the unevenness of their territorial development (Vertakova et al. 2015). This is due to the overall uneven development of socio-economic systems, which is particularly evident in large countries such as Russia, China, India, the United States, Brazil, and others.

Similar regional unevenness is noted in the level of development of the countries of the European Union (Analytical Center 2017). Thus, in 2015 the average level of development of the leading regions of the EU was estimated at 40–60 thousand euros per capita. (The EU regional section has been reviewed in accordance with the NUTS 2 classification, the 2015 version.) GRP of the twenty richest regions of the EU (mainly located in Germany, the United Kingdom, Austria and the Netherlands) is at least 50% higher than the average GRP of the European Union. The poorest regions of the EU are represented by Greece and the countries of Eastern Europe, especially Bulgaria, Hungary, and Romania (Table 1).

The uneven development of the economy of different regions generates uneven development of the services sector and the need to implement regionally differentiated measures of state regulation. The most common mechanism here is supporting service enterprises in poor regions through grants, subsidies, technical assistance, etc. Particular attention is paid to small service companies. This has not only economic significance (in that it stimulates regional economic growth), but also social significance (in that it increases the level of employment, prevents people from migrating internally, etc.).

The enterprises of the services sector in rural areas, where their level of development is lower than in cities, experience the need for state support especially acutely. As an example, Table 2 presents data on the Russian Federation regarding the digitization of telephone networks in cities and rural areas.

Table 1 Differentiation of GRP per capita in some EU regions, EUR thousand

Country	Region	2004	2008	2015
United Kingdom	West Inner London	113.9	135.2	167.5
Luxembourg	Luxembourg	53.6	67.6	76.2
Germany	Hamburg	49.5	53.9	59.5
Hungary	Northern Hungary	8.9	10.1	12.9
Romania	Northeast	5.2	7.9	9.9
Bulgaria	South Central Bulgaria	6.0	7.9	9.6

Source Analytical Center 2017

Table 2 The level of digitalization of local telephone networks in Russia's regions (2016), %

Federal district of Russia	In cities/towns	In rural areas
Central	93.7	76.0
Northwestern	83.6	83.8
Southern	83.7	74.2
North-Caucasian	90.1	74.9
Privolzhsky	96.8	86.0
Ural	90.2	71.4
Siberian	94.2	89.8
Far Eastern	98.1	90.8

Source Ministry of telecom and mass communications of the Russian federation

Differentiation is due to a series of causes—a lower concentration of the population, which does not allow to obtain the benefits coming with larger scale operations, under-developed business infrastructure, lower per capita income of the population, a shortage of qualified personnel, etc. among them. These factors objectively contribute to the prevailing development of small service enterprises in rural areas. Thus, the state policy of regulation of the services sector should be coordinated with measures to support and stimulate small entrepreneurship.

An important role in regulating the functioning and development of services in the regions (primarily household, housing and communal services and social services) belongs to municipal administrations. In this regard, local administrations should not only create the conditions for the development of a variety of services, but also actively promote and participate in this. Such participation should include creating municipal service enterprises. This recommendation is in good agreement with the above-mentioned trend towards the growth of the public sector of the economy.

At the same time, independent economic (and not only law-making) activities of local administrations, in contrast to the activities of large state-owned enterprises, may prove to be more effective. Sources of this possible effectiveness are a good understanding of local problems and requests of the municipality's population combined with a relatively low level of bureaucratization of business processes. In this regard, it seems to us that the initiatives of municipalities to create service enterprises oriented to providing services to the local population should be supported by regional and country governments.

These circumstances determine one more important specific feature of the state policy of regulation of the services sector. In order to effectively manage the sphere of services at the municipal level, local governments lack the necessary resources, not only physical (material and financial), but also intellectual, organizational, legal, power, personnel, etc. It is essential to provide assistance to them in these matters.

A characteristic feature of most types of activity in the services sector is a high degree of localization, linkage to a certain territory (region, city, district, urban and rural settlements). Therefore, the size, location, types and scales of activities, forms of ownership, the methods of operation of service enterprises, their role and devel-

opment potential in the conditions of modernization should be reasonably aligned with the needs, priorities and strategy of innovative shifts in the regional economy.

Russia's experience shows that some of the most effective methods of regulation of the services sector development are such methods as certification, licensing, quality control, state (municipal) order, crediting and partially funding (subsidizing) socially relevant service organizations, differentiating the terms and conditions of renting out the production and non-production facilities owned by regional and local authorities.

4 Accounting for the Effect of Servicization of the Economy and Society

As we noted earlier, in addition to the global trend of increasing the share of the tertiary sector in GDP production, there is also the effect of servicization of all economic activities. As a rule, there are various service units in the majority of industrial, agricultural, construction and other companies. The activities of large, medium and even small service enterprises are often multidisciplinary or combined (Miles 1993). In the services sector, the processes of concentration, consolidation of production, diversification of the types in activities and services, intensified by competition, have always been going on intensively and continue to do so. In this connection, it is often only possible to clearly separate the secondary and tertiary sectors in the modern economy in theory, but not in practice.

In addition, the range of types of service activities is expanding. Along with traditional household services (repair of household appliances, television and radio equipment, watches, repair and manufacturing of clothes, shoes, furniture, metal products, dry cleaning, cosmetic services, etc.), car services, forwarding, touristic, financial, insurance and legal services, an ever-greater use and spread is enjoyed by consulting, marketing, logistics, leasing, outsourcing, franchising, auditing, distribution, wireless and cellular communication, stock trading, exhibition, architectural planning, advertising, publishing, real estate, expert, patent, engineering, technology, computer programming, e-commerce, environmental and many other services that it is utterly impossible to comprehensively list here. Each of these types of services has its own specifics, from the point of view of their regulation.

In addition, there is a gradual penetration of the services sector into the field of social interaction, servicization and economization of traditional social interrelations. In particular, we are talking about education, healthcare and other areas that are basic for the self-reproduction of society. What is striking is that these areas are increasingly seen in both theoretical studies and in the practice of state economic policy as elements of the services sector. Thus, the services sector is an integral part of the activities directed at meeting the diverse spiritual and material needs of the population. It can either promote social progress or block it.

In this regard, the regulation of the activities of service enterprises is becoming a strategically important area of state policy, not only its economic policy, but also

the state development policy in general. This is especially important for developing countries that have a low level of socio-economic development. Measures to regulate the services sector, therefore, should be combined with activities aimed at the development of human potential and the formation of human and social capital.

As an object of state regulation in the sphere of services, there are industries, regions, conditions and situations of the socio-cultural life of the country’s population in which problems are created or can be created that are not solved automatically, and elimination of these difficulties is necessary for the economic sector to adequately function, as well as for social stability to be maintained at a given time. Thus, the regulation of the services sector is closely related to institutional changes and structural policies.

5 Development of Services and Innovation

The difference between the current and perspective economic models consists in increasing the degree of innovation in production (Furman et al. 2002). In this regard, the future economy is often described as innovative. Innovations penetrate all branches and types of human activity and play an increasingly prominent role in the life of the society. The volumes of high-tech production are steadily growing, and the share of high-tech exports in the total volume of exports in the world is about 20% (Fig. 3).

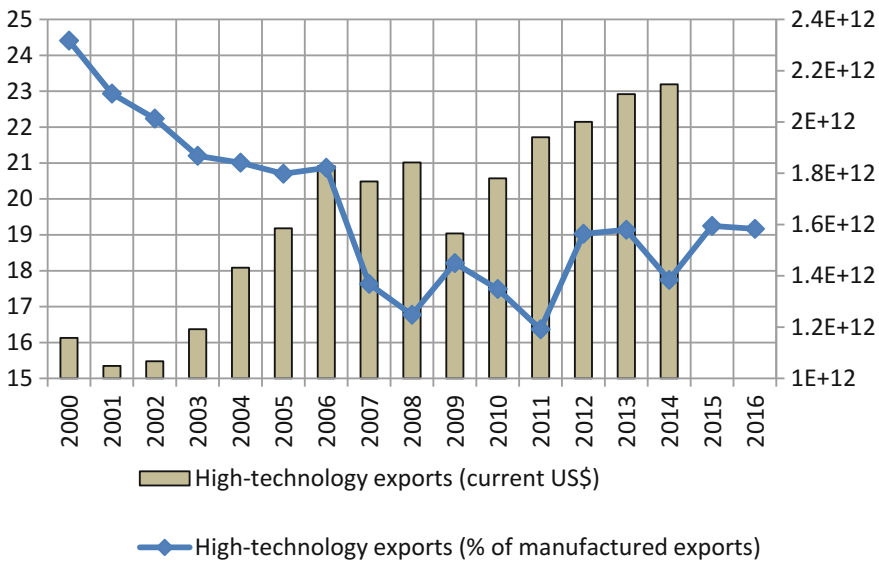


Fig. 3 High-tech exports in the world. Source World Bank, <https://data.worldbank.org>

Table 3 Innovative activity of organizations in Russia, %

Sector of economy	2014	2015
Mining	7.5	6.9
Manufacturing industries, total	13.6	13.3
Including high-tech manufacturing	32.0	31.7
Other services	3.5	3.1

Source HSE 2017

The growth of innovation is a general trend, which should also be manifested in the activity of service enterprises. However, Russian practice shows that service companies are lagging significantly behind in innovative development from enterprises of other sectors of the economy (Table 3).

Automatic market regulators do not work here. In this regard, it seems that it is necessary to increase state stimulation of innovative activity in the services sector. That is, what is required is a coordination of measures to regulate the services sector and state innovation policy (such as providing innovative infrastructure, training specialists, patent-related consulting, subsidizing innovative projects, etc.).

6 Conclusions

The services sector is a complex socio-economic system with diverse properties, functions, resources, connections, all of which are determined by the nature of services, specific features of sectoral and regional development, and characteristic features of service processes. The services sector is one of the most important system-forming sectors of the modern economy. The service industry is not limited to traditional types of service activities, it expands its presence in public life and economy, becoming more and more deeply integrated into them and intertwined with virtually all branches and areas of the national economy. This predetermines the need for an integrated approach to state regulation of its development.

It should be noted that over time, the sphere of services as an object of management is becoming more complex. Therefore, in accordance with the principle of the necessary diversity formulated by W. Ashby (originally called the law of requisite variety or Ashby's Law), it requires that its management system be increasingly complex as well (Mumford 1988). State regulation of the processes of creation, development and functioning of service enterprises is continuously undergoing the process of complication. Regulatory measures are combined with instruments of regional, industrial, structural, innovative and other branches of state economic policy. This requires institutional changes aimed at creating a regulatory framework that provides for this integration.

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The Impact of China's "Belt and Road Initiative" on the European Union



Cristina Elena Popa  and Wei Liang 

Abstract After introducing the 1978 reforms, China shifted from a centrally-planned to a market-based economy. The success of these economic reforms has been immense, as today China has become a leading player in the world's economy. In order to achieve the goal of becoming the world's biggest superpower within the next 30 years, China's 13th Five Year Plan (2016–2020) increased the government's focus on innovation, with particular emphasis on infrastructure development. In this article, we have analyzed the impact of China's "Belt and Road Initiative" on the European Union. China's investments have a positive impact on the economic growth of the EU member countries, as they provide new jobs, capital and technology. However, more and more countries want to limit China's ability to buy European companies in sectors of national interest. The challenge is for these measures to ensure control, but do not block the much-needed investments that countries need.

Keywords European Union · Belt and road initiative · China · Investments

1 China's Role in the World Economy

After introducing market principles thanks to the 1978 reforms, China shifted from a centrally-planned to a market-based economy. From an isolated country on the world's map, it has become a leading player in the world's economy. A new China was born. The implementation of these reforms has contributed decisively to China's World Trade Organization accession in 2001. The signing of this agreement has continued China's process of opening-up to the outside world, accelerating the volume

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of foreign investments in the country and import-export operations. The country has increased its growth rate, becoming more open, more transparent, and more rules-based. The 2008–2009 financial crisis has further strengthened China’s importance in the world economy. Even though GDP growth slowed down, from 14.23% in 2007 to 9.65% in 2008 (The World Bank, Data), the government took quick action through fiscal and monetary expansionary measures. The Chinese stimulus package amounted to 586 billion US\$, more than a third being allocated to infrastructure sectors (The World Bank 2010). The stimulus plan proved to be a success, as it helped the Chinese economy make up the loss from export cuts.

As a result of the implementation of liberal reforms, China’s GDP growth has averaged nearly 10% a year and has lifted more than 800 million people out of poverty (The World Bank 2018). Having the largest population, China is the second largest economy in the world, after the U.S. in terms of GDP and the first in terms of GDP based on purchasing power parity (PPP) (Table 1).

On December 2017, China is the world leader in terms of exports, accounting for 231 billion US\$, and second after United States in terms of imports, recording a value of 177 billion US\$ (The Statistics Portal 2018). The majority of China’s exports come from multinational foreign companies that invest in China. Cheap labor, wide networks of suppliers and a huge national market, made China very attractive to investors. In 2016, China was the first destination for inward foreign direct investment among developing countries, in the third position worldwide, reaching a net inflow of 171 billion US\$ (The World Bank, Data).

China has been called “the world’s factory”, being the dominant manufacturing center of the world. However the country is making great progress in moving up the value chain and transforming into a global innovation hub. The goal is to restructure the economy towards domestic consumption, services and higher value exports. The cost of labor force, industrial land and construction for building factories is nowadays much lower in countries in Southeast Asia and Africa, which are about to take China’s place in low-cost manufacturing.

Table 1 List of countries by GDP and list of countries by GDP (PPP)

Rank in the world	Country	GDP (billions of U.S. dollars)	Rank in the world	Country	GDP (billions of U.S. dollars)
1	United States	20.2 thousand	1	People’s Republic of China	25.1 thousand
2	People’s Republic of China	13.12 thousand	2	United States	20.2 thousand
3	Japan	5.06 thousand	3	India	10.34 thousand
4	Germany	3.93 thousand	4	Japan	5.55 thousand
5	France	2.77 thousand	5	Germany	4.31 thousand

Source International Monetary Fund 2017

Once its economic size grew, China desired to have a bigger influence in global affairs. Nowadays it is one of the largest contributors to the UN budget (United Nations 2018) and a growing contributor of troops to UN peacekeeping operations (United Nations Peacekeeping 2018). A burning topic for China is to reduce pollution, as it holds the largest share of global carbon dioxide emissions in the world (Fig. 1), facing great environmental challenges in terms of air, soil and water pollution.

Thomas Friedman in his book "The World is Flat", drew attention to environmental issues, saying that 'where China is going, the world will go' (Friedman 2007). The country is so powerful now that we can say that if China sneezes, the entire world will catch a cold.

In spite of the great progress made, China is still classified as a developing country, having in 2016 a GDP per capita of only 8123.2 US\$ (The World Bank, Data). As China's GDP growth has been on a downward slope (Fig. 2) in recent years, the government's challenge is to stabilize it at the level of 6.5%.

As China's population grows by 1% per year, it is absolutely necessary for the government to create sufficient jobs to absorb this workforce. Stable economic growth and employment creation are important for domestic political legitimacy. Regarding the GDP structure, China aims to increase the domestic consumption share and reduce the country's volatility in slowing exports and investments.

Even though China has taken important steps towards liberalizing its economy, the country doesn't have a market economy based on a capitalist doctrine. China has

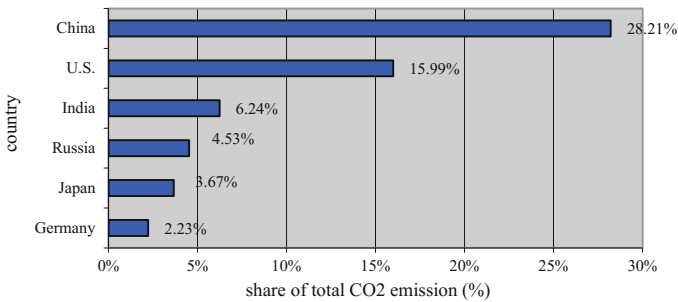


Fig. 1 Largest producers of CO2 emissions worldwide in 2016, based on their share of global CO2 emissions. *Source* The Statistics Portal 2016

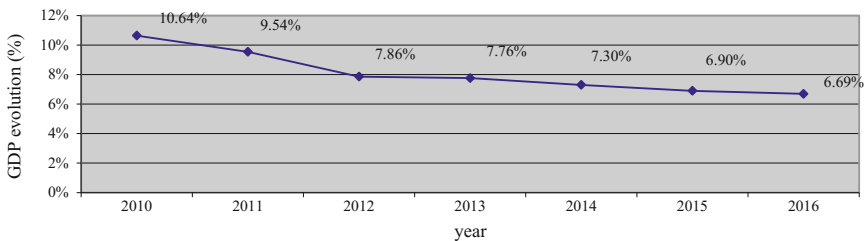


Fig. 2 China GDP annual growth (%). *Source* The World Bank: Data

a specific state capitalism in which economic activity is undertaken by the state. The largest Chinese companies are owned by the state, making a contribution of 80% of the stock market capitalization. According to the American business magazine *Forbes*, in 2018 two state-owned Chinese companies: ICBC and China Construction Bank were in the top two positions in the World's Biggest Public Companies (*Forbes* 2018). Chinese state-owned companies are encouraged by the state to trade, invest abroad, and find resources as never before, becoming great powers worldwide.

In order to achieve the goal of becoming the world's biggest superpower within the next 30 years, China's 13th Five Year Plan (2016–2020) increased the government's focus on innovation, with particular emphasis on infrastructure development. This is meant to facilitate China's opening up to the world and help the implementation of one of the most ambitious Chinese initiative: "the Belt and Road".

2 China's Belt and Road Initiative

The Belt and Road Initiative, proposed by Chinese President Xi Jinping in 2013, aims to promote connectivity between Asia, Europe and Africa for the purpose of promoting all-round cooperation and foster new growth drivers in trade and economic development. Its five major goals are: policy coordination, facilities connectivity, unimpeded trade, financial integration and people-to-people bonds. It aims to improve the region's infrastructure, putting in place a modern network of land, sea and air passages. Since investment and trade cooperation is a major task in the B&R Initiative, removing investment and trade barriers for the creation of a sound business environment represents an essential objective (National Development and Reform Commission 2015).

The logic is obvious, in the situation of increasingly fierce international competition, new models of regional cooperation, such as the trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP), can help a country deal with external pressures (Rahman and Ara 2015). Although B&R countries are mostly low-income economies, they may have the potential of turning into a new growth engine of the world economy if receiving proper assistance, creating new markets for China's exports and outward FDI (Tian et al. 2016). Up to the present, the B&R Initiative proved to be a great success for China, especially in terms of trade. China's total value of trade with countries along the Belt and Road routes has reached around 953.59 billion US\$ in 2016, accounting for 25.7% of the country's total foreign trade volume. Moreover, China's exports to countries along the Routes have maintained growth momentum since 2011, hitting a value of 587.48 billion US\$ in 2016, the highest in recent years (Silk Road Chamber of International Commerce 2017). For many B&R countries, China has become the biggest trading partner. Consequently, trade with B&R countries, to some extent, helps stabilize export in China in the context of global economic slowdown. In the last years China's export suffered a continuous slide due to diminishing demand from developed countries. To continue the good collaboration with the countries along the route, the Chinese

government plans to continue to build roads, rails, ports, pipelines and other transportation infrastructures, lower trade barriers and promote regulatory harmonization to minimize the threat of doing business under different institutional systems.

Another benefit the B&R Initiative offers China is the new growth engines for the country's economic development. After 1979, as part of its economic reforms, China opened its market to foreign products and investors, establishing 5 Special Economic Zones (SEZ) and 14 coastal cities. There, foreign trade activities were deregulated and complicated bureaucratic procedures were reduced to the minimum. At the same time, a tax reduction policy was implemented to attract foreign direct investments. Foreign investments had played a key role in helping China's local firms, through transfer of new technology, skills and know-how. They also made substantial contributions to the economic development of these regions thereafter. As these Special Economic Zones and cities are mostly located in southern eastern areas of China, a wide gap occurred in the economic development between eastern part and central and western part of the country. The south-eastern coastal cities have a far more sophisticated industry and a much higher per capita income compared to western regions. The untapped central and western area, accounting for 2/3 of the Chinese territory, bears huge opportunities and potential for the country's further development. Consequently, the Silk Road Economic Belt, part of B&R Initiative, which starts from western part of China, will play a critical role in promoting the economic development in this part of China. During the implementation of B&R Initiative, a large portion of advanced industries are expected to be established or transferred from eastern China to central and western China, bringing updated technology, job opportunities and huge development spaces to these areas. This will also offer Chinese central government a chance to deploy the layout of emerging industries among eastern, central and western parts of China. Therefore, B&R Initiative will contribute to a more reasonable industry distribution and a more balanced regional development in China.

Also, B&R Initiative helps accelerate the international economic cooperation between China and other countries along the Route. China's development pattern appears to have reached a bottleneck, with growth moderating continuously during the past few years (Huang 2016). As can be seen in Fig. 2, China's economic development has suffered a continuous decline from year 2011. Partial reasons could be ascribed to China's heavy dependence on both export and government investment to maintain its economic growth. The position of China's manufacturing industry in global value chain is relatively low in terms of input-output ration (Ouyang 2017). Traditional Chinese export industry still features labor-intensive and low value-added manufacturing businesses. Unfortunately, as shown in Table 2, China has seen falling working-age population (aged 15–64) and rising old-age dependency ratio since 2013, indicating the disappearance of its demographic dividend. In addition, the average wage has also experienced accelerated growth in the past 10 years (Table 3). These continuous rising costs have severely reduced China's competitiveness in being the manufacturing center of the world. China has reached the point where the manufacturing share of GDP has peaked and will begin to decline as the economy becomes increasingly service based (Huang 2016). To ensure sustainable

Table 2 Age composition and old dependency ratio of population in China

Indicators	2010	2011	2012	2013	2014	2015	2016
Population aged 15–64 (10 thousand persons)	99,938	100,283	100,403	100,582	100,469	100,361	100,260
Population aged 65 and over (10 thousand persons)	11,894	12,288	12,714	13,161	13,755	14,386	15,003
Old-age dependency ratio (%)	11.9	12.3	12.7	13.1	13.7	14.3	15.0

Source National Bureau of Statistics of China 2017

Table 3 Average wage in urban units in China

	2000	2005	2010	2011	2012	2013	2014	2015	2016
Average wages of staff and workers (Yuan)	9,371	18,364	37,147	42,452	47,593	52,388	57,361	63,241	68,993

Source National Bureau of Statistics of China 2017

development, China has made economic transition a state strategy, making continuous endeavors to restructure and upgrade its industry. Thus, it started to develop new-technology and service industry in order to move to the higher-end of the world value chain and turn itself into an innovation-driven economy.

On the other hand government investments, especially in infrastructure and equipment manufacturing, have significantly spurred the growth of Chinese economy during the global financial crisis. As a result, China's infrastructure and equipment manufacturing industries have experienced tremendous growth in the past years. Through these investment, Chinese enterprises have accumulated updated technologies and management know-hows. However, these investments have also had a negative side effect, respectively industrial overcapacity. Thereby, the reduction of overcapacity in industries such as steel and cement, became top priorities in late 2015 at the Central Economic Work Conference in China. China plans to reduce overcapacity by gradually eliminating and shutting down outdated production facilities (National Development and Reform Commission 2016). According to the data released by China's National Bureau of Statistics, the utilization rate of industrial production capacity decreased continually from 2011, in 2016 registered the lowest point of 73.3% (Fig. 3). This figure improved in 2017, when it increased to 77%. This proves the effectiveness of the Chinese government's continuous tight control on new pro-

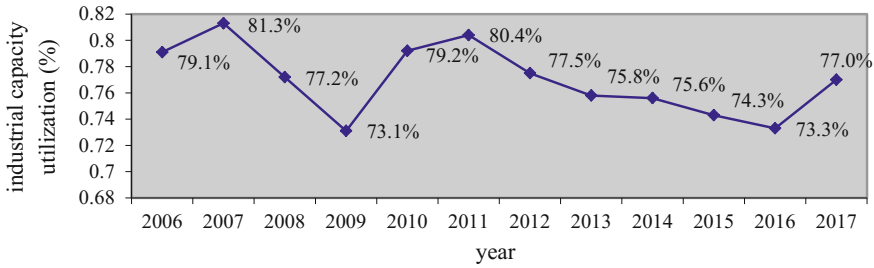


Fig. 3 Industrial capacity utilization in China from 2006 to 2017. *Source* National Bureau of Statistics 2018

duction capacity and its enduring effort to eliminate outdated capacity. However, this has indicated that it is no longer feasible for China to continue to rely on heavy investment in infrastructures. China requires a new model to support its economic development and to aim higher in the world value chain.

On the other hand, most B&R nations are developing countries carrying forward industrialization and urbanization, therefore considerable infrastructure and mature industry systems are needed. These countries may have comparative advantages as abundant natural resources and cheaper production factors such as land and labor, but suffer from severe shortage of capital. By contrast, China may have an edge in technology, production capacity and capital, thanks to its long-time trade surplus. This economic complementarity between China and the other B&R countries provides sufficient opportunities for them to draw on each other’s strengths and to realize cross-border resource optimization and integration. For example, China offers leading technical solutions on a global level and has extensive construction experience in high-speed railways, which can effectively compensate for the lack of funds and the technical shortage of neighboring countries in the process of railway construction (Wang and Huang 2016), (Shao et al. 2017). The B&R Initiative is a blueprint for China to explore cooperation with new economic partners. Through this way, China is also able to assert greater international influence and contribute to the international economic architecture (Huang 2016).

According to the China’s Ministry of Commerce, in 2017, Chinese enterprises signed 7217 contractual projects with a total volume of 144.3 billion US\$ with 61 B&R countries. This accounts for 54.4% of the total overseas contractual projects Chinese enterprises signed. The new investment in B&R countries made by Chinese enterprises reached 14.36 billion US\$ and represented 12% of the total volume (Ministry of Commerce 2018). This cooperation will create job opportunities and tax revenue for host countries, assist their infrastructure construction, facilitate their industrialization process and finally contribute to their economic development. Meanwhile, it will help China explore international demand, utilize excess production capacity, reduce overall costs and increase its competitiveness in the international competition. Most important, this international cooperation will allow China more space and resources to develop its high-tech and innovation-based emerging indus-

tries, providing the chance to improve its distribution of industrial chains. China will also increase the openness of its service industry to B&R countries to accelerate the development of regional service industries.

Thus, promoting international production capacity cooperation along B&R countries becomes a vital goal for China, which will benefit both sides and shape a win-win situation.

3 EU—China Economic Relations

After having established official diplomatic ties in 1975, EU and China have become close trade partners. In terms of imports, China is EU's main commercial partner, and in terms of exports it is second only to the U.S. The main imports from China are industrial and consumer goods, machinery and equipment, footwear and clothing and the main exports to China are machinery and equipment, motor vehicles, aircraft, and chemicals. According to the European Commission, the two countries trade on average over 1 billion € a day (European Commission 2018).

In 2016 EU had a surplus for trade in services of 10.9 billion €, but trade in services amounts only 10% of total trade in goods. EU's trade deficit in goods with China reached in 2016 175.2 billion €, showing an upward trend (Fig. 4).

U.S., China's main trade partner, had in 2017 the biggest deficit for trade in goods ever recorded of 347 billion US\$ (U.S. Census Bureau 2017). Fearing of an even bigger deficit, and with the aim of protecting domestic producers, the U.S. has begun to take protectionist measures. It started with the taxation of washing machines and solar panels imported from China, and it seems that this is just the beginning. Under these circumstances, trade relations between the EU and China are likely to increase in the years to come. China's trade surplus is mostly due to the fact that it can produce

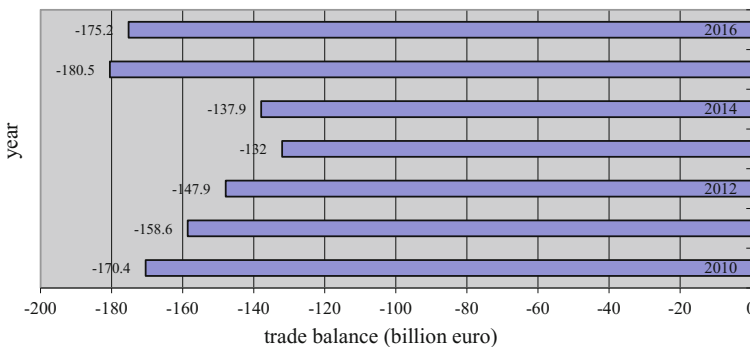


Fig. 4 European union and China—trade balance in goods (billion euro). *Source* European Commission, European Union, Trade in goods with China 2018

goods at much lower costs compared to other countries. Cheap labor force and the help offered by the state are just a few of the causes contributing to China’s low costs.

In regard to investments, the European Union continues to be an important destination for Chinese investors, even more important than the U.S. 2015 was the first year China invested more in the EU, compared to EU investments in China. For the first time China became a net direct investor in the EU, of about 0.3 billion €. The European Union is an attractive investment destination because it has a stable political and economic environment, a large sales market, high purchasing power of consumers, skilled workers, high-tech companies and brands that enjoy global recognition. With the launch of the Belt and Road (B&R) Initiative, the number of Chinese investments in EU increased (Fig. 5), primarily in the infrastructure and logistics sectors.

China’s interest in Europe was reconfirmed in 2012 by the collaboration with the 16 Central and Eastern Europe (CEE) countries. According to this agreement, the 16 European countries: Albania, Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia, Slovenia, Bulgaria, Romania, the Czech Republic, Hungary, Poland, Slovakia, Latvia, Lithuania and Estonia, can benefit from Chinese investments to upgrade local infrastructure. Until now, Chinese investment in the 16 CEE countries has exceeded 9 billion US\$, while CEE has invested only 1.4 billion US\$ in China (Cooperation between China and Central and Eastern European Countries 2017). Within this partnership, China’s first large infrastructure investment was the Pupin Bridge in Serbia, the second bridge over the Danube River in Belgrade, inaugurated in 2014. It was built by China Road and Bridge Corporation (CRBC), with total investment of around 189.7 million US\$. Since then, investments in CEE have continued, currently in progress being a high-speed rail line of 350 km from Belgrade to Budapest, which is expected to cost 3.8 billion US\$. The 16+1 partnership is a first step in achieving the goals of the Belt and Road Initiative that aims to improve trade between China and Europe.

China’s investments continued in countries outside the center and eastern part of the continent. In recent years, China has focused its attention on the countries which were most affected by the Eurozone crisis: Ireland, Italy, Spain, Portugal and

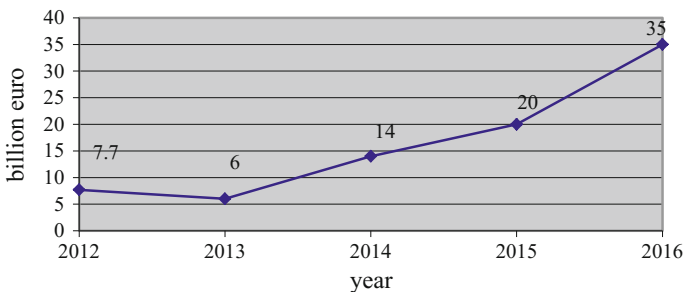


Fig. 5 China’s FDI in Europe. *Source* Hanemann and Huotari 2015 and Hanemann and Huotari 2017

Greece. As the asset prices fell sharply, China has become one of the main sources of foreign capital for these economies. In 2015, the state-owned company China National Chemical Corp (ChemChina) bought the Italian tire manufacturer Pirelli for 7.7 billion US\$ and the next year the Chinese conglomerate HNA Group acquired the Irish airline leasing company Avolon for 2.5 billion US\$. In Greece and Portugal, China took advantage of the large-scale privatization program part of their EU-IMF bailout and entered the country's markets through such acquisitions. In 2016, China COSCO Shipping Group, paid 1.64 billion US\$ for control of 51% of the state-owned company Piraeus Port Authority, which manages the Port of Piraeus. According to the agreement, the Chinese firm has to invest 383 million US\$ in port infrastructure over the next ten years (Casaburi 2017). A year before, COSCO Shipping Lines, acquired a terminal at the Port of Kumport in Turkey, located on the Bosphorus strait, strategically ensuring maritime access to Europe for Chinese goods. All these investments, alongside the close collaboration with the CEE are meant to expand and secure maritime routes and land infrastructure networks into Europe for Chinese products within the framework of the B&R Initiative.

However, the most popular destinations for Chinese investors remain the developed countries of Western Europe. In 2016 the "Big Three" European economies (Germany, the UK, and France) accounted for more than half (53%) of the total investment value (Hanemann and Huotari 2017). Even if they do not buy the majority stake in all the investments they make, Chinese companies seek to gain access to brands, technology, experience and high-quality products in order to increase their competitiveness on the international market and meet the changing domestic consumption behavior (Du and Zhang 2018).

4 The EU's Position Regarding the Belt and Road Initiative

The EU shows its full readiness to support China in the process of opening up to the world, as long as it respects the rule of law and human rights. Since it became WTO member, China has made great progress in meeting its obligations, however, the EU still has a number of discontents. They refer to industrial policies and non-tariff measures in China which discriminate foreign companies, too much government intervention in the economy, unequal access to subsidies and cheap financing, poor protection of intellectual property rights in China and industrial overcapacity in a number of industrial sectors, especially steel production (European External Action Service 2018).

Despite these complaints, the EU and China have demonstrated that they have the ability to defuse the tensions through dialogue and cooperation. The reality is that the EU needs China to the same extent that China needs the EU, as together they can promote prosperity and sustainability. In the last years the two parties have signed many partnerships meant to strengthen even more the relations in economy, trade and investment, society, environment and many other areas.

In 2013 the two parties signed the EU-China Strategic Agenda 2020, the common framework for EU-China cooperation. This agreement covers the areas of peace and security, prosperity, sustainable development, and people-to-people exchange.

Ever since, the collaboration between EU and China successively unfolded. In 2014, the European Commission announced its Investment Plan for Europe, also known as the Juncker Plan meant to stimulate growth and investment in the EU28. The Plan's objectives were to add between 330 billion € and 410 billion € to the EU's GDP and create more than 1 million new jobs over the coming years. A year later, China was the first non-EU country to announce its contribution to the Plan. The two sides agreed to set up a joint working group to increase cooperation in all aspects of investment. They agreed to collaborate in areas such as infrastructure, technologies, equipment and standards. The purpose of this agreement is to create business opportunities, jobs, growth and development for both sides (European Commission 2015).

In order to attain a position of global leadership in corporate innovation, the EU created Horizon 2020, the biggest EU Research and Innovation program, with approximately 80 billion € of funding available between 2014 and 2020. Through this program, the European Commission decided to invest 700 million € to support research and innovation in 5G. Without a doubt 5G is the future in terms of communication network as it bring greater speed, lower latency and the ability to connect more devices at once. Interested in innovation and activities that add considerable value, at the end of 2015 China decided to participate in the project, signing a key partnership with the EU on research funding and market access to 5G networks. The EU, China and other important Asian partners, who got involved, plan to make 5G a reality by 2020. The Investment Plan for Europe and Horizon 2020 are a great opportunity to stimulate Chinese investment strategy in Europe, part of the Belt and Road Initiative.

With the elaboration of the new EU Strategy on China, in 2016, was set out the policy framework for EU engagement with China for the next five years. Interested in strengthening the relations, EU wants to create synergies between its projects and the B&R Initiative. The European Commission proposed, among other objectives to "drive forward infrastructure, trading, digital and people-to-people connectivity between Europe and China" (European Commission 2016). A more developed infrastructure network between EU and China will facilitate trade and boost the economic prospects for all concerned. Ever since 2013, the two sides have initiated talks regarding an Investment agreement, meant to provide investors on both sides with predictable, long-term access to the two markets. The EU encourages productive Chinese investments in Europe, which respect local rules and regulations and wants EU investments in China to be equally welcomed. China's market and rapid development continue to offer huge opportunities, which European investors want to take advantage of. The investment agreement is meant to promote open and fair competition in each other's markets and to discourage discriminatory practices.

5 Conclusions

With so much to offer, China's integration into the world economy seems to be in everyone's interest. China's investments have a direct impact on the economic growth of the EU member countries, as they provide new jobs, capital and technology. Despite the idea that Chinese investments in the EU are a win-win situation, it seems that lately this view is no longer shared by all. In autumn 2017, European Commission chief Jean-Claude Juncker has proposed careful analysis of the situations in which a foreign, state-owned, company wants to purchase a European harbor, part of EU's energy infrastructure or a defense technology firm. He suggested that such acquisitions in sectors of national interest should be limited if EU's collective security is in danger. Considering that most of China's large-scale investments are being made by state-controlled or state-financed companies, such a measure would strongly affect the B&R Initiative. Studies reveal that Chinese state-owned enterprises play a greater role in Europe and investment in state-owned assets is more prominent than in the United States (Casaburi 2017).

Against the backdrop of these concerns in Europe, Chinese companies have sought to show their good intentions regarding investments. A relevant example is the state-owned China National Chemical Corp (ChemChina) who gave up control in 2017 of Pirelli, the Italian tire maker, reducing the stake below 50%. The Chinese want to prove that their investments are financial ones that respect the autonomy and responsibility of the management, without making major changes in the companies. Moreover, after the purchase of Lobkowicz Brewery Group in the Czech Republic, China Energy Company Limited (CEFC group) helped it preserve its traditional brewery skills, but also brought the Czech beer to Chinese shops. So, besides the financial support that Chinese companies offer, another major advantage is that it opens the way for European products to the immense Chinese market.

Unlike Europe, the U.S. has an authority which controls foreign investment in the U.S. and makes sure that foreigners do not take advantage of the country's open approach to foreign investment. The Committee on Foreign Investment in the United States (CFIUS) is an inter-agency committee authorized to review transactions that could result in control of a U.S. business by a foreign person ("covered transactions") (U.S. Department of the Treasury 2012). If CFIUS finds that a covered transaction presents national security risks it may impose some conditions to the parties or recommend the President to block the investment. In 2016 Zhongwang USA LLC, a Chinese-owned business, announced that it wants to buy Aleris Corporation, a U.S. aluminum-product maker for 2.3 billion US\$ but one year later it has withdrawn its offer, as CFIUS identified national security concerns. Also because of national security concerns, at the beginning of 2018 CFIUS blocked MoneyGram sale to Alibaba founder Jack Ma's, a 1.2 billion US\$ transaction.

Just like the U.S, France and Germany have given the state more power to block non-European Union investors in areas that threaten public order or national security. Together with Italy they have welcomed Jean-Claude Juncker's proposal and want to limit China's ability to buy European companies in areas such as infrastructure,

hi-tech manufacturing and energy. The challenge is for these measures to ensure control, but not block the investments that countries need.

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God and the Profit—A European Overlook on Some Economic Doctrines



Dan Popescu

Abstract When we discuss the relationship religion-European identity, we should switch between two parties. We do not have “unique networks”. It is necessary to have “accomplices” and “connivance”, in the good sense of these words, for the purpose of progress which does not come only from one part, but from all parts. It is also necessary to always look to the future, but without neglecting history knowledge, depicting lessons, the needed experience. Out of all these, we exclude anarchism, left or right-side terrorism, religious or lay, Islamic or Christian etc. Superior technologies may promote it widely developed. Let us start from the fact that people radicalization—beyond those paid directly to be “radical”—starts with poverty, ignorance, semidoctrism.

Keywords European identity · Religion · Economic doctrines

1 Introduction

When the Very Reverend Mother Superior in Victor Hugo’s “Les Miserables” lied to the police inspector, Javert, that the former convict, Jean Valjean, is not hidden in her monastery – could one speak about God, virtue or sin? “La mère superieure” did not want to “render” Jean Valjean to the hands of the brutal police, she knew things were not in order. Therefore, although a lie was implied, we can still talk about virtue. Most of us understand it as such. But, then, why does the genial Victor Hugo imagine Mother Superior, after the episode in discussion, asking a “sister” to whip her back because she had lied to the inspector? As we understand it, this was not only about God, about virtue, but also about sin, about the devil. Therefore, the situation is more complex ... We have, in our lives, enormous differences between “words” and realities, between principles and details, between promises and their fulfilment (especially see politicians, but not only them). It is difficult to solve, but

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much more difficult it is to understand facts. We do not only need short terms, but the facts must be looked at from a certain perspective, on medium and long term. What are we doing today, what effects do our actions have for us and for others in the future? (Popescu 2014). In fact, human condition is the most important...

In conclusion, we have the phrase: God and the profit. A European overlook on some economic ideas and doctrines. Certainly, competition is involved, the fight for existence, but this thing has a certain significance. However, we bring in discussion a different matter. In the profound antiquity, our Christian God was not recognized. Later on, from a certain perspective, He was. However, God appeared as opposed to the slave-master, God recognizing the slaves. This fact is beyond any understanding, either divine or human. It makes no sense. I believe—and it is not only my opinion—that Rome, the Roman Empire, were they to be Christian, they wouldn't have had the end they really had, the unravelling. In between brackets ... there were many economic reasons but, next to them, there was an important cause of the US civil war “The North Against the South”, that of slavery abscission in front of God and men. Further on, in the Middle Age, the conflict, the confrontation between God and profit had already become active: The Bible against the Stock Market (Popescu 1999). More and more, and especially during the medium Middle Age, a modest life, humiliation, an ascetic life promoted by the Church (but not practiced by some of its priests) are opposed to a super-abundant, opulent life. They are opposed to hidden or extrovert pleasures of life. They are opposed to the life of the rich, to most of the rich people. The rich having sinned, they started to buy their immunity, negotiating with the help of Christian Catholic priests, through indulgences ...

That is why at the end of October 2017 there was the celebration of 500 years, half a millennium, from that day in which at Wittenberg in Saxe, Germany, the monk Martin Luther displayed on the university wall his protestant theories. He withheld—and he was right—that sin cannot be negotiated with God. Neither can crime be negotiated, nor the stealing or corruption, lie or adultery. One cannot give money to the Church to be forgiven. A new world would begin (Popescu 2017) ...

...In time, without giving details, things calmed down so much that, a few years ago, the Pope himself paid a homage to Luther. And in this context, the European identity has acquired, to a great extent, a religious, moral, social dimension of love towards neighbors, of generosity, of understanding and support for those in need, of fight against poverty, of fight for freedom but without harming the others, a fight for equal chances, for brotherhood among people, respectively for solidarity. Behold that the European identity—supposing now, administratively, for each of us, allegiance to a Europe, stretching geographically from the Atlantic to the Ural Mountains—also suggests a moral, social component which is characteristic to Christian religion: “love thy neighbor”, tolerance, humanism.

2 European Identity

This is how I elucidate the problem: at that moment, in France, for example, King Ludvik XVI, who neglected the people, and his wife Mary Antoinette, who despised him, were less European than Danton, Robespierre, Marat, Saint-Just, Camille Desmoulin and other distinguished personalities of the French Revolution from 1789, who loved him, even if for the success of the Revolution blood was spilt and numberless people were guillotined. This is certified. The words: “If you don’t have bread, eat cake”, uttered by Mary Antoinette in front of starving people who would ask for a better life, were, in fact, words of the devil. Thus, we have the problem of South America, become Latin, where the great Simon Bolivar—“El Libertador”—was more European than the Spanish Crown, than many, many of the great people in Spain who wanted to maintain the respective countries in a miserable economic status. This is also certified. We can extend our judgements in this manner before and after. In England, Cromwell was much more European than Carol I Stuart (Colson 1918). Last but not least, Napoleon was much more European than Alexander of Russia, than the Emperor of Austria, than the King of Prussia, than the Crown of England etc. In fact, revolutionaries, with all possible minuses, would look towards the future and the kings, beyond a series of positive sequences, would look back to the past. Surely, this may be too much, but it is still something ... To continue, that viêt-cong vet is not more European than many other European or world leaders. Reading his statement lately I could not help but notice: “In a war there are no winners but only ruins... We may only find those who had never fought, those who like to discuss about who won and who lost the war”. In its religion, humanism is a component. And it expresses a certain human identity, not just exclusively European. However, it is quite clear that terrorism, this XXI century crime, has no points in common with religion in the sense we remember it now. It is only identified with crime. Then, where should we place Jean Jaurès? Certainly, among those that, today, can be considered as having the strongest European identity.

To conclude: Was the great revolutionary, Nicolae Bălcescu, in România, more European than many of the Voivodes of the Danubian Principalities who would despise people and poverty? We certify this as well. Or, still in South America or Argentina, were the following personalities more European than those who, in one way or another, eliminated or defeated them?—here we speak about colonel Juan Domingo Peron and his very delicate but indeed fighting wife Evita Duarte-Peron (we had seen on Buenos Aires streets a march of hundreds and hundreds of people commemorating their death, people in whose interest they had fought), or in Chile, we may speak about the “social” Salvador Allende, or, in Europe, in Germany, we may speak about the inter-changeable leaders of the Weimar Republic. We give another yes to the question. Even if, I repeat, blood was spilt, sometimes more blood than anything else for defending some social ideals. Did Dr Jivago and even the businessman Piotr Komarovski, himself, characters of Boris Pasternak’s masterpiece *Dr Jivago*, did they not think in this manner? They understood that at the moment, in Russia, there was a little “golden world”, strong to a great extent

in its semidoctrism, despising people, concentrated on its sumptuous carnivals, in its embarrassing rasputinism, in the disturbing idea that things will always remain as such, and there was also a great world of poverty and dust, of ignorance, that agitators would waken to life. Certainly, they were not associated with the childish fever of red intransigence promoting, in general, for most people, severe crime which we may call intransigent but indulgent with the bosses. Jivago and Komarovski were one with the Christian syntagma “be good” and “love thy neighbour” ... Republican Spain defended social ideals, while Franco’s Spain defended ideals as such, but to a great extent, also interests of the unfriendly capital towards mobs. And then, whose side was God on?

3 European Identity, Religion and Economic Doctrines

We made a world tour in time, not tributary to superficial judgement, but due to, directly or indirectly, a common base of difficult problems: Christian religion, European identity. This is not absolute, but a hypothesis. We may say that religion, in itself, nurtures European identity as the latter nurtures religion. But atheism, not once met, is it a belief? It is the faith there is no God, there is no divinity. To the extent it is humanist, it is also European. Is not Voltaire European, in our sense, nowadays? Certainly, he is, and one of the greatest. How about Rousseau? Certainly. From Europocentric perspective, Europe, in fact, the European continent, is a cradle of effective world civilization, but also spiritual civilization, generating, through its actions, through the promotion of its civilization, through the impact with other religions, a real-world progress. Globalization, in general, and progress globalization, especially, started from Europe. Speaking in stages, we have the Roman Empire but also the great geographical discoveries, starting with XV century. Next, we speak about the industrial revolutions. Not few times, this was accomplished with torment and blood, but, according to the time precepts, it happened relatively natural. This was a price to be paid and not a sin. There was no killing out of pleasure, sadism, vice or revenge, but this happened in the name of, say, “civilizing principles”. From today’s perspective, things change. The blood quantity diminished, there being discovered the exemplifying dimensions of progress. Humanism and tolerance are situated at the front. Among others, the fact that, at present, hundreds of thousands and million people from the former colonies migrate to Europe in such a determining manner, so extensively, demonstrates this eloquently.

Surely the problem may be looked at from another point of view, as well: how are European humanism, naturally, but also the Asian and the African ones—discussing here only a differentiating line, the continental one—conjugated? My approach may be placed under discussion or completed by approaches starting, to a lesser extent from Europe, but from other parts of the world, having other sets of values and intimate beliefs. From the point of view of other religions, Islamic, Buddhist, Confucianism, one may put further judgements that may be similar to a greater or lesser extent, but this does not make the subject of our study.

Coming back, can we say, I wonder, that economic doctrines, founded on the social, on solidarity—see founders like Charles Gide, Frederic Passy, Leon Bourgeois, founders of cooperatism of the type Schulze-Delitzsch, then Friederic W. Raiffeisen, the English school of cooperation etc.—are more European than economic liberalism, whose father was Adam Smith, then, the French Jean Baptiste Say (the one who did not believe in the existence of economic crises because, he said, “products are traded only on other products”), David Ricardo, Heckecher, Ohlin, Samuelson, the appreciated-in-time Milton Friedman and others? Today’s Socialists, (the Western ones), are they more European than the liberals today? (Popescu 1999). We may affirm this, but pretty reserved. There are, thus, from the perspective of the social, arguments of “yes” but also “no” arguments. This is, surely, a hypothesis.

Excepting the “diabolic” speculator George Soros, who, however, may be restrained by law, let us not forget, still, what mercantilists stated: “Laissez faire, laissez passer, le monde va de lui même”. For, Adam Smith would say “Il mondo va da se”. Such sayings are not only beautiful, but often hide just state intervention in support of private entrepreneurs, especially the big ones. Does doctrine “Monroe” not reflect the same: to defend, to support by state means the US interests beyond US borders? Such theses can make us European without any problems. Here—even if not always the case—there should prevail solidarity, altruism, with benefits for employers and employees. A Labor Code for and employers against employees discourage the latter. And a Labor Code for employers and against employees displeases the latter, causing strikes and protests of all sorts, which means loss of activity.

A balanced line is most useful socially. Naturally, freedom is preferred, but within the framework of law, naturally, equality, also, but equality of opportunity, some manage more, some less, people are different fraternity, of course, but especially in solidarity, generosity, altruism. In strictly economic language, solidarity, generosity, and selflessness are actually externalities which, being internalized return benefits, even if sometimes indirect, for those who promoted them.

Therefore, the world goes by itself, there are objective economic laws that action in order to regulate. And yet, based on this liberty of action, of entrepreneurs, great resources of development were created, the world has made much progress. Liberalism is harsh but competitive, it is based on initiatives and success, it pushes things forward. Based on this, great geographic discoveries happened. Europe and its catholic religion, and then the protestant one spread from North and South America up to Asia and Australia up to Africa. Similarly, based on this, industrial revolutions were initiated and developed ... Then, do we have the right to deny, to neglect the reality that the great European civilization was drawn, to the greatest extent, under the sceptre of the great European emperors and kings, under the sceptre of some great seniors who represented the essential leading structure of evolution at a certain moment? No, we do not have this right. We inherit even nowadays (Toynbee 1998) despite the fact that such a perspective manifested, not once, not at all a shy contempt, even outspoken, brutal, towards people, towards the poor. And from all these directions, however, everything was drawn in the name of God and with God’s help. The French-Belgian Jacques de Launay was a great historian. A particularly daring

researcher on the immediate history of Europe and the world. Therefore, he entered the ins and outs and underground secrets with intelligence, courage and originality. I read several papers and I recently reread “The Secret History of the Comintern”. It offers rich opportunity for reflection. Here’s one: when our grandparents, the men of that time in our families, but also young men and women, died in the trenches, fighting for the ancestral land, gangs of villains (allogeneic mostly) would work in Moscow in the Comintern, detailed plans to subdue to the Russian influence countries in Central and Eastern Europe in order to destroy the national feeling of these countries, the national identity of the people here, to exterminate the elites, in order to dismantle their culture and church. And this, with the price of blood, of hundreds of thousands of victims ... can we speak of religion and European identity in the sense we have them today? No way. Everything had to be subdued to Russia. We need to say that if Great Romania was built with the support of the church, religion, it broke up with blows given to its church, both Orthodox, Catholic Greek, Catholic, and other denominations, etc. It must be said, however, that such plans came to life, unfortunately, in the most savage and bloody way through the admirable sacrifice of blood, which is to be respected, especially the Russian, Soviet one fighting Nazi Germany. But even then, unfortunately, the blood sacrifice all through, as I said, the cruel, bloody suppression of elites, of the national and Christian element in the case of Romania, but also from other countries “occupied and liberated” by the Soviets. Religion, understood and respected, requires humanism, understanding, tolerance, generosity. And in those days, there were not any of those features. History is not a sequence of beautiful, gentle, innocent events; interests prevail, often cunning, violence, but from here to the mass crimes, was and is a long distance. In the name of religion, rather, religions, terrible crimes have been committed and are still being committed in the name of faith, not necessarily Christian. However, European religions, European identity, as interpreted according to modernity, contemporariness, have vehemently been opposing them. Which, in my opinion—and not just mine—will raise, will perpetuate such identity, realizing, more pronounced, the clear distinction between God and religion as well. God is not religion, the latter being a particular manifestation of faith in God, the glorification of God. Between brackets: there have been “religious ideologies”, including not only wild capitalism, exacerbated, not only, especially, Nazism, so criminal, but, also, “communism”, with the “God” Stalin and the USSR. And within communism, there stood out “trends”. For example, Stalin, supporting Lenin’s thesis, that of the victory of the proletarian revolution in one country, that weakest link, Russia, USSR, thus asking massive support for Russia, even sacrifice from the part of the whole proletary world. He faced, was the hard enemy of Trotsky (Lev Bronstein) who was in favour of the world communist revolution thesis, globally victorious. Obviously, with him in the forehead. Certainly, all these had nothing to do with what actually I have been calling religions ...

4 Behold a Complicated Picture!

In Romania, huge stealing from everywhere was experienced, even if the Romanians go to jobs and pose as pious people. Those who care for values and without social rewards to the measure of those values have been suffering. Research is still done, most of the times serious, in what checking transactions, doubtful acquisitions, in problems of contract commissioning, of some fictive amounts or real ones from the fiscal paradises are involved. We speak here about the “offshore” secret accounts, tax and respective technologies strike etc. such topics are remembered as ingredients of some crookery patented at European level ... Staying in Europe, I believe in an even simpler method, namely, operatively, there should be taken decisive measures by comparing legal incomes with the fortunes of these corrupt and cynical nouveau-riche people, who live in luxury villas in the country and abroad and live in nabob lifestyle from money stolen from population, as a rule, beyond any law. Are they the “new Romanian aristocracy” in the good and generous sense of the word “aristocracy” or the so-to-say, in fact, corrupt, uneducated, embarrassing, venal, stateless one with an immense thirst for stealing, for getting rich? One must see what these had inherited before 1944. What the communist system took away from or gave them, what they have acquired or lost after the Revolution—how and why—in the country and abroad etc. We lose ourselves, unfortunately, in much “small” stuff, inclusively in mass-media, which is considerably overcome by such real, serious problems. Would this happen deliberately or undeliberate? These types of research may be combined. However, we deal with a destiny we do not deserve. When would we experience “the change”, much more speaking of a stringent need in economy to re-bring in the economic circuit the resources stolen from the inside or with support from abroad, because that was one way of stealing as well? The reaction, thus, would reveal just an effective European identity, the one which got France out of trouble, and Italy as well, the one which got out of trouble countries like Belgium, the Netherlands, USA, even Russia, and many other countries not in the least.

Certainly, politics is subordinated to interests, but it depends on how much and how. There is a limit in this sense, too. Therefore, we have been pressed by all kinds of diplomats serving the interests of some foreign companies but who are getting rich magically, too. Not to mention the chiefs of public administration with such weak results, officers made generals overnight, banks transferring profit abroad or politicians receiving huge incomes for empty words ... Let us not forget that, during the interwar period, the legionary, super-religious, discriminative and sometimes criminal movement, exacerbating nationalism—“You, Captain, should make a country/Like the holy Sun in the sky”, but how, by what means, naming the engines creating resources, how we should integrate into a civilized Europe was not mentioned—fed its force and interests just from such a cupid, corrupt atmosphere stimulated by the very King Carol II. The results are obvious. We wonder about our decision-makers—beside those that got rich and are still getting rich in this manner ... What is the Justice system doing to stop it—even selectively, in order to gain, by this, the population trust?

It is, therefore, necessary, I believe, that when we discuss the relationship religion-European identity, we should switch between the two parties. We do not have “unique networks”. It is necessary to have “accomplices” and “connivance”, in the good sense of these words, for the purpose of progress which does not come only from one part, but from all parts. It is also necessary to always look to the future, but without neglecting history knowledge, depicting lessons, the needed experience. Out of all these, we exclude anarchism, left or right-side terrorism, religious or lay, Islamic or Christian etc. Superior technologies may promote it widely developed. Let us start from the fact that people radicalization—beyond those paid directly to be “radical”—starts with poverty, ignorance, semidoctrism.

Behold a complicated picture! There are also good parts, but we did not especially refer to them. Is this an economic and social implosion with lethal effects? No one who is in the limits of normality wishes it as much as explosive barrels, some with lit fuselage, are spread on different areas—from national exacerbation or, on the contrary, antinational, to poverty, to the social, from natural catastrophes to pollution, from religious schisms to the “controlled” offensive of ignorance etc.—in the entire world. What may help is European identity respect ...

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Innovative Teaching Strategies in Accounting



Raluca Sava

Abstract Accounting in higher education is a practical subject and teaching financial accounting has nowadays become a challenge. Professional organizations and corporate employers prefer to hire students with critical thinking skills, communication skills, technical skills, and analytical skills. Accounting students often have a negative attitude towards the subject and struggle to understand core concepts of accounting standards. Finding and using new and innovative methods of teaching accounting is a crucial skill for teachers. Certain methods and approaches can truly enhance the learning process, and done right, applying innovative learning and attention-management techniques to classes is a win-win for both students and teachers. The article is a review of literature on innovative teaching methods in Accounting.

Keywords Active learning · Teaching strategies · Accounting · Innovative

1 Do We Need Active Learning Teaching Strategies in Accounting?

Active learning is not a new topic, being first defined by Bonwell and Eison (1991) as instructional activities involving students in doing things and thinking about what they are doing. Due to the students engagement in the learning process, active learning is contrasted to traditional lecture, where students receive information from teacher. It is based on a theory of learning called constructivism, which emphasizes the fact that learners construct or build their own understanding.

Active learning benefits were highlighted by Bonwell and Eison (1991) and include greater student interest and motivation, involving students in learning-process activities providing more frequent and immediate feedback to students, promoting development of student skills in critical thinking, improving writing and speaking

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skills, increasing individual accountability, promoting greater academic achievement providing students with an opportunity to think about, talk about, and process course material, improving recall of information, more favorable attitudes toward learning, developing expertise in collaborative learning and teamwork.

Eison (2010) underlined that through active learning activities students can be engaged in various ways by reading, thinking and speaking critically, expressing ideas through writing, examining personal attitudes and values, giving and receiving feedback, and reflecting on the learning process. Active learning activities can be completed by students working as individuals, pairs, small groups, or the entire class. They can be tailored to specific time constraints and can be used in different settings and contexts such as class, a bridging tool, outside the class.

Do we need active learning teaching strategies in accounting and why?

In the field of accounting national and international professional bodies encouraged in the last decade university accounting educators to adopt active learning teaching strategies in accounting curriculum.

Understanding the mysteries of accounting often scares (Comanicu 2010). Accounts should be regarded as an art, science, technique, language and social game, with particularly important role in decisions on any organization. Teachers must struggle to find attractive ways to teach in order to enhance engagement and learning outcomes.

Russell et al. (2002) underlined that the rule-based, memorization, test-for-content, and prepare-for-certification exam model is inefficient and does not prepare students for the ambiguous world they will encounter after graduation. The current educational models focus too much on content at the expense of skill development -skills students need to become successful professionals. Students are not exposed enough to the impact of technology on business and the ways that technology can be leveraged to make business decisions.

Using innovative teaching strategies to promote active learning has become nowadays a major concern for worldwide teachers. Innovative teaching involves using methods and teaching learning materials for the benefit of students. Students must be able to demonstrate knowledge, judgment, application skills, communication and teamwork and self-management.

Zraa et al. (2011) stated that cooperative learning models of teaching are the most suitable teaching models for the development of professional accounting competencies in the new millennium. Through cooperative learning learners collaborate helping each other and learning from each other. The findings of their study indicated that the social interdependence theory and the cooperative learning model are the most appropriate to test for teaching accounting in the new millennium.

Problem-based learning (PBL), gamification, simulation and role-playing, are three teaching models that can be used in teaching accounting under the idea of an active, experiencing student in a situation where knowledge is not transmitted to the student, but constructed through activity or social interaction.

The aim of the study is to underline the advantages and the effectiveness of using these methods in teaching accounting, as they result from the literature review.

2 Problem Based Learning (PBL) in Accounting

One of the knowledge-oriented teaching method that can be used in order enhance students learning abilities is problem based learning. This method allow students to work in teams and to create their own knowledge system. Other benefits of PBL underlined in literature are problem solving skills, critical thinking and lifelong learning capacity.

A large number of studies have backed up benefits of PBL method, although there has been little research on PBL approaches within accounting. Soares et al. (2014) and Stahl and Dunning (2015) presented reviews on published articles concerning PBL in teaching accounting and underlined the fact that there are a few documented studies concerning the application of Problem-Base Learning in accounting education, and PBL, as an object of Accounting research, is a fairly recent phenomenon and still in its infancy.

Milne and McConnel (2001) presented the following advantages of using PBL in accounting education: increased self-direction; emphasis on meaning and not facts; higher comprehension and better skill development; teamwork, interpersonal skills and an increased level of learning.

Hansen (2006) presented the utility of PBL in topics introduction and being the focal point for learning new materials in accounting. Complex problems are used to motivate students to acquire, communicate, and integrate information. PBL can foster students to think critically and solve complex problems, find and use learning resources, work in teams, use effective communication skills, and become continual learners.

Soares et al. (2014) presented the development of communication skills, problem solving and teamwork as being advantages of using PBL. Accounting courses that had also been detected in previous research.

Some empirical studies aimed at investigating the effectiveness of PBL. Soares et al. (2014) identified some methodological outline of the research about PBL in Accounting: the methods used are experimental or quasi-experimental, and methods of data collection, such as observation, surveys and interviews, and the use of common questions with Likert scale surveys.

Tamayo and Uriarte (2016) conducted a study regarding the degree of students' satisfaction in a Financial Accounting course where PBL methodology was applied. Findings underlined positive result regarding students' satisfaction.

An improvement of student's learning outcomes was presented by Hsu et al. (2016). The authors used PBL experimental method to investigate its effect on accounting students' learning. They conducted an after-class survey on students' feelings and perception regarding PBL and found that more than half of the students gave positive responses.

3 Gamification in Accounting

Gaming techniques are becoming recognized for driving better learning outcomes—especially from an engagement and retention perspective.

Mindell (2011) presented Game of business as a useful learning tool in accounting subject. By completing the game in class cooperative competition and cooperative learning were stimulated. Even students who rarely do homework were involved and somehow “forced” to opportunity to interpret, record, and verify a large number of transactions in a relatively short period of time.

In 2014 a research was conducted by Moncada S.M. and Moncada T.P. in order to supply some guidance for well-designed educational games and to introduce new activities that can be used to supplement accounting and business teaching and learning. After a literature review, they found that Games like Monopoly, Jeopardy, Bingo or puzzles can be used when teaching principles of financial accounting, financial accounting and investments, financial accounting and tax or financial reporting. Games helped students applying concepts and at the same time made class time entertaining.

The effectiveness of learning introductory accounting course owed to the use of games supplementary to the traditional teaching methods was studied by Shah (2017). The exploratory research presented students perceptions relating to the integration of games in an introductory accounting course, accentuating that games are one of the motivational factors to maintain student’s interest in the course.

Another study assessing the effectiveness of videogames in comparison to simulations in a higher education environment was conducted by Carens et al. (2017). The study focused on three dimensions: attributes, motivation and learning outcomes of digital game-based learning and provided results for the using of videogames in accounting education.

Considering that serious games can improve the teaching process, Malaquias et al. (2018) analyze whether students more engaged in the use of DEBORAH Game (a serious game developed in Brazil) during the activities of the accounting history discipline presented higher levels of academic performance in such discipline. The results of paper were in line with previous research that also indicated improved students’ academic performance through serious games.

Mobile gaming app is starting also to be used to enhance accounting education outside of the classroom. Seow and Wong (2016) describe the first mobile gaming app for learning accounting, Accounting Challenge (ACE). Based on a voluntary students’ survey, the majority rated ACE favorably, indicating that they were satisfied with the app. ACE was presented at several international and local events and received positive feedback.

4 Simulation and Role-Playing in Accounting

Simulation has been discussed within the literature, and a number of institutions have implemented a range of business games and simulations as enhancement initiatives in business courses like business strategy or business ethics.

Simulation is designed to reproduce a real life situation wherein the students have to assume roles as they analyze situation and make decisions. As the simulation proceeds, students respond to the changes by comprehending the consequences of their decisions and determine future actions based on that.

Simulation ensures students effective learning as comprised of two critical skills: the ability to integrate concepts and the ability to make decisions.

Chilcott (1996) presents two types of simulations: role-playing and system dynamics simulations. Role-playing simulations provide students an opportunity to learn through playing a role in a scaled-down real-life situation in which students assume real world roles as they solve problems and make decisions. The focus in a role-playing simulation is on “learning by doing”. System dynamics simulations are designed to help students experience a real-life situation as it plays out over time. Simulations become role-plays when the student is expected to act as they imagine appropriate to a given role.

Faria (1987) conducted a survey of U.S. universities and corporations. The study found that 95% of the members of the AACSB (formerly American Assembly of Collegiate Schools of Business) deans surveyed utilized simulations in their curricula, and they expected simulation usage to increase over the next five years.

The simulation experience aligns accounting and related financial data with business processes and performance outcomes so that students are able to observe and exploit the value of the relevant accounting information for better decision making.

Shifting from “*knowing to thinking*” in introductory accounting courses were explained by Springer and Borthick (2004) by implementing simulation episodes.

Saptono (2010) showed that role-playing implementation in a learning process could improve students’ enjoyment level and test scores. Students were more positive about school, subject areas, and teachers or professors when they were structured to work cooperatively. Students were more positive about each other when they learned cooperatively than when they learned alone, competitively, or individualistically—regardless of differences in ability, ethnic background.

Smalt and Selden (2013) conducted an empirical study to investigate the effect of integrating an accounting simulation, *The Accounting Game*, into an accounting course. They determined that the use of a simulation is a more effective method of teaching accounting principles than traditional teaching methodology, improving student performance and student perceptions toward the accounting profession.

Stephen et al. (2017) extended the use of the Monopoly® board game as an economic simulation exercise designed to reinforce an understanding of how the accounting cycle impacts the financial statements used to evaluate management performance. This extended approach uses the rules and strategies of a familiar board game to create a simulation of business and economic realities, which then becomes

an effective, interactive, in-class financial accounting practice set. The Monopoly® game helps students develop skills in basic financial accounting because the game is an “economic simulation” of business activity.

Accounting students should enrich themselves with the technical knowledge, critical thinking, and problem-solving skills to be successful in today’s competitive environment. To reach these objectives, they should be highly engaged and motivated in the learning process. Simulations and role-playing, games and problem based learning provide students with some form of imaginary or real world within which to act out a given situation.

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Information and Communication Technology and Central Banks, in a Digital Dynamic Environment



Răzvan Șerbu

Abstract There are a lot of debates about the new technologies, about advantages and disadvantages brought by these information and communication technologies. There are pros and cons, but what is more important is how the economy will be shaped by the adoption of this technology and how the institutions are going to take advantage of them. A very important role, threatened by crypto currency, is still played by the Central Banks. If they can take this into consideration, then the measure they will acquire, thru the monetary policy, will affected the economy in which the ICT (Information and Communication Technology) is more and more present. The aim of the paper is also to present some theories of great economists, related to this subject, that give us some ideas about the past so we can imagine more clearly the future shape of the economy.

Keywords Information and communication technology · Banks · Productivity

1 Introduction

It is being discussed very intensively and at all the levels about the new technologies; foremost advance in artificial intelligence is more and more present, other general technologies are presented each and every day, there are a lots of changes that come with every seconds.

Both at the level of people, of companies or governments the impact is one that has never been seen before. All people interact with these more or less but there is not another way. And we speak about a more special environment, rural environment where this technological revolution even if it records some delay, is to be taken into account.

In this way the data of the Romanian National Institute of Statistics shows that in the rural environment in our country the percentage of those who have internet

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connection at home is more than double as compared to those who don't have running water and sewerage and they have the toilet in the yard. Practically, very often the Romanians may see more interested by those gadgets instead of the comfort in their own home. If at individual's level the interest is so great at level of companies it is exponentially increased. New technologies brought amazing revolutions at the level of the turnover for small companies, start-up and up to Amazon, Google, Apple, Facebook, etc.

The dynamics of Instagram is to be mentioned which in less than 2 years increased from a business with a dozen of employees with no profit to one that now values 1 billion dollars, namely to be acquired at this price after 551 days since its launching.

Other data that support this dynamics that affect all levels of society would be the top Forbes for this year. Recently the Forbes top of the billionaires on the planet was announced and what is to be noted in the list is a record number of billionaires in the technology industry with 23 more than the previous year.

There are a record 206 tech billionaires on Forbes' 2018 list of The World's Billionaires. Together they are worth an astounding \$1.3 trillion, up 30% since last year. It has been a banner year for most of these tech tycoons: 58% of them have bigger fortunes than a year ago, while only 13% experienced declines.

The two countries with the most tech billionaires were, perhaps not surprisingly, the U.S. and China, with 38 and 26% of all tech billionaires, respectively. This year marks the first time that two techies from China rose to the top 20 richest: Tencent chairman Ma Huateng (also known as Pony Ma) ranks No. 17 in the world, thanks in part to his wildly popular WeChat, while Alibaba BABA +1.8% chairman Jack Ma comes in at No. 20 richest. Altogether, 8 of the 20 richest people on Earth amassed fortunes in the tech sector (Forbes 2018).

2 Experimental, Results and Discussion

We have seen the impact and reaction of the private environment for citizens, from the perspective of adapting to new technologies. However, as usually, it is interesting to analyze the government and state institutions response to this is what we will analyze.

The governments have seen these information technologies first as a threat and have tried to protect themselves as much as possible. Nevertheless, in this democracy it was very difficult to achieve and often in the short term because the populations reacted quickly through modern information and communication technologies.

The governments of the communist countries having other governing principles have largely succeeded in blocking a number of platforms, some of free communication others payment like just because they had been controlled by internet users and could not be controlled by the governments. Nevertheless, they did not stop here. Very soon, they discovered that they could use the modern communication technologies for their interest by manipulating the public opinion through different means.

Some examples are given by the organization Freedom House that has been making studies since 2009 covering in the first pilot report 15 countries. Their report of this year was able to cover 65 countries. The criteria used in choosing the countries were the internet penetration rate, the size of the population with access to internet regional or global relevance of the respective countries and the restrictions and protection used on the internet. If we were to measure in percentage, the population included in the study within the total of those connected to the internet a percentage of 88 was attained and this ensured a majority so that this should be taken into account.

The study was made by the ONG for basic freedom protection, in 65 countries and aimed at the internet freedom in these countries. The conclusions are very interesting and also worrying too: such 30 governments used manipulation techniques on the Internet in 2017 with the purpose of altering online information, and even worse because the things went bad as compared to last year when the number was only 23. So with every year that passes the governments cannot keep the access blocked and then they prefer to use manipulation techniques.

Following the report "Freedom of the Net" from those manipulations it comes out the use of the paid commentators, (the so-called trolls), followed by the automatic accounts (the so called "bots") and then the fake news sites.

It is also mentioned in this report they the online manipulation techniques have played an important role in the elections of at least 18 countries in the last year. Even this year have been discovered such manipulations with the occasion of the USA elections, manipulations that were discovered to be done by Russia. Russia is one of the countries that, along with China, started using paid commentators and automatic accounts for broadcasting governmental propaganda. Now there are many other countries in this studio, the phenomenon becoming a global one.

As the companies in the social media state, these manipulations are often difficult to detect and especially difficult to fight as compared to other types of censorship much as blockage of different web sites but if these companies invested more and did not just look for increasing the profit then we might speak of success and fight up against manipulations. It is for the 3rd year that China ranks first in manipulations on the Internet as a consequence of increasing censorship and fight against online anonymity such as imprisoning those dissidents who express their opinion online (Freedom House 2018).

The year 2017 marks the seventh consequence year of decline of liberty on the internet. There is the impact that modern technologies have on governments. If we started with the analysis of the impact of these technologies on people, companies and on the state, there is another institution that is interesting to search in the whole domain, namely the Central Bank.

In a world that has recently passed through an immense global crisis, the whole population is looking for a rescuer and everybody has eyes for the state institutions even the eyes of private companies where salvation should come from. One of the institutes whose aim is to keep balance is the Central Bank. It is interesting to see how the central banks reacted to such waves, such as technologies tsunami, we may

say that the role of the central bank is not too much related to the tech industry but it might be a great mistake to believe this.

Governors and councils that govern the central Bank and monetary policies are not known as being a visionary group on industries regardless whether tech or non tech. The transition from the idea to the change that can be brought in order to raise the efficiency of the business and satisfaction of clients should be the task of companies.

It was until recently. The monetary policy is not influencing this process. Its responsibility is the demand of economy or it is the wish of people to spend money.

The central bankers are seen as drivers of a bus where the population of the country travels, as well as the firms and the government. If the direction given by the steering wheel is established by governments the central Bank has the brake and acceleration at hand and the task to take care of the engine (the economic engine) is not their responsibility. But things have changed due to the technological revolution. There are examples that show us that a Central Bank that knows to anticipate the impact of technological revolution, is to take into account in future. But to anticipate the future we must analyze the past.

Therefore, we must remember the theories of the Nobel Prize winner Robert Solow, a famous economist formed and influenced by his Ph.D. adviser Wassily Leontief and by Paul Samuelson who has also advised his Ph.D. students in economy and who became well known among the 3 winners of the Nobel Prize: George Akerlof, Peter Diamond, Josef Stiglitz.

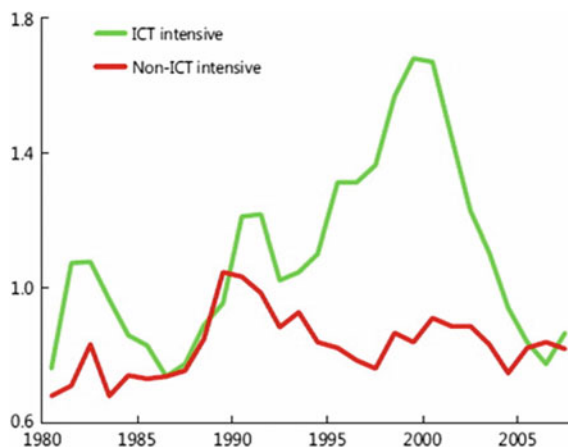
Robert Solow was the first who developed a model of growth with different forms of capital. The idea behind Solow's vintage capital growth model is that new capital is more valuable than old (vintage) capital because new capital is produced through known technology. Within the confines of Solow's model, this known technology is assumed to be constantly improving. Consequently, the products of this technology (the new capital) are expected to be more productive as well as more valuable (Haines and Sharif 2006).

As we can see in Fig. 1, however, productivity is decreasing now more and more. This means above all a fragile economic activity that cannot push the economy farther. The expectations are very high because there are more and more technologies but nothing has come yet with a shock for the economy. There is need for more time, for the line of productivity to climb, more time and a little help from the bank maybe supportive.

The words of Robert Solow are memorable, about the massive adoption of technology into the United States Company but not in statistics: This concept is sometimes referred to as the Solow computer paradox in reference to Robert Solow's 1987 quip, "You can see the computer age everywhere but in the productivity statistics" (Solow 1987).

Now if we are looking at the economy of our country, we can find some advice and some good interpretation, but no action. Adrian Vasilescu, adviser of BNR government, described the world economic cycles from the point of view of technological explosions considering that people have to get used to a new normality, different from that he was used to. He said that in history the first cycle started in 1720 with a

Fig. 1 Total productivity growth (ICT and non ICT intensive sectors) 6 year moving average percent.
Source Fourceri, Celik and Schnucker (2016); Dabla Noris and others (2015); EU KLEMS and WORLD KLEMS data; IMF staff estimation evolution of banking services distribution and technology development



great financial crisis followed by investments in fundamental sciences. The last but not least ended with the World War I and this crisis closes the last economic cycle.

The BNR governor has the same opinion that modern technologies are going to influence the way banking is running and that the banking system in Romania must be trained to get professionalized. He says that a fundamental principle for that time and for today was to have the possibility of a direct relation with clients. “That time there was no electronic communication, no Facebook, you had to meet the person face to face. That is why electronic banking was reticent as we had been used to have the client next to us when giving him a credit, talking to him.”

Actually, the role of a central bank in managing the output is more fundamental than these theories suggest. A good monetary policy of a central bank can entail a sustainable economic growth with the new technologies.

Indeed, in a paper published in 2006, Basu et al. concluded that the advancement of technologies tend to force economies towards crisis. They estimated that technological improvements have the tendency to prevent the use of capital and labor force and business investments up to a period of two years. For those who pass through such periods this effect would bring the diminishing of inflation and increase of salaries.

The financial activity’s regulation presupposes the process through which behavior rules applied to the economic subjects (at individual and collective levels) are uttered, imposed and verified in relation to the financial services for creating and maintaining the stability of evolutionary financial system (Bratu 2016).

This is the moment for Central banks to interfere. The diminishing of inflation should be taken into account. More monetary incentives should be given to have an increase in prices and of salaries. The central banks must demonstrate their skills so that the new technologies have gradual effects and labor force migration is with gaps in time not all of a sudden (Basu et al. 2006).

Then they have to consider according to this how the new measures for should be the monetary policy is being applied as far as these need time to be absorbed on

the market. But all is possible only if these councils of the central banks and the governors are ready to imagine the technological changes that already by have an impact, an imminent one. An obstacle in decision taking is the lack of statistic data.

These technological revolutions are without precedent, even if they are compared with the industrial revolution, they have different effects. So, the measures need to be more guessed than calculated on statistical data because they don't exist. The central banks through their councils and through governors should assume this risk of a small inflation, to offer more liquidity and so, an important chance for productivity of applying new communication and information technologies of a high stake for an economic development in the present situation and in the future. The economies have re-launched and now it depends on the central banks how this economic cycle will be like.

If our central bank has recently been raising the problem, recently in the economy of other states more advanced, the central bankers have already made a few movements of this kind.

If twenty years ago, in 1966, Alan Greenspan started to ask himself why the informational technology spread all across America seemed not to raise the productivity. He wasn't the first to ask himself. As we have seen at the beginning of the article there were other economists who asked themselves the same question. But Alan Greenspan was the president of the federal reserves and he held the leverage of monetary economy at hand. When the rate of unemployment had modified, the federal reserves, led by Alan Greenspan, bet the efficiency of the informational technology and of the communication to maintain the prices at maximum 2% inflation. This brilliant movement led to the longest period of economy growth after the previous one in 1960.

Alan Greenspan said "What should be indisputable is that a number of new technologies that evolved largely from the cumulative innovations of the past half century have now begun to bring about awesome changes in the way goods and services are produced and, especially, in the way they are distributed to final users. Those innovations, particularly the Internet's rapid emergence from infancy, have spawned a ubiquity of startup firms, many of which claim to offer the chance to revolutionize and dominate large shares of the nation's production and distribution system" (Greenspan 2000).

In spite on the success obtained few central bankers seem to have this courage as abilities to repeat the procedure but most remain to calculate and having simpler patterns with macroeconomic indexes like inflation and occupying labor force.

Unfortunately a more opening to re-professionalize is needed as well as trust in new technologies to use the monetary policy of a country successfully in nowadays economic conditions "Is the role of the progress of Invention revealed to have altered in the course of America's development by the historical rise of the conventional factor- productivity growth rate, or by the vanishing act we have just performed with the contemporary conventional residual? Obviously not".

Insofar as technological change has not been neutral, we cannot gauge its full impact without considering its effects upon the changing quantities in which the various productive inputs have been supplied. [...] Until we are able to articulate the

reciprocal interactions between technical and social innovation and alterations in the availability of the factors of productions, “the residual” as we know it must remain at the best a lower-bound measure of ignorance of the process of economic growth” (Abramovitz and David 1973).

In 1973 Arthur Okun mused that in an economy with very low unemployment firms would coax more output out of their workers. By letting spending grow rapidly and unemployment tumble, a central bank might induce productivity to grow faster. In the 1980s Olivier Blanchard and Larry Summers further developed this notion in their work on “hysteresis”. They reasoned that, if weak demand led to a long period of joblessness, workers might find their skills becoming obsolete and their connections to the labor market eroding.

A short-run monetary failure could create a long-run drop in supply. Correspondingly, a central bank that responded to recession by allowing unemployment to fall to inflation-stoking levels might find that this overheating lures discouraged workers back into the labor force, and pushes firms to give them the training and equipment they need to thrive. Demand, in such cases, might create its own supply (The Economist 2018).

If we analyze the data that International Monetary Fund in the paper that they sponsored we will find out (see Fig. 2) that the history is kind of repeating and the facts that Robert Solow presented in years '80 are coming back now: “Productivity growth—the key driver of living standards—fell sharply following the global financial crisis and has remained sluggish since, adding to a slowdown already in train before [...]Structural headwinds—already blowing before the crisis—include a waning ICT boom and slowing technology diffusion, partly reflecting an aging workforce, slowing global trade and weaker human capital accumulation. Reviving productivity growth requires addressing remaining crisis legacies in the short run while pressing ahead with structural reforms to tackle longer-term headwinds” (Adler et al. 2017).

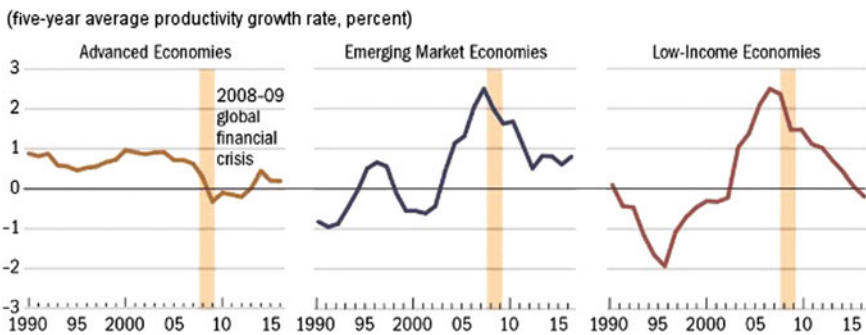


Fig. 2 Productivity growth rate (five years), percent. *Source* Penn World Tables 9.0; IMF; World Economic Outlook; and IMF- staff calculations

Note Group averages are weighted using gross domestic product (purchasing power parity)

3 Conclusions

Nowadays we notice that almost every individual has a smartphone, and for sure a computer. Based on that image, intuitively we think that we all know how to use properly those electronic devices, and for sure we think that we all use specific services like internet banking.

Analyzing the available data we observe that our intuitive impression is quite an illusion. Only a part of us have basic digital skills and from those only few use digital financial services like online banking. It seems that the principal vector is education. Those who have education (mostly high education) are using digital banking, and this is because they understand financial system (they have a certain degree of financial education), and, in addition, they are individuals who possess electronic devices, they are individuals who manage a financial assets portfolio (even if that portfolio are formed by money market financial assets), and also they are individuals who have positive attitudes toward using digital banking services. Moreover, they are individuals who are included in one type of Generational Cohorts.

Our research results suggest that is important to take into consideration every type of generational cohorts, when a institution design a business policy. This is suitable for banking industry too. In order to evaluate the “click-and-mortar” business model or “digital banking” business strategy, financial institution should assess the main characteristics of running generational cohorts along with other important vectors (that we mentioned in theoretical framework).

This is needed for Romania’s banking industry, were only 11% from those who access internet at least once in the last 3 months, and were financial education degree is the lowest among all EU member states, and were standard education is decreasing.

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Corporate Social Responsibility in Islamic Banking. Case of Indonesia



Atina Shofawati

Abstract Islamic banking conduct intermediary function and social function. Social function of Islamic banking was characterized by the zakat function and qardhul hasan. The aim of the paper is to describe the implementation of Corporate Social Responsibility in Islamic banking in Indonesia. Dimensions of CSR covers Modes of CSR Activities, CSR Collaborative Agencies, CSR Beneficiaries. This paper uses qualitative method especially the descriptive qualitative method. This paper analyzes the annual report in 2016 of Islamic Banking in Indonesia with content analysis method. Islamic banking in Indonesia were reflected by the Bank Muamalat Indonesia and Bank Syariah Mandiri which have the similarity of size, business scale and age. The result of this paper can describe the implementation of Corporate Social Responsibility of Bank Muamalat Indonesia and Bank Syariah Mandiri through social function and all dimensions of Corporate Social Responsibility. Corporate Social Responsibility in this paper covers Modes of CSR Activities, CSR Collaborative Agencies, CSR Beneficiaries.

Keywords Corporate social responsibility · Social function · Islamic banking

1 Introduction

Islamic bank in Indonesia have many functions, it is included intermediary function, social function, investment manager and investor. This study emphasizes social function of Islamic banking. Social function of Islamic banking was characterized by the zakat function and qardhul hasan. Social function reflect the implementation of Corporate Social Responsibility in Islamic bank, although theoretically the concept of social function is different with Corporate Social Responsibility. Social function was derived from the Islamic jurisprudence. One pillars from five pillar of

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muslim is conducting zakat. Implementation of zakat also adopted by Islamic bank in implementing social function. Although the function of Islamic bank is conducting social function, but in the annual report of Islamic banking in Indonesia uses the terminology of Corporate Social Responsibility which actually refers to the implementation of social function, because of the sources of fund to conduct Corporate Social Responsibility from zakat and qardhul hasan which reflect the social function of Islamic bank. Social function was derived from Islamic jurisprudence. Social function in Islamic bank consist of Zakat and Qardhul Hasan.

There are some research about Corporate Social Responsibility in Islamic Bank which become the reference in this research which cover the research of Chintaman (2014), Wan Jusoh and Uzaimah (2017), Abdullah and Azis (2011), Abubakar (2016). According to Chintaman (2014), the CSR activities lead to the upliftment of the destitute among the society. Banks established according to the principles of any religion may have more inclination towards fulfilling their religious duties as well as their social duties by practicing CSR. On the other hand Conventional banks guided by their moral duties and social and mandatory compulsions for undertaking CSR activities. The study of Chintaman (2014), examines the preferences and patterns of both the kinds of banks and compares their CSR practices, evaluate the effects of Islamic Tenets on the CSR practices and looked into the preferences of the banks regarding CSR Collaborating Agencies. Case study method, Content Analysis and Dimension Score Analysis have been undertaken to fulfill the objectives of the study. The result of the Chintaman (2014)' study reveals that the Islamic Banks are more innovative in their CSR practices and the effects of Islamic Tenets could be envisaged in their practices.

According to Wan Jusoh and Uzaimah (2017), Corporate Social Responsibility (CSR) term has rapidly developed and is no longer a strange concept among business communities. As part of business entities and concurrently guided by Shari'ah principles, Islamic banks face even more expectations in performing CSR as Islamic financial institutions. It was found that there are significant issues that need to be addressed in order to ensure the efficiency of Islamic banks CSR applications especially regarding corporate social Responsibility disclosure (CSRD), CSR department and CSR fund (Wan Jusoh and Uzaimah 2017).

Abdullah and Azis (2011) identify the importance of and relationships between the three key concepts of corporate reputation, stakeholder relations, and corporate social Responsibility from a managerial perspective of corporate communication and corporate marketing and employed in-depth interviews with selected companies from GICs, MNCs, and IPCs and found that, despite the significant alignment and integration between corporate reputation, stakeholder relations, and corporate social Responsibility in their practice, all these have been managed as business duties (regulated), not genuinely for the substantial contribution to a larger social community and environment (self-regulated).

Abubakar (2016), conduct research aims to look at the CSR of the Islamic financial institutions and to what extent they achieve maqasid al-Shariah through this concept. It is found that several Islamic financial institutions are involved in activities that promote corporate social Responsibility, such as payment of Zakat to the

needy, charity takaful product, donations, program funding and institutions of social services, training students, and protecting the environment which is in line with maqasid al-Shariah. It is recommended that the Islamic financial institutions should engage in more activities that will bring more benefits to the society to ensure that they are not left behind in serving the community—which is the main purpose of the Shariah—when compared to its conventional counterpart (Abubakar 2016). A business's CSR can include a wide variety of tactics, from giving away a portion of a company's profits to charity, to providing "greener" business operations. Regarding Maqasid Shariah, the main objective of the Shari'ah is to attain mercy for mankind by ensuring their benefits and moving their harms. Hence Maqasid al-Shari'ah, or the objectives of Shari'ah, aims to "promote benefits and repel harms, which is achieved through *maslahah* (public interest)" (Abubakar 2016).

This study especially refers to the research of Chintaman (2014). The aim of the paper is to describe the implementation of Corporate Social Responsibility in Islamic banking in Indonesia. Dimensions of CSR covers Modes of CSR Activities, CSR Collaborative Agencies, CSR Beneficiaries. Research question in this study are How about the implementation of Corporate Social Responsibility in Islamic banking in Indonesia which is consist of Dimensions of CSR which covers Modes of CSR Activities, CSR Collaborative Agencies and CSR Beneficiaries?

2 Concept of CSR

Concept of CSR revolves around the issues like ethics, social upliftment, environmental protection and solution to other global problems. The organizations direct their efforts towards the upliftment and benefit of the stakeholders (Chintaman 2014). Who are stakeholders? If stakeholders are "those individuals or groups who depend on the organization to fulfill their own goals and on whom, in turn, the organization depends" (Johnson and Scholes 2002) in Chintaman (2014), then one organization is concerned with a very large amount of people, if not everyone since many people depend, either directly or indirectly, on an organization's activity. And, if the organization is accountable to all its stakeholders (i.e., everyone) rather than to one constituency (i.e., the shareholders), then the notion of accountability becomes valueless because it is too broadly set and useless from a managerial point of view (Hummels 1998; Vinten 2000) in Chintaman (2014). In the 1960s, in an outline of CSR, Frederick (1960) defined CSR as an action taken by businessmen to direct the operations of an economic system so as to fulfill the expectations of the public. That is to say, production and distribution are required to be conducted in such a way that will improve total socio-economic welfare (Abubakar 2016; Fig. 1).



Fig. 1 Corporate social responsibility. *Source* www.industryplayer.com in Chintaman (2014)

3 Islamic Financial System

The need for understanding the concept of Islamic Finance System arises before understanding the concept of Islamic Banks as Islamic Banks are part of Islamic Financial System. Islamic Financial System is based on the principal of Sharia (Chintaman 2014).

3.1 Sharia

The literal translation of the Arabic term Sharia is “the way”, but it is now widely understood to mean the principles of Islamic law. Sharia is not a finite standard: it is a set of rules, principles and parameters. The primary sources of Sharia are the Chintaman (2014): Quran (the sacred book of Islam believed to record the Word of God as revealed to the Prophet Muhammad). Sunna (the practices of the Prophet Mohammed). The Sunna is found in the series of narrations (Hadith) resulting from dialogue or interaction with the Prophet Muhammad, transmitted by his companions and later collected by scholars (Chintaman 2014). Sharia governs every aspect of a Muslim’s life. A practicing Muslim is required to lead a just and pure life to achieve piety. In this endeavor, a Muslim’s income and expenditure must remain free of impurities (such as the receipt or payment of interest). To do otherwise would be to commit a sin. The need for Islamic finance is therefore a spiritual necessity rather than an economic convenience. Sharia sets out what constitutes “just” and “pure” for a Muslim. While some parts of Sharia are quite specific and incapable of further interpretation, some of its requirements are of wider application and take the form

of principles or guidelines. To that extent, Sharia is therefore subject to a further process of interpretation (Chintaman 2014).

3.2 Principles of Islamic Finance

The following are fundamental principles of Islamic finance that Islamic finance transactions must comply with (Chintaman 2014).

- Prohibition of Interest or Usury
- Ethical Standards
- Moral and Social Values
- Liability and Business Risk.

3.3 Islamic Banks

There is no standard way of defining what an Islamic bank is, but broadly an “Islamic bank is an institution that mobilizes financial resources and invests them in an attempt to achieve predetermined islamically-acceptable social and financial objectives. Both mobilization and investment of funds should be conducted in accordance with the principles of Islamic Shari’a”. (www.albarakah.com, 2014) in Chintaman (2014). The Qur’anic verse “...Allah has permitted trade and has forbidden riba (interest)” (Qur’an 2:275) is the reason why Islamic finance encourages entrepreneurship and trade, and denies riba (interest) in all business transactions. Islamic banks deal in goods and documents, but not in money. Money is used only as a medium of exchange for purchasing assets and then engaging in sale, lease or investment. On the other hand, conventional banks deal with money and documents and ignore goods. Money is treated as goods or a commodity which is purchased and disposed off (Chintaman 2014).

This is well demonstrated in a hadith narrated by Urwa when the Prophet (peace be upon him) gave him one dinar in order to buy a sheep for him. Urwa bought two sheep for him with the money. Then he sold one of the sheep for one dinar, and brought one dinar and a sheep to the Prophet. On that, the Prophet invoked Allah to bless him in his dealings. (Bukhari) If Urwa had borrowed the first dinar with the condition that he would return the dinar plus a sheep that would be pure interest (ribā). By engaging in business and trade, money is converted into something useful which in turn generates legitimate profit for the financier (Chintaman 2014).

Distinct functioning of Islamic Banks (Chintaman 2014):

- Following are the simple steps to be followed in Islamic Banking system (IBS): Money is deposited in a bank and the bank guarantees to return the money. Money can be withdrawn at anytime. Bank may charge you a fee for looking after your money and may pay hibah (gift) to you if it deems fit. This concept is normally used

in deposit-taking activities, custodial services and safe deposit boxes (Chintaman 2014).

- Mudharabah (Profit Sharing)
- Bai' Bithaman Ajil (BBA) (Deferred Payment Sale)
- Murabahah (Cost Plus)
- Musyarakah (Joint Venture)
- Ijarah Thumma Bai' (Hire Purchase)
- Lease-to-Own
- Islamic Forwards.

4 Literature Review

CSR has irreversibly become part of the corporate fabric (Pearce and Doh 2005) in Chintaman (2014). Many organizations have developed a detailed corporate social Responsibility (CSR) programs designed to generate goodwill among various stakeholders and to increase market value. Banks are pouring millions of rupees into different kinds of CSR programs and strategies in the race to strengthen their reputation and improve relationships with stakeholders (Chintaman 2014).

4.1 *Notion of CSR*

The impact of CSR on corporate reputation is shaped by how the firm communicates its CSR activities to its external stakeholders and how its activities are reported in the national media and other communication mediums (Rettab et al. 2008) in Abdullah and Azis (2011). Dow Jones Index (2005) defined CSR as a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments. business in the Community (BITC) defined CSR as “a company’s positive impact on society and the environment through its operations, productions or services and through its interaction with key stakeholders such as employees, customers, investors and suppliers” (Katsoulakos and Katsoulakos 2006, p. 13). On the other hand, Carroll (1979, p. 500) states that businesses that practice social Responsibility attend to “economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time” (Abdullah and Azis 2011).

4.2 *CSR and Banking Sector*

Banking sector has yield positive impacts of CSR initiatives. A study by Lemke (1987) in Chintaman (2014) reports that a Massachusetts bank succeeded in

promoting new 138 accounts (worth \$11 million) by assisting endangered animal species with donations made to the World Wildlife Fund (WWF). A study conducted by Ararat (2005) in Chintaman (2014) in Middle East and North Africa (MENA) on the notion of “corporate social responsibility” (“CSR”). The reports are prepared as a prologue for a workshop organized by the World Bank (MDF5) which took place in Beirut in 2005. It suggests that it will take some time before the local societies will play a significant role in driving the “CSR” in the region. This change will involve a shift in values towards universal values, a process which will continue to be driven by democratization and globalization. A study by Muhamat (2010) in Chintaman (2014) reveals that one needs to distinguish between ethical banking product and Corporate Social Responsibilities (CSR) and there is much to be learnt for the local Islamic banks from the Cooperative Bank of Britain if one aspires to be a complete bank with ethical banking products.

A Study was conducted by Islam et al. (2010) in Chintaman (2014). It identified the distinctive features of the social Responsibility of banking business in different countries, and also formulated the conclusion that the American model of CSR is the most widespread in the world because of simplicity of its implementation in the short term. A Study by Scholtens (2009) in Chintaman (2014) revealed that the interest of banks to develop the social report and to disclose their CSR policies is increasing.

Many studies were conducted to measure the effect of CSR on financial performance of banks, amount of funding and stock price. The study by Simpson and Kohers (2002) in Chintaman (2014) revealed positive impact of CSR on financial performance. And study by Callad Muñoz and Utrero-Gonzalez (2009) in Chintaman (2014) also endorsed the same result on amount of funding and stock price stability.

Hence, while the virtues of Islam have always advocated social Responsibility, the challenge to Islamic banking communities lies in its application. For Islamic banks, good CSR practices should have already been embedded in all aspects of their operations. Indeed, Islamic banking should endeavor to be the epicenter in the financial galaxy of promoting good CSR practices (Dusuki and Dar 2007) in Wan Jusoh and Uzaimah (2017).

While Islamic banking industry has progressed to become an increasingly considerable segment within the global financial market, it has been renowned as a viable and competitive form of financial intermediation not only in Muslim countries but also outside the Muslim region and offers an extensive range of financial products and services (Dusuki 2008). The basic differences between Islamic banking and conventional banking, is not only in the ways they perform their businesses, but also in terms of all the values which guide Islamic banking whole operations and outlook (Dusuki 2008) in Wan Jusoh and Ibrahim (2017).

5 Data Collection and Methodology

This present study analyzes the CSR practices from Islamic Bank in Indonesia. The rationale behind the selection of Islamic bank is that the similarity of size,

business scale and age. Total two banks selected for this study that are Bank Muamalat Indonesia and Bank Syariah Mandiri. The study is based on the secondary data. The data was collected from annual reports, journals, websites of the banks. According to Chintaman (2014), an objective coding scheme is applied to the data which is commonly known as content analysis. Content analysis method makes the data systematically comparable.

This paper uses qualitative method especially the descriptive qualitative method. Adopted the study of Chintaman (2014), the methodology of this study is use qualitative method with content analysis method. Content analysis which is integrated with Dimension score analysis and then followed by Case Study to explain the implementation of Corporate Social Responsibility in Bank Syariah Mandiri (BSM) and Bank Muamalat Indonesia (BMI). This paper analyzes the annual report in 2016 of Islamic Banking in Indonesia with content analysis method. Islamic banking in Indonesia were reflected by the Bank Muamalat Indonesia (BMI) and Bank Syariah Mandiri (BSM) which have the similarity of size, business scale and age.

According to Chintaman (2014), the key finding of the content analysis of the study of Chintaman are present with the Percentage Scores of various CSR Areas and CSR Activities, but the content analysis in this study with the disclosure of the item and dimension of Corporate Social Responsibility in annual report of Islamic bank. If the item and dimension of Corporate Social Responsibility was explained in annual report get the value of 1 but if the item and dimension of Corporate Social Responsibility was not explained in annual report so get the value of 0.

6 Case Study of CSR Practices

6.1 Case Study of Bank Syariah Mandiri (BSM)

Corporate Social Responsibility (CSR) reflect the commitment of BSM to the environment to give added value to the stakeholder to encourage the growth of the firm. Policy of CSR in BSM is conducting through triple bottom lines which cover economic indicator, environmental indicator, and social indicator. CSR BSM based on 3 pillars which cover Spirituality (Character Building), Nationalism (National Contributor), welfare (Economic Empowerment). In implementing CSR, BSM conduct cooperation with Laznas BSM to conduct channeling of firm zakat fund and implementation of humanity program (Annual Report of BSM 2016; Fig. 2).

Implementation of CSR program in BSM have two sources of fund which cover Zakat, Infak, Shadaqah (ZIS) Fund and Dana Kebajikan (fund of goodness). Zakat channeling was implemented through Program:

- a. Mitra Umat, Didik Umat, and Simpati Umat which refers to 8 ashnaf zakat (mustahik) which cover needy, poor, Amil, Muallaf, Riqab, Gharimin, Fisabilillah, Ibnu Sabil.
- b. BSM Fellowship Program for the orphan and pension employee which is death.

Fig. 2 Graphics of concept scheme of CSR-BSM.
 Source Annual Report BSM (2016)



Zakat fund from BSM through LAZNAZ BSM was distributed in three Programs (1) Program mitra Umat; (2) Program Didik Umat; (3) Program Simpati Umat (Table 1).

Fund of Goodness (Qardhul Hasan/Non-profit Loan)

Qardhul hasan have source from fine, non halal earning, and another social fund. The kind of activity which have distribution of qardhul hasan cover the development/renovation of public facility which cover school, disaster aid, healthy aid, book distribution and computer for the school. Realization distribution of Fund of Goodness (Qardhul Hasan) in 2016 covers Spirituality consist of dakwah and ibadah equipment; Nationalism consist of education, ambulance, operational car, social, public facility; welfare consist of community development and Laznas BSM (Table 2).

CSR Program of Life Environment cover giving the fish seed and plants seed, disaster aid, home renovation and Use material and energy which can recycle.

CSR which is related with labor force, healthy and work safety which cover Facility of life insurance in health and BPJS. Considering Environment aspect in giving credit/financing to the customer.

Gender equality and work opportunity

The rate of work accident is Zero Accident

CRS which is related development of community social.

Table 1 Receiver benefit of Zakat fund 2016

Program	Zakat	
	Individual	Institution
Mitra Umat	–	–
Didik Umat	313	13
Simpati Umat	9347	30
Total	9660	43

Source Annual Report BSM (2016)

Table 2 Realization distribution fund of goodness (Qardhul Hasan) in 2016 (IDR million)

Pilar CSR	Total
Welfare	1,422,576,443
Nationalism	3,548,444,076
Spirituality	3,589,012,250
Laznas BSM	28,430,000,000
Grand total	36,990,032,769

Source Annual Report BSM (2016)

Table 3 Distribution of ZIS LAZNAS BSMU (BSM) fund in 2016

No.	Kind	Corporate	Nominal (IDR)
1.	Disaster	23	237,178,080
2.	Healthy	217	1,815,257,543
3.	Education	199	2,823,374
4.	Social	405	4,753,806,563

Source Annual Report BSM (2016)

CSR activity with Laznas BSM cover Mitra Umat consist of micro entrepreneurship, the young muzakki, kampung berdaya; Didik Umat consist of scholarship and aid for school equipment: Simpati Umat consist of healthy aid and disaster also environment aid.

Development of Umat Economy Program of Education and Training

Program of Community social cover care for dhuafa, Ramadhan care, care for natural disaster, renovation of mosque and school.

Dana kebajikan in Islamic terminology is Qardhul hasan (non-profit loan) (Table 3).

Related with CSR Customer, BSM have target to finish complaint handling from customer.

6.2 Case Study of Bank Muamalat Indonesia (BMI)

Throughout 2016, Bank Muamalat has conducted various targeted and measured CSR program are to achieve a better quality of social, economic and education life for all beneficiaries. The programs cover four activities aspects including Environment, Community Development, Employment, Occupational Health & Safety (K3), as well as Responsibility towards the Customer (Annual Report BMI 2016).

The focus of other Bank Muamalat CSR programs are regarding the Environment and social economic Development. In carrying out the programs, Bank Muamalat cooperate synergically with its affiliates, namely Baitulmaal Muamalat (BMM) and Zakat Management Board (LAZ) on criteria determined by Bank Muamalat. In terms

of Health, Safety and Employment (K3) as well as Responsibility towards customers are conducted and organized independently by Bank Muamalat (Annual Report BMI 2016).

Bank Muamalat implements CSR activities with several funding sources, among others from the company's funds, employees and companies zakat, as well as other halal funds such as infaq and shadaqoh and other sources that cannot be recorded as the banks's revenue (Annual Report BMI 2016).

Responsibility Towards Environment

Internal Green Campaign

Responsibility Towards Social and Society Development.

Empowering community in terms of economic, educational and humanity.

1. Economy—Green Horti Cianjur program based agricultural business program
2. Education—MES-Muamalat Scholarship
3. Humanity
 - a. Proud to give Blood Donation for Indonesia
 - b. Muamalat Sharing the Light of Qurban
 - c. Muamalat Rapid Response
 - d. Infrastructure Donation.

Responsibility Toward Employment, Occupational health, and Work Safety. Disaster Mitigation (Thematic).

Responsibility Toward Customer.

Service excellence relied on the Responsibility toward customer to deliver the extra miles satisfaction to customer. Customer Complaints Handling.

7 Analysis and Findings

The key finding of the content analysis of the study with the disclosure of the item and dimension of Corporate Social Responsibility in annual report of Islamic bank. Dimensions of CSR in this paper according to Chintaman (2014), that explain Dimensions of CSR consist of Modes of CSR Activities, CSR Collaborative Agencies and CSR Beneficiaries.

Table 4 represents the Individual Dimension Scores of the Islamic Banks under study. The implementation of Corporate Social Responsibility in Islamic banking in Indonesia consist of Dimensions of CSR covers Modes of CSR Activities, CSR Collaborative Agencies, CSR Beneficiaries. Modes of CSR Activities consist of Providing Aids/Equipments/booklets etc., Financial Assistance (Non-Zakat Funds), Construction Work, Qard al Hasana, Financial Assistance (Zakat Funds), Cooperation with Other Institutions, Organizing Programmes, and Projects. CSR Collaborative Agencies consist of with NGOs, with Government Agencies, with Charity Organizations, with other Organizations. CSR Beneficiaries consist of Educational

Activities, Training and Skill Development, for differently abled, to Needy, Down-trodden, for Marriage, for Medical Treatment, for Diversified Activities, for Medical equipments, for Prisoners, for Fishermen, for People affected by Natural Calamity, for Zakat Fund Campaign, for Traffic Awareness, for Religious Activities, for Retiring Employees, for Heritage Club, for Women, Employment to Nationals, For Sports, For other Events and Festivals, For Environmental Education.

Bank Syariah Mandiri (BSM) and Bank Muamalat Indonesia (BMI) conduct Dimensions of Modes of CSR Activities in 2016 for all item (7 item). Modes of CSR Activities consist of Providing Aids/Equipments/booklets etc., Financial Assistance (Non-Zakat Funds), Construction Work, Qard al Hasana, Financial Assistance (Zakat Funds), Cooperation with Other Institutions, Organizing Programmes, Projects. Bank Syariah Mandiri (BSM) conduct Dimensions of CSR Collaborative Agencies in 2016 for one item that is With Charity Organizations. Charity Organizations for BSM is Laznas BSM. Bank Muamalat Indonesia (BMI) conduct Dimensions of CSR Collaborative Agencies in 2016 for 3 item that is With NGOs that is Zakat Management Board (LAZ), With Charity Organizations that is Baitulmaal Muamalat (BMM), With Other Organizations that is MES. Bank Syariah Mandiri (BSM) conduct Dimensions of CSR Beneficiaries for almost of all item except For Differently abled, For Marriage, For Prisoners, For Traffic Awareness, For Heritage Club, For Sports. Bank Muamalat Indonesia (BMI) conduct Dimensions of CSR Beneficiaries for almost of all item except For Differently abled, For Marriage, For Prisoners, For Fishermen, For Traffic Awareness, For Retiring Employees, For Heritage Club, For Women, For Sports.

Table 5 represents total the Individual Dimension Scores of the Islamic Banks under study which show that total disclosure of implementation Corporate Social Responsibility in Bank Syariah Mandiri in 2016 is 23 which is consist of dimensions of Modes of CSR Activities is 7 item, CSR Collaborative Agencies is 1 item and CSR Beneficiaries is 15 item. Total disclosure of implementation Corporate Social Responsibility in Bank Muamalat Indonesia in 2016 is 22 which is consist of dimensions of Modes of CSR Activities is 7 item, CSR Collaborative Agencies is 3 item and CSR Beneficiaries is 12 item. Therefore the implementation of Corporate Social Responsibility in 2016 from Bank Syariah Mandiri is better than implementation of Corporate Social Responsibility in 2016 from Bank Muamalat Indonesia.

According to Abubakar (2016), the research finds that the concept of social Responsibility (CSR) requires businessmen and corporations to direct the operations of an economic system so as to fulfill the expectations of the public. That is to say, production and distribution are required to be conducted in such a way that will improve total socio-economic welfare of the public. Furthermore, CSR from Islamic perspective requires business men and corporations to safeguard the interests and welfare of the society as a whole and this is in line with maqasid al-Shari'ah. Moreover, it is found that several Islamic financial institutions are involved in activities that promote corporate social Responsibility, such as payment of Zakat to the needy, charity takaful product, donations, program funding and institutions of social services, training students, and protecting the environment.

Table 4 Individual dimension scores of Bank Syariah Mandiri (BSM) and Bank Muamalat Indonesia (BMI) in 2016

Dimensions	BSM	BMI
<i>Section 1: Modes of CSR Activities</i>		
Providing aids/equipments/booklets etc.	1	1
Financial assistance (non-Zakat funds)	1	1
Construction work	1	1
Qard al Hasana	1	1
Financial assistance (Zakat funds)	1	1
Cooperation with other institutions	1	1
Organizing programmes, projects	1	1
Total Section 1	7	7
<i>Section 2: CSR Collaborative Agencies</i>		
With NGOs		1
With government agencies		
With charity organizations	1	1
With other organizations		1
Total Section 2	1	3
<i>Section 3: CSR Beneficiaries</i>		
Educational activities	1	1
Training and skill development	1	1
For differently abled		
To needy, downtrodden,	1	1
For marriage		
For medical treatment	1	1
For diversified activities	1	1
For medical equipments	1	1
For prisoners		
For fishermen	1	
For people affected by natural calamity	1	1
For Zakat fund campaign	1	1
For traffic awareness		
For religious activities	1	1
For retiring employees	1	

(continued)

Table 4 (continued)

Dimensions	BSM	BMI
For heritage club		
For women	1	
Employment to nationals	1	1
For sports		
For other events and festivals	1	1
For environmental education	1	1
Total Section 3	15	12

Source Annual Report BSM (2016) and BMI (2016)

Table 5 Total individual dimension scores of Bank Syariah Mandiri (BSM) and Bank Muamalat Indonesia (BMI) in 2016

No.	Dimension of corporate social responsibility (CSR)	Bank Syariah Mandiri (BSM)	Bank Muamalat Indonesia (BMI)
1.	Modes of CSR activities	7	7
2.	CSR collaborative agencies	1	3
3.	CSR beneficiaries	15	12
	Total	23	22

Source Annual Report BSM (2016) and BMI (2016)

8 Conclusions

Implementation of Corporate Social Responsibility in Islamic banking in Indonesia which were reflected by Bank Muamalat Indonesia and Bank Syariah Mandiri through social function and all dimensions of Corporate Social Responsibility consist of Modes of CSR Activities, CSR Collaborative Agencies, CSR Beneficiaries. Total disclosure of implementation Corporate Social Responsibility in Bank Syariah Mandiri in 2016 is 23 which is consist of dimensions of Modes of CSR Activities is 7 item, CSR Collaborative Agencies is 1 item and CSR Beneficiaries is 15 item. Total disclosure of implementation Corporate Social Responsibility in Bank Muamalat Indonesia in 2016 is 22 which is consist of dimensions of Modes of CSR Activities is 7 item, CSR Collaborative Agencies is 3 item and CSR Beneficiaries is 12 item. Therefore the implementation of Corporate Social Responsibility in 2016 from Bank Syariah Mandiri is better than implementation of Corporate Social Responsibility in 2016 from Bank Muamalat Indonesia.

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Methodological Approach for Messages Classification on Twitter Within E-Government Area



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Abstract The constant growth in the numbers of Social Media users is a reality of the past few years. Companies, governments and researchers focus on extracting useful data from Social Media. One of the most important things we can extract from the messages transmitted from one user to another is the sentiment—positive, negative or neutral—regarding the subject of the conversation. There are many studies on how to classify these messages, but all of them need a huge amount of data already classified for training, data not available for Romanian language texts. We present a case study in which we use a Naïve Bayes classifier trained on an English short text corpus on several thousand Romanian texts. We use Google Translate to adapt the Romanian texts and we validate the results by manually classifying some of them.

Keywords Social media · Naïve Bayes classifier · Text classification

1 Introduction

There are many ways to define Social Media. However, most of the definitions emphasize three important elements: user generated content, communities and Web 2.0 (Ahlqvist et al. 2008). Globalwebindex, cited in Minqing and Bing (2004), shows today's statistics regarding Social Media usage. Top 4 Social Media platforms are

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Facebook (with 70% of the internet users), Google+ (50%), YouTube and Twitter. The next three platforms are Chinese centric social networks and include Sina Weibo, Tencent Weibo and Qzone.

Classification is the task of choosing the correct label for a given set of input data. For the basic classification tasks, each entry is regarded as isolated from all other inputs and the set of labels is defined in advance. Some examples of classification tasks:

- Deciding which is the subject of a news article from a fixed list of thematic areas such as “e-government”, “economy”, “technology” and “politics”;
- Deciding whether the occurrence of the word “referendum” has positive or negative connotations depending on a particular context;
- Deciding whether an email is spam or not.

A large interest for the use of automatic tools for the extraction of emotions, sentiments and opinions from a text has been seen. Many applications used for text processing are already employing tools for automatic subjectivity analysis (Balog et al. 2006). Studies demonstrates that it is feasible to determine the public mood by interpreting the Twitter data (Lansdall-Welfare et al. 2012; Godfrey et al. 2014; Bian et al. 2016).

Of all the subjectivity, analysis work to date the greatest part has been applied to English, leading to the creation of several resources and tools for this language. New research paths are opened by the recent machine translation technology. Although this technology is not yet mature to the level of creating translations like humans do, it allows access to material written in many different languages. It is possible to use this technology together with other computational methods to analyze non-English text using computational tools designed for the English language. Applying this method saves on the costs of developing tools for each language in particular. Some studies like (Banea et al. 2008; Turner et al. 2015) use machine translation in multilingual content analysis.

2 Subjectivity Analysis Using NLTK and Naïve Bayes Classifier

Some of our prior work (Stoica et al. 2012, 2013) focuses on messages obtained from Twitter social network. We want to classify the messages with regards to the sentiment of the user who writes it. To achieve this goal, we decided to use the Naïve Bayes classifier and the processing of the natural language. The Naive Bayes Classifier is very well suited for a high rate of inputs and is based on the so-called Bayesian theorem. Maybe due to its simplicity, this method can outperform other more sophisticated ones.

The Natural Language Toolkit (NLTK) is a collection of libraries written in Python and it is used for natural language processing (NLP). The toolkit has proven itself as a teaching tool but also as an individual study tool and as a starting point for

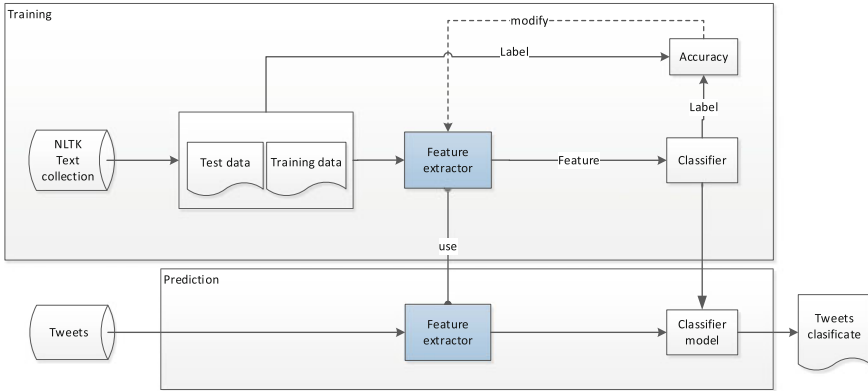


Fig. 1 The classifier architecture

other research systems. NLTK library has been chosen because it contains a “Web chat” dictionary containing user’s chat discussions, which in turn has a structure very similar to that of the tweet. The web dictionary contains about 1.000.000 labelled entities that can be used to train and test the Bayes classifier. Once trained, we use the resulting model to classify our tweets.

As we can see in Fig. 1, the ranking of tweets is pretty simple once you have built the characters extractor and trained the classifier. However, the difficult part it is to select the appropriate features extractor.

The training process is limited to selecting 3.000.000 documents and dividing them into two parts: the training set and the test set. The training set is used for building the model later used to classify tweets; the test set is used to validate the model and to calculate the accuracy. For this process, our contribution consists in building the features extractor that ensures the best accuracy. The technology used comprises the following steps: cleansing the text, the tokenization of words, stemming and the relevant characteristics extractor. The text cleaning process consists in removing the noise in the tweet, meaning the removal of links, entities or other annotations.

Stemming is the process of extracting the root from each word, for example the word “proofs” is transformed into “proof” thus helping the classifier by reducing the search space. Word tokenization splits text into simple words, although this may sound trivial, this is not always an easy task. The extractor creates a map containing all relevant words in our text, the whole process is explained using a practical example shown in Fig. 2. NLTK was originally created in 2001 as part of a computational linguistics course in the Department of Computer and Information Science at the University of Pennsylvania. The Natural Language Toolkit is a suite of program modules, data sets, tutorials and exercises, covering symbolic and statistical natural language processing. NLTK is written in Python and distributed under the GPL open source license. Over the past five years, NLTK has become popular in teaching and research.

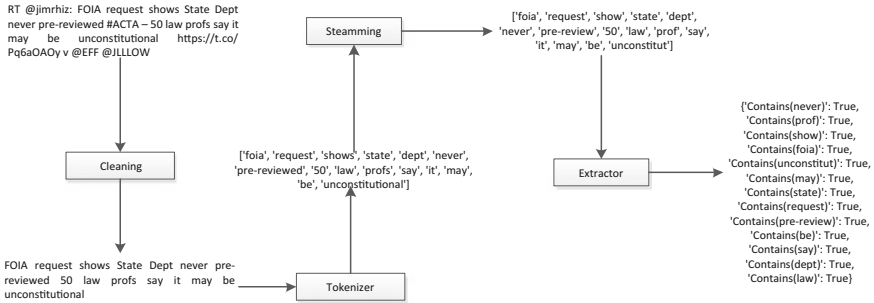


Fig. 2 Obtaining the relevant words

3 Adapting the English Classifier for Romanian Language

Even if we have no trained classifiers for text in Romanian, we wanted to observe what happens when we use classifiers trained with texts in English. The problem became apparent when we classified from the perspective of the user’s feelings a number of 10,982 tweets obtained with input parameters: Keywords: “referendum”, “alegeri”; location: “Romania” (Fig. 3).

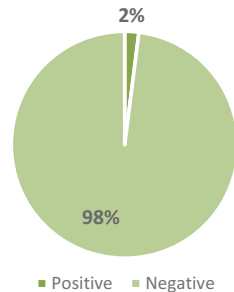
Obviously, such a large discrepancy between users’ feelings set against the sought topic was unlikely, which led us to an inevitable conclusion: classifiers are not suitable for these texts.

To resolve this issue, we proposed the following amendment to the classifier: before entering the message into the classifier, this message will go through a stage of automatic translation into Romanian. The architecture that realizes this adaptation is given in Fig. 4.

Having made the change, we resumed the classification using the same input data, obtaining the results in Fig. 5.

It is noted that we have a much more “normal” distribution of the user’s preferences. However, nothing assures us that we have a correct classification. For this purpose, we decided to do a check of the accuracy of the proposed system in Fig. 4.

Fig. 3 Results for Romanian language text



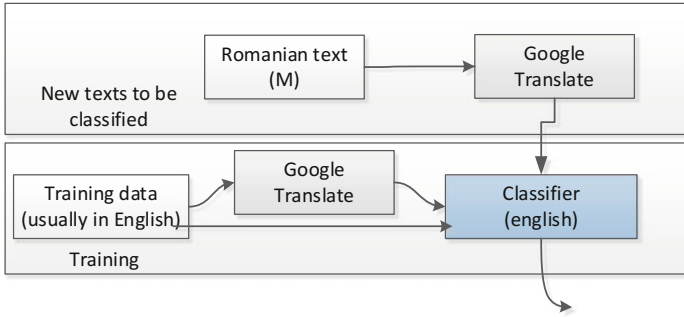
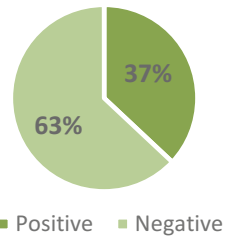


Fig. 4 Using Google Translate to modify the classifier

Fig. 5 Results after the using Google Translate



4 Validating Classifier Adaptation for the Romanian Language

We made a web page (<http://earth.ulbsibiu.ro:8777/research>) in order to allow multiple users to carry out a classification of messages in Romanian (see Fig. 6).

A total of 2514 posts were classified on the website, yielding the following results (Fig. 7).

Tweet	Calificativ
@whocoolich: Si eu cred, dar in 2014...in toamna :) RT @Ziare_com: Cred ca vom avea alegeri prezidentiale in toamna	<input checked="" type="radio"/> Pozitiv <input type="radio"/> Negativ
@lancuionut oare CCR va putea ignora mii de oameni care isi vor recunoasterea votului popular de la referendum? cand se numara?	<input type="radio"/> Pozitiv <input checked="" type="radio"/> Negativ
RT @subiectiv. Deci, ca sa pricep, calculul la referendum a fost pe domiciliati in Ro plus liste speciale de afara si nu pe toti romanii ...	<input checked="" type="radio"/> Pozitiv <input type="radio"/> Negativ

Fig. 6 Manual classification of the messages

Fig. 7 Results of the manual classification

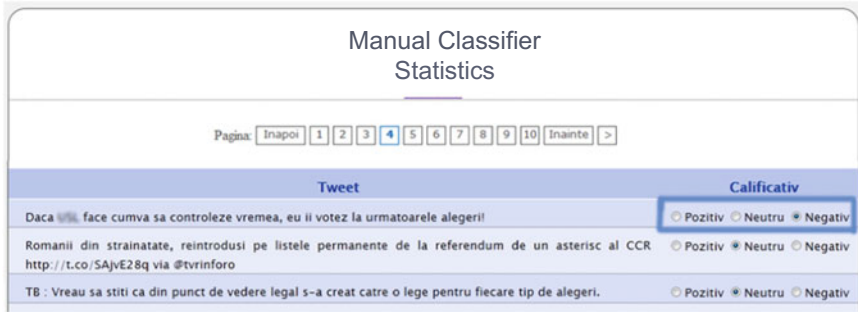
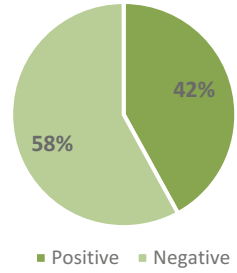


Fig. 8 Manual classification of the messages (with neutral option included)

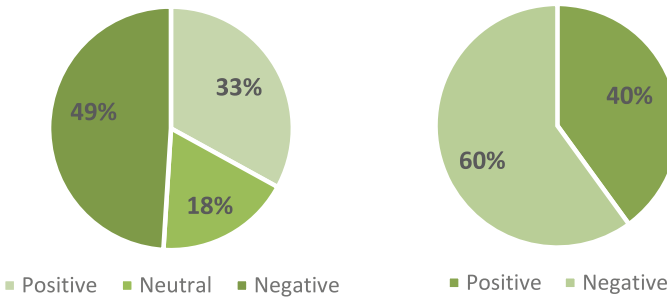


Fig. 9 Results of the manual classification of the messages (with neutral option included)

Even if the results were similar, with less than 5% deviation from what we expected to obtain the students who participated in the classification process have expressed a desire to also have available the “neutral” option. The reasoning behind this request was that a large number of messages could not be clearly classified into one of the categories positive or negative. Therefore, we made a second webpage (<http://earth.ulbsibiu.ro:8777/researchn>) (Fig. 8).

The obtained results are shown in Fig. 9. Again, the results confirm that automation of the classification process using Google Translate followed by the classifier trained for English is viable (differences of 3%).

5 Conclusions and Further Research

We built a case study using both manual and automatic short text classification for the Romanian language. Our results show that using a classifier trained for a different language text corpus will give us extremely poor results when applied to Romanian language texts. Using an automatic translation step seems to solve the problem. To demonstrate this, we used both automatic and manual classifications of Romanian language texts, obtained from the public Twitter stream. The results are promising, having around 5% differences between the manual and automatic classification. The results became even more accurate when we remove the neutral texts, with only 3% differences.

We still have to implement a mechanism to validate the manual classification, especially because of its subjective nature. On this regard, we work on software that will provide an automatic validation system on our manual classification pages, by using a confidence/voting algorithm.

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Customer Satisfaction and Quality Services in the Hotel Industry: A Strategic Approach



Cosmin Tileagă and Oana Opreșan

Abstract In the hotel and hospitality industry, managers need to see quality as their main competitive advantage and need to acknowledge the ways in which quality can be used to drive competitiveness. As one of the most important aspects of hotel management and customer relationship management, the quality of all touristic services influenced by the intensifying competition, determine suppliers to take into account more the needs and requirements of customers in order to have a successful strategy. In the digital world where consumers are well-informed, the choice to purchase best quality services is the ultimate choice given the opportunity to compare other services with other companies. Both managing decision makers and employees must find a way to provide customers with a balanced quality and price services or products, in line with expected standards. Service quality in the hospitality industry becomes one of the most important factors for gaining a sustainable competitive advantage and customers' confidence in the highly competitive marketplace, and therefore service quality can give the hospitality industry a great chance to create competitive differentiation for organizations. It is thus considered as a significant core concept and a critical success factor in the hospitality industry. A successful hotel delivers excellent quality service to customers, and service quality is considered the life of hotel.

Keywords Customer satisfaction · Hotel industry · Hospitality industry
Hospitality services · Customer management relationship

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1 Introduction

Customer requirements drive the compliance of quality services for all companies in the HORECA industry. All organizational levels must comply with quality standards and principles in all HORECA industry (Akbar et al. 2010). In what hotel products and services are concerned, quality services must have the following characteristics:

- Quality must be tangible: employees must communicate in a proper way according to procedure with clients.
- Quality means seriousness: companies need to hire employees with the right skills and performance according to all standards.
- Quality means speed: servicing the customers must be within requires time and according to customer requirements.
- Quality means politeness: employees need to be courageous and respect the client no matter the situation.
- Quality means security and safety: the complete safety must be provided according to requirements and procedures.
- Quality means correspondence and accessibility: the service must be provided without difficulties and when the client has access to the proper information, in a desired language, the satisfaction tends to be higher.

For every business activity, HORECA companies must comply with all legal requirements imposed by the law. For this purpose, every hotel management must assure an internal control and quality management system to support all efforts for the planification, monitorization and improvement all touristic services to a better standard and quality (Changa and Chen 2011). Customer satisfaction is directly related to the quality of touristic products and services. In order to implement a quality services system, managers need quality components such as the consideration of: guest services and expectation, training and the empowerment of employees, new procedures for the customers' wishes, revising systems and evaluating service delivery (Dominici and Guzzo 2010; Fig. 1).

2 Literature Review

2.1 Customer Satisfaction Conceptualization

Consumer satisfaction is of vital importance to the success of a business, as it has been shown to be closely linked to recovery, loyalty and profitability. Consumers who are satisfied with a purchase are believed to be more likely to buy that product again. Unsatisfied consumers show resentment to the business, complain, ask refund of money paid for the product and even negatively affects other buyers. Even though there are numerous and different definitions of consumer satisfaction in the literature, they still share three elements (Jana and Chandra 2016):

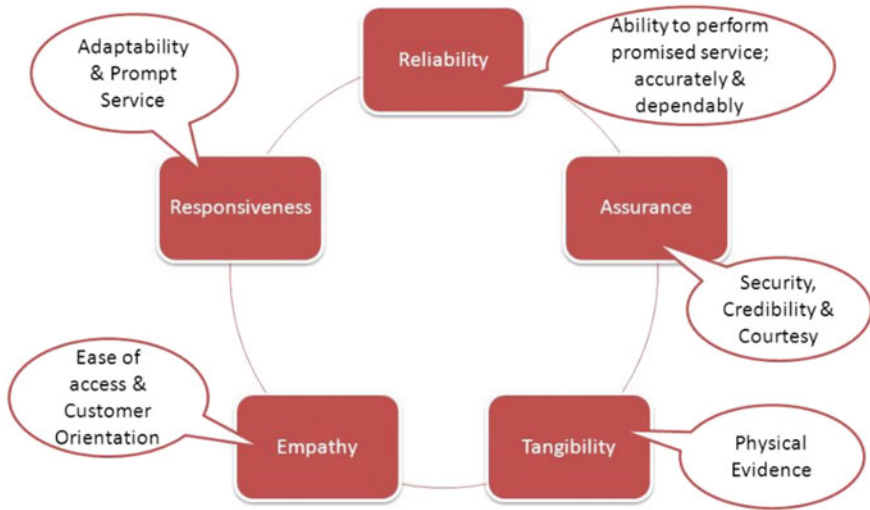


Fig. 1 Determinants of quality in the hotel industry

- consumer satisfaction is an emotional or cognitive response;
- the answer is focused on expectations, product, consumer experience etc.;
- response occurs at a certain time (after consumption, after choice, based on, experiences accumulated over time).

Some authors such as Fornell, proposed numerous benefits of customer satisfaction:

- a reduction in price elasticity which customer satisfaction generates: satisfied customers are willing to pay more for all the products and services and are more tolerant to price changes.
- consumer loyalty for satisfied customers means a greater chance for repurchasing the services or hotel products. A very good consumer loyalty will allow the hotel to have a good cash-flow, reflected in its earnings.
- transaction costs: a high level of consumer satisfaction will lower the transaction costs, no need for the company to spend additional money to attract new customers as satisfied customers will buy with higher frequency, both in time and in quantity.
- the cost of attracting new hotel customers are low for companies that provide efficient consumer satisfaction programs. Consumers with a high degree of satisfaction will recommend the products or services to other people or media will be opened in providing good information to new customers.
- a good reputation is a good asset in maintaining proper relationships with suppliers or business partners and will lead to an improvement of reputation, advantageous when making decisions.

As regards the consumer’s reaction to satisfaction/dissatisfaction, most researchers paid special attention to the complaints behavior as a consequence of its dissatisfac-

Fig. 2 Dimensions of customer satisfaction



tion. It is appreciated that there are several types of consumer reactions to dissatisfaction, namely:

- does not take any action;
- change the product/brand;
- change supplier;
- file a complaint with the seller, producer or third party;
- tell others about the product that has been dissatisfied (Fig. 2).

The behavior of complaints depends not only on the intensity of dissatisfaction, but also on factors such as the characteristics of the consumer, the expected gains, the economic costs involved, the type of product, etc. This explains the results of the various studies that many unfulfilled consumers do not complain about. The implications of this inactivity are negative for both marketers and consumers. First of all, not expressing dissatisfaction deprives consumers of a return to this unpleasant experience for them. Secondly, limited consumer actions only mask market problems that the firm should correct (Pearce and Robinson 2011). Additionally, consumer complaints are seen by the company as an important source of information for making decisions about creating more competitive products.

2.2 Services Quality Conceptualization

The tourist services are a multitude of activities that serve the satisfaction of all the needs of the guests throughout their stay. The tourist services must provide conditions for the rehabilitation of the work capacity simultaneously with the pleasant and instructive leisure time. The standard proposes to consider the following features of the services: facility, waiting time, length of service, hygiene, security, responsiveness accessibility courtesy, comfort, competence, credibility and effective communication. The guest’s evaluation of the service is the absolute measure of the quality of the service provided. The communication between the guest and the hotel, the guest’s appreciations or notifications help to improve the quality of the service (Fig. 3).

The sphere of services has, as is known, a number of peculiarities that lead to different ways of acting and manifesting some of the criteria for measuring the quality of benefits. Once more, these differences are also encountered in tourism services. Taking into account the fact that tourism, together with the useful leisure activities contributes to the satisfaction of the social needs—even by only contributing to the recovery of the labor force, we find that the benefits in this field are an integral part of the modern life, respectively the entire post-industrial society. Under these conditions, the tourism sector must take into account the needs and value orientations of the tourist, the tourism industry and the host community. The three main actors are interested in a fair measure of interests, which must be done fairly and fairly. In recent years, the quality of service provided by most providers has increased. The tourist market in Europe has obviously developed, the tendency being a harmonization with the European standard, but the pace is slow enough to meet the expectations of the customers. Service providers have begun to understand that the center of these

Fig. 3 Customer satisfaction, Venn diagram perspective



concerns is man, a tourist worker, and less facilities for accommodation, meals, objects, material facilities, but they are not to be neglected. The quality of the tourist product is influenced to the highest degree by the level of education and training of the staff involved in tourism, which determines the quality level of the direct services (Mohajerani and Miremadi 2012).

Through their strategies, managers aim to achieve the highest quality standard required to maintain competitiveness. When setting the goals it proposes, organizations need to consider several aspects: customer needs, staff skills, existing constraints, available space, endowment equipment and regulatory standards. When setting a goal, tourist units use several standards:

1. performance standards (necessary costs, output volume and value, results achieved in relation to needs)
2. service standards (good organization, team training and skills development for employees)
3. referential professional standards (compartments in which tourism activity is divided and specific attributions)
4. standards that include specifications (the elements of the tourist unit)
5. standards with operating procedures (mode of operation).

From the point of view of entrepreneurs, quality management is reflected in activity monitoring, effective marketing strategies, customer loyalty and competitive advantage.

Quality is a constantly changing technical-economic and social category as a result of changes in human needs but also under the impact of technical progress. A diminishing of the concerns and resources allocated for quality improvement would result in a decrease in the organization's competitiveness, with easy to imagine consequences. Organizational orientation towards quality must be a permanent feature from which the organization can benefit by offering satisfaction to all stakeholders. Quality optimization and continuous improvement are the ways in which this goal is achieved if viewed in succession and interdependence. The quality optimum must be achieved through continuous improvement and should represent the level at which improvement can continue to achieve permanent and long-term benefits. Therefore, any organization needs to implement methodologies for calculating and recording cost and quality effects, while measuring and analyzing customer and stakeholder satisfaction.

3 Evaluating Quality in the Hotel Industry

In the hospitality industry, a good internal evaluation of quality is very important to identify all issues and most important find solutions for them. A systematic and regular analysis of all evaluation results will include:

Fig. 4 Main parts of service quality evaluation



- measurement of customers needs and expectations;
- the comparison of result with perceived quality;
- identifying improvement activities;
- competitiveness control and benchmarking quality;
- certification systems, in addition to their importance as mean of quality control and assurance.

Moreover, different mechanisms are designed to offer quality of touristic services. Establishing a very good strategy for accommodation labels by classification schemes can be informing consumers, enabling an informed choice that can be quality-based and the encouragement of investment and improvement by establishing a standard that needs to be reached and maintained (Fig. 4).

In the hotel management, there are 2 forms of measurement: quantity and quality measurements:

- Star rating system and classification systems which encourages tourists to choose;
- Brands that can replace the classification system—if they have certain attributes of quality, more often when associated with a specific service;
- Quality mark: many countries have already established systems for awarding hotels different quality scores based on their procedures and achievements;
- ISO standards that can be applied in the tourism sector.

The delimitation of the product/tourist service from other products has a subjective impact on quality, but more importantly for the consumer, because it has to meet its expectations. An authentic tourist product/service can offer superior quality by itself. Also, the harmonization of tourist offer with the natural and human environment is the basis for the development of sustainable tourism, which implicitly assumes a certain quality of tourism products and markets as there is no sustainable quality tourism. The customer's satisfaction is due to the quality of the offer, the quality of the communication process, the quality of the relationship with the provider, the quality of the raw materials, the materials, the techniques and the technologies used in the global touristic product manufacturing, distribution and provision it. Which brings attention to the approach of quality as a process with a precise purpose: meeting the needs, requirements and expectations of consumers in relation to a product/tourist service, according to the contractual conditions (Saeed et al. 2011).

On another note, it is known that globalization involves standardization, internationalization, which highlights the fact that in all fields of activity there are common

quality criteria, capital for the consumer, which makes it necessary and possible transfer of know-how in the field of quality in tourism and not only. Any transfer of know-how generates changes at the level of each entity, with intercondition relations between change, organizational culture and technology and know-how transfer as factors of competitive transformation of entities in the context of globalization, thus generating innovations in tourism. Know-how transfer can identify and implement relevant experiences on best practices in developing and improving quality in tourism, quality management in tourism, quality of processes (production and performance), quality of logistics activity, etc. to streamline the implementation of sustainability, cost-effectiveness, greening and effective measures in the hospitality industry.

Ensuring and improving quality in tourism is a key factor in the competitiveness of service providers operating on the tourism market, and through the transfer of technology and know-how, quality standards, best practices in terms of quality, positive experiences in the quality of processes, quality management system procedures, quality systems, etc. As such, it is accredited the idea that success in the hospitality industry can be ensured by continually improving quality in tourism, highlighting the human, technical, technological capacity and natural country.

4 Conclusions

Hotel and restaurant managers should provide high-quality services for both them and hired staff. Recommendations for superior customer service. A successful strategy that provides profitable results can include on retaining existing customers and offer them services beyond their expectation, focus on quality services and customer satisfaction, a continuous improvement of quality, a regular training and accountability of service-oriented employees. The basis for quality assurance in tourism is to ensure the protection and safety of the consumer in tourism, the accessibility and hygiene of accommodation and meals, transparency in the provision and transmission of information, authenticity of supply and harmonization with the natural and human environment. Obviously, when one of the adjacent quality determinants does not manifest, one cannot talk about quality or total quality in tourism, many of the moments of truth being negative.

The content of the hotel industry has evolved in parallel with the development of accommodation capacities and their involvement in tourism activity, enriched with new functions and forms of benefits. The connection between tourism and the hotel industry is considered complex, deeper and deeper in both directions. On the one hand, the hotel industry develops as a result of tourist traffic, on the other hand, the development of tourism is conditioned by the existence of accommodation, equipment, and last but not least, the quality and variety of services offered. The hospitality industry, the quality of accommodation services, influences not only the level of tourism development in general, but also the efficiency of this activity. The attractions of the accommodation services ensure a good capitalization of the tourism potential in general, but also the efficiency of this activity. The attractions of the

accommodation services ensure a good capitalization of the tourism potential, of the available labor resources, of the capacity of the technical-material base, leading to the achievement of higher coefficients of valorization.

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What Is the Impact of Value Added Tax on GDP in Romania and Bulgaria?



Ana-Maria Urîtescu

Abstract The objective of this study is to analyze the link between value added tax and gross domestic product in Romania and Bulgaria. The econometric techniques used are cointegration technique, autoregressive vector (VAR) and Granger causality. The data used are quarterly. These are between 1999 Q1 and 2017 Q3. The VAR results indicate a strong link between the data series for both Romania and Bulgaria. The results of the Granger test applied to the VAR model indicate a unidirectional link from GDP to VAT for Romania, while in Bulgaria there is no correlation between the current GDP value and the past VAT values.

Keywords VAT · GDP · Granger · Var · Variance decomposition

1 Introduction

Value-added tax is “the most popular sales tax in the world” (Tait, 1999). According to Tait (1999) “the VAT is designed to raise large amounts of revenue (typically 5–10% of gross domestic product) without creating economic distortions”.

According to Bogetic and Varga (1996), in Bulgaria, “the vat was adopted for four reasons: neutrality of VAT, the country’s aspiration to join the European Union, revenue capacity of the VAT and the advice of international advisers and agencies such as the International Monetary Fund and the World Bank.”

The VAT was introduced in Bulgaria in 1994 and in Romania in 1993. In Romania, VAT replaced the tax on the movement of goods and in Bulgaria replaced the turnover tax and market. Both, in Romania and Bulgaria the standard VAT rate was 18% at the beginning. In 2018, in Romania, the standard rate applied is 19% and in Bulgaria 20%, starting with 1999. Unlike Bulgaria, which had the same standard share in the studied period, in Romania the standard rate varied. Thus, in 1999 the standard VAT

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rate in Romania was 22%, 19% in 2000, 24% in 2010, 20% in 2016, and 19% in 2017 again.

Both Romania and Bulgaria have reduced VAT rates, but for our country, the scope is wider. Bulgaria has a reduced 9% share only for hotel accommodation, while Romania has two reduced rates. The first share is 9% for foodstuff, water suppliers, pharmaceutical products, medical equipment for disabled persons, hotel accommodation, restaurant and catering services, agricultural inputs. The second reduced quota is 5% and applies to books, books on other physical means of support, newspapers, periodicals, etc.

2 Literature Review

VAT is an important tax in the fiscality of each country where it is applied. This is also evidenced by the numerous studies that analyze the behavior of this tax and its impact. In this section are mentioned some studies which analyze the relationship between VAT and GDP. According to these studies, the relationship between the two variables can be either positive or negative.

Ibadin and Oladipupo (2015) conducted a study analyzing the impact of indirect taxes on economic growth in Nigeria. The econometric method used is Error Correction Model. The data are annual between 1981 and 2014. The indirect taxes analyzed are Value Added Tax, Petroleum Profit Tax and Custom Excise Duties. The results of this study indicate a significant positive relationship between value added tax, petroleum profit tax and real gross domestic product.

Bilal (2015) analyzes the role of value added tax for economic growth in Pakistan, studying the relationship between the two variables. The econometric methods used are Ordinary Least Square (OLS) Regression Technique and Granger Causality. Also, for this country, there is a positive relationship between value added tax and economic growth measured by GDP. Both the results of the regression model and the Granger test results indicate a strong relationship between the two variables.

The author believes that an increase in revenue collected from value added tax would reduce the budget deficit and help balance the budget.

Njogu (2015) in his study analyzes the impact of value added tax on economic growth in Kenya. The econometric method used is the Poisson regression model. According to the results obtained through this study, there is a negative relationship between value added tax rates and economic growth. The author says that the government should cut VAT rates or keep them low to boost economic growth.

Another study that examines the relationship between value added tax and economic growth is that achieved by Umeora (2013) for Nigeria. The studied period ranges between 1994 and 2010. The econometric model used is linear regression. The results of the analysis are similar to those obtained by Ibadin P.O. and Oladipupo A.O. Value Added Tax has a significant impact on economic growth. The author believes that an increase in the VAT rate will lead to a significant increase in economic growth.

3 Methodology of Research

The link between VAT and GDP in Romania and Bulgaria is being analyzed starting from previous studies.

The analysis of the impact of VAT on GDP is made for both Romania and Bulgaria. The VAT is represented by the share of VAT earnings in GDP. GDP is expressed in chain-linked volumes based on 2010. The data are quarterly between the first quarter of 1999 and the third quarter of 2017. These data were taken from Eurostat and processed with Eviews 9 and Excel.

Stages of analysis are graphical representation and analysis of data series evolution, testing the stationarity of data series, testing the co-integration, selection of a maximum number of lag using the Akaike criterion, creation of VAR model, testing the impulse response function, variance decomposition and Granger causality test. These stages have been completed both for Romania and for Bulgaria.

The graph below shows the evolutions of the series of the weight of the value added tax in the gross domestic product for Romania and Bulgaria.

This graph shows that the weights of value-added tax in GDP for Bulgaria were higher than those in Romania for most of the time. Compared with Bulgaria, our country exceeded the values of this country only in 2002 Q1, 2002 Q2, 2002 Q3, 2005 Q1, 2011 Q1, 2011 Q2, 2011 Q4 and 2015 Q1.

The lowest value recorded by Romania was 5.5% in Q3 2009, this being the highest 12% in 2005 Q1. For Bulgaria the lowest value was 6.1% in 2002 Q3, and the highest 11.2% in Q4 2006 (Fig. 1).

The ADF (Augmented Dicky Fuller) test was used for testing the stationarity of data series. The results of this test indicate that none of the four data sets is stationary. The first difference was used to make the data series stationary. The results of the ADF test applied to the series formed by differentiation indicate the integration of the 1st order series of data.

Data series cointegration is tested using the Johansen Cointegration Test. The results of this test are as follows (Figs. 2 and 3).

The test results indicate that the series are not cointegrated. The probabilities resulting from the Johansen Cointegration test are higher than 5%, and null hypotheses are accepted. As a result of this test, the Autoregressive Vector technique can be

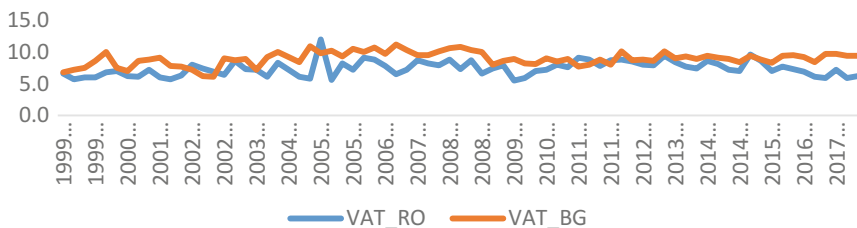


Fig. 1 Evolution of VAT receipts in Romania and Bulgaria 1999 Q1–2017 Q3 (author’s calculation)

Series: GDP_RO VAT_RO
 Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.130467	13.19738	15.49471	0.1078
At most 1	0.042566	3.131870	3.841466	0.0768

Trace test indicates no cointegration at the 0.05 level

Fig. 2 Johansen cointegration test for Romania (author’s calculations)

Series: GDP_BG VAT_BG
 Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.144869	14.50158	15.49471	0.0702
At most 1	0.043917	3.233546	3.841466	0.0721

Trace test indicates no cointegration at the 0.05 level

Fig. 3 Johansen cointegration for test Bulgaria (author’s calculations)

VAR Lag Order Selection Criteria
 Endogenous variables: D_GDP_RO D_VAT_RO
 Exogenous variables: C
 Date: 03/06/18 Time: 23:01
 Sample: 1999Q1 2017Q3
 Included observations: 69

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-424.5449	NA	802.6108	12.36362	12.42838	12.38931
1	-407.1107	33.35243	543.7979	11.97422	12.16849	12.05130
2	-349.6683	106.5597	115.5755	10.42517	10.74895	10.55362
3	-285.8909	114.6145	20.45314	8.692490	9.145787	8.872328
4	-248.8593	64.40273	7.863945	7.735053	8.317863*	7.966273
5	-242.6070	10.51113*	7.385368*	7.669769*	8.382093	7.952371*

Fig. 4 Results of VAR Lag order selection criteria for Romania (author’s calculation)

applied. To determine the maximum number of lags, the Akaike criterion is used. Var Lag Selection Criteria returns the following results (Fig. 4 and 5).

According to the above tables, the Akaike information criterion indicates for Romania the maximum number of lags 5, and for Bulgaria the maximum number of

VAR Lag Order Selection Criteria
 Endogenous variables: D_GDP_BG D_VAT_BG
 Exogenous variables: C
 Date: 03/06/18 Time: 23:06
 Sample: 1999Q1 2017Q3
 Included observations: 69

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-378.9743	NA	214.2155	11.04273	11.10749	11.06842
1	-367.7542	21.46440	173.7838	10.83346	11.02773	10.91053
2	-345.5977	41.10205	102.7125	10.30718	10.63096	10.43563
3	-245.0182	180.7515	6.255247	7.507774	7.961071	7.687612
4	-208.8836	62.84279*	2.468403*	6.576336*	7.159147*	6.807557*
5	-206.7740	3.546634	2.613947	6.631129	7.343453	6.913732

Fig. 5 Results of VAR Lag order selection criteria for Bulgaria (author’s calculation)

lags 4. Thus, we created VAR models with 5 lags for Romania and VAR with 4 lag for Bulgaria.

The results of the VAR models are in Tables 1 and 2.

Interpretation of VAR results is difficult due to a large number of lags. The values associated with R2 indicate a strong link between the two sets of data for both Romania and Bulgaria. For Romania, R2 is 98.9907% and for Bulgaria 98.6592%.

The next step is testing the impulse response function. The impulse response function indicates what effect a shock may have on a time series. For both Romania and Bulgaria, the impulse response function shows a GDP impulse on the VAT, and also an impulse of VAT on GDP. For Romania, the results are Figs. 6 and 7.

The response of D_GDP_RO to D_VAT_RO indicates how Gross Domestic Product is influenced by VAT (shocks). The impact on GDP of VAT changes for Romania is not significant, but it is a positive one.

The response of D_VAT_RO to D_GDP_RO indicates the effect of a shock on GDP for VAT. The answer to the effect of a shock on GDP is mostly negative.

Fig. 6 The response of D_GDP_RO to D_VAT_RO (author’s calculation)

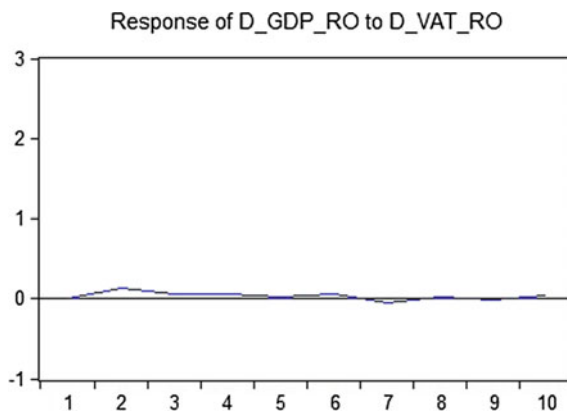


Table 1 The results of the VAR models for Romania

	D_GDP_RO	D_VAT_RO
D_GDP_RO(-1)	0.162471	0.057614
	(0.12565)	(0.05756)
	[1.29307]	[1.00090]
D_GDP_RO(-2)	-0.247605	-0.002473
	(0.07748)	(0.03549)
	[-3.19590]	[-0.06967]
D_GDP_RO(-3)	-0.227291	0.020140
	(0.07763)	(0.03556)
	[-2.92799]	[0.56633]
D_GDP_RO(-4)	0.789425	-0.025474
	(0.07840)	(0.03592)
	[10.0686]	[-0.70921]
D_GDP_RO(-5)	-0.399784	-0.060360
	(0.12944)	(0.05930)
	[-3.08852]	[-1.01787]
D_VAT_RO(-1)	0.126828	-0.852003
	(0.28329)	(0.12978)
	[0.44769]	[-6.56476]
D_VAT_RO(-2)	0.151036	-0.475143
	(0.37094)	(0.16994)
	[0.40718]	[-2.79602]
D_VAT_RO(-3)	0.176008	-0.242788
	(0.38965)	(0.17851)
	[0.45170]	[-1.36008]
D_VAT_RO(-4)	0.166485	-0.094986
	(0.37288)	(0.17083)
	[0.44648]	[-0.55604]
D_VAT_RO(-5)	0.084669	-0.016812
	(0.28526)	(0.13069)
	[0.29681]	[-0.12865]
C	0.850229	-0.006605
	(0.36785)	(0.16852)
	[2.31136]	[-0.03919]
R-squared	0.989907	0.617712
Included observations	69	

Author's calculations

Table 2 The results of the VAR models for Bulgaria

	D_GDP_BG	D_VAT_BG
D_GDP_BG(-1)	-0.253072	0.029539
	(0.08278)	(0.03822)
	[-3.05701]	[0.77293]
D_GDP_BG(-2)	-0.224875	0.031311
	(0.08496)	(0.03922)
	[-2.64685]	[0.79832]
D_GDP_BG(-3)	-0.239046	0.020831
	(0.08454)	(0.03903)
	[-2.82774]	[0.53377]
D_GDP_BG(-4)	0.785413	0.018138
	(0.08534)	(0.03940)
	[9.20288]	[0.46036]
D_VAT_BG(-1)	-0.198744	-0.572109
	(0.27247)	(0.12578)
	[-0.72942]	[-4.54832]
D_VAT_BG(-2)	0.361007	-0.359741
	(0.28533)	(0.13172)
	[1.26524]	[-2.73108]
D_VAT_BG(-3)	0.285413	-0.375109
	(0.28701)	(0.13250)
	[0.99444]	[-2.83106]
D_VAT_BG(-4)	0.187806	-0.025385
	(0.26830)	(0.12386)
	[0.69998]	[-0.20494]
C	0.725339	-0.047168
	(0.33121)	(0.15290)
	[2.18999]	[-0.30848]
R-squared	0.986592	0.387589
Included observations	70	

Author's calculations

For Bulgaria, the results are (Figs. 8 and 9).

For Bulgaria, the effect on GDP as a result of a impulse on VAT is in 7 out of 10 positive and in the other negative.

The impact on VAT as a result of an impulse on GDP is in three negative periods and in the other positive.

The variance decomposition has the role of identifying how a variable can explain the evolution of other variables.

Fig. 7 The response of D_VAT_RO to D_GDP_RO (author's calculation)

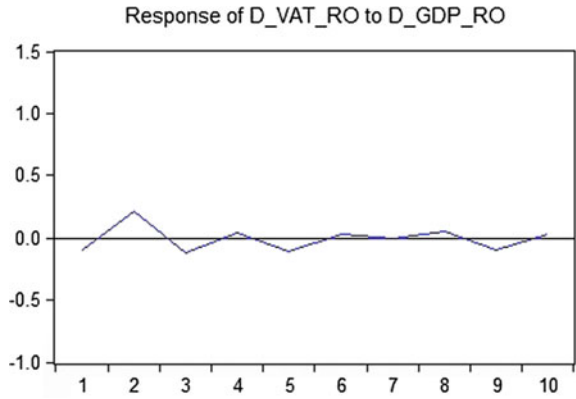


Fig. 8 The response of D_VAT_BG to D_GDP_BG (author's calculation)

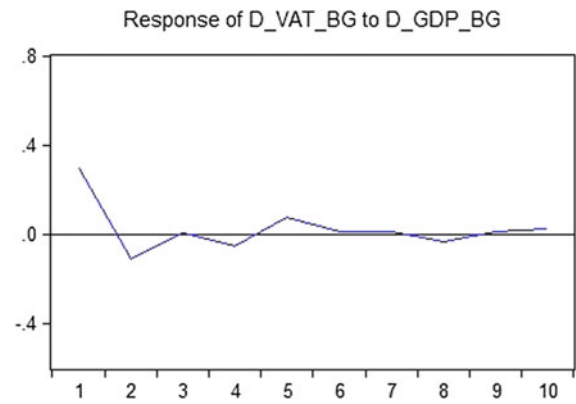
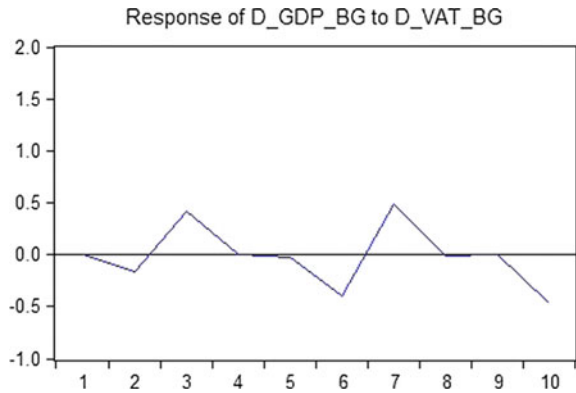


Fig. 9 The response of D_GDP_BG to D_VAT_BG (author's calculation)



Variance decomposition for Romania.

Table 3 shows variance decomposition for GDP in Romania. As shown in the VAT tables contributes about 0.250635% to GDP.

Table 3 Variance decomposition of d_gdp_ro

Period	S.E.	D_GDP_RO	D_VAT_RO
1	2.267158	100.0000	0.000000
2	2.298638	99.67460	0.325399
3	2.351470	99.61091	0.389095
4	2.449572	99.57947	0.420525
5	2.997638	99.71699	0.283013
6	2.998963	99.67649	0.323506
7	3.109480	99.68009	0.319912
8	3.229456	99.70147	0.298530
9	3.654090	99.76499	0.235015
10	3.655076	99.74936	0.250635

Author's calculations

From Table 4, you can see to what extent a shock on GDP can cause fluctuation in a VAT and vice versa. The contribution of economic growth to VAT is increasing during the period, reaching 4.830632% at the tenth period.

In the long run for VAT, it can be argued that a boost to VAT can cause fluctuations in GDP of 4.830632% and 95.16937% of VAT fluctuations (Table 5).

Regarding Bulgaria, for a period of 10 semesters, the impulse to VAT can cause 6.884653% fluctuation in GDP (Table 6).

Following the breakdown of the VAT option, it can be argued that a boost to VAT can cause fluctuations in GDP of 11.02301% and 88.97699% in VAT fluctuations.

After estimating the VAR model with 5 lags for the two countries using VAR Granger Causality/Block Exogeneity Wald Test we checked the Granger causality for each country. The results are listed in Figs. 10 and 11.

Table 4 Variance decomposition of d_vat_ro

Period	S.E.	D_GDP_RO	D_VAT_RO
1	1.038644	0.918260	99.08174
2	1.378801	2.962051	97.03795
3	1.409612	3.575181	96.42482
4	1.411354	3.653599	96.34640
5	1.416241	4.225774	95.77423
6	1.416582	4.267287	95.73271
7	1.416664	4.268682	95.73132
8	1.417568	4.390710	95.60929
9	1.420428	4.774117	95.22588
10	1.420856	4.830632	95.16937

Author's calculations

Table 5 Variance decomposition of d_gdp_bg

Period	S.E.	D_GDP_BG	D_VAT_BG
1	1.827219	100.0000	0.000000
2	1.906618	99.32246	0.677536
3	1.956840	94.86839	5.131615
4	1.971412	94.94392	5.056078
5	2.595122	97.07274	2.927256
6	2.744995	95.31617	4.683833
7	2.797733	92.40268	7.597323
8	2.818463	92.51344	7.486561
9	3.281873	94.47838	5.521622
10	3.445311	93.11535	6.884653

Author's calculations

Table 6 Variance decomposition of d_vat_bg

Period	S.E.	D_GDP_BG	D_VAT_BG
1	0.843534	12.36713	87.63287
2	0.963867	10.91382	89.08618
3	0.964343	10.90325	89.09675
4	0.971937	11.03140	88.96860
5	1.002236	10.95430	89.04570
6	1.004429	10.91235	89.08765
7	1.004515	10.91935	89.08065
8	1.006615	11.00474	88.99526
9	1.008411	10.97423	89.02577
10	1.008713	11.02301	88.97699

Author's calculations

The test results indicate for Romania a unidirectional relationship from GDP to the VAT. Thus, it can be said that, in the case of Romania, there is a correlation between the current VAT value and the past GDP values. For Bulgaria, test probabilities exceed 5%. According to this result, there is no correlation between the current value of GDP and past VAT values or the current value of VAT and past GDP values.

VAR Granger Causality/Block Exogeneity Wald Tests
 Date: 03/05/18 Time: 23:10
 Sample: 1999Q1 2017Q3
 Included observations: 69

Dependent variable: D_GDP_RO

Excluded	Chi-sq	df	Prob.
D_VAT_RO	0.353814	5	0.9965
All	0.353814	5	0.9965

Dependent variable: D_VAT_RO

Excluded	Chi-sq	df	Prob.
D_GDP_RO	15.34259	5	0.0090
All	15.34259	5	0.0090

Fig. 10 Results of Granger causality for Romania (author's calculation)

4 Conclusions

Value Added Tax remains the most important indirect tax. For both Romania and Bulgaria, adopting this kind of tax was an important step towards the European Union.

For the studied period, unlike Bulgaria, which had the same share of VAT since the beginning of the period, the Romanian state changed the VAT rate five times in 18 years.

R²'s high values indicate a strong link between VAT and GDP both for Romania and for Bulgaria.

Variance decomposition indicates that VAT contributes about 0.250635% to GDP for Romania, and 6.884653% for Bulgaria.

The results of the Granger test applied to the var model indicate a unidirectional link from GDP to VAT for Romania, while in Bulgaria there is no correlation between the current GDP value and the past VAT values.

VAR Granger Causality/Block Exogeneity Wald Tests

Date: 03/07/18 Time: 00:00

Sample: 1999Q1 2017Q3

Included observations: 70

Dependent variable: D_GDP_BG

Excluded	Chi-sq	df	Prob.
D_VAT_BG	4.739073	4	0.3151
All	4.739073	4	0.3151

Dependent variable: D_VAT_BG

Excluded	Chi-sq	df	Prob.
D_GDP_BG	3.869077	4	0.4240
All	3.869077	4	0.4240

Fig. 11 Results of Granger causality for Bulgaria (author's calculation)

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How Performant Are the Premium Companies Listed on BSE? A Financial Performance Analysis from a Value Creation Perspective



Diana Elena Vasiu and Livia Ilie

Abstract In order to analyze the potential of listed companies, the scientific literature suggests modern indicators that are built using value creation concepts. The attention of specialists, both theoreticians and practitioners, is directed towards the approach of company's performance based on the created value. Traditional management based on analyzing and interpreting accounting data from financial statements has proved a reduced capacity to evaluate and express in a clear and precise manner the real performances of companies. Over time, the financial ratios used to quantify the value created by companies as expression of their performance were in multiple forms, becoming more and more comprehensive. In previous research (Balteş and Vasiu 2015) we analyzed the capacity to create value in case of the companies listed on the BVB. The results recorded for the period 2006–2013 were unsatisfactory, in terms of modern indicators that are built using value creation concepts. This article expands the research results currently, investigating if listed companies have improved their performance in terms of created value.

Keywords Economic value added (EVA) · Market value added (MVA)
Cash value added (CVA) · Cash flow return on investment (CFROI)

1 Introduction

In order to analyze the potential of listed companies, the scientific literature suggests modern indicators that are built using value creation concepts.

The attention of specialists, both theoreticians and practitioners, is directed towards the approach of company's performance based on the created value. Tradi-

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tional management based on analyzing and interpreting accounting data from financial statements has proved a reduced capacity to evaluate and express in a clear and precise manner the real performances of companies. Traditional management based on analyzing and interpreting accounting data from financial statements have proved a reduced capacity to evaluate and express in a clear and precise manner the real performances of companies (Ciuhureanu 2016). The accounting data may be subject to some lack of transparency and can be manipulated within the accounting rules, as the bonuses of managers depend on the accounting profit and the financial performance of the company is analyzed using the ratios based on the accounting profit (Doaei et al. 2012). Consequently, these ratios are nor offering the best framework for the decision making process.

The traditional financial ratios reflect the past performance of a company with a limited relevance in forecasting future performance. Similar for the profitability ratios: can be useful in evaluating the efficiency in using the capital and the assets of the company, but their information content is limited to past results. The market value of shares is incorporating not only the information related to the past financial performance of the company, but especially the investors' expectation related to future performance. Moreover, no financial ratio takes into account the cost of capital, only the effects of using the capital. This explains why there are companies with high financial performance, but their activity is not generating value, by contrary is producing permanent loss in value (Tabara and Dicu 2007).

Over time (Ciuhureanu 2017) the financial ratios used to quantify the value created by companies as expression of their performance were in multiple forms, becoming more and more comprehensive. Among these, we will take into account Economic Value Added (EVA), Market Value Added (MVA), Cash Value Added (CVA) and Cash Flow Return on Investment (CFROI).

2 Indicators Assessing the Value Created

Economic Value Added (EVA). The concept of Economic Value Added is a service mark of Stern Value Management, formerly Stern Stewart & Co. Joel Stern, CEO of the consulting company, is the creator and developer of the EVA concept. EVA is an economic measure of profit. EVA is also called economic profit, as it aims to capture the true economic performance of a firm. It is calculated as a difference between the net operating profit after tax and the opportunity cost of the invested capital. The opportunity cost of the invested capital is a weighted average cost of capital (WACC).

Economic Value Added represents the real economic profit and is determined as a difference between the return of the invested capital and the weighted cost of capital, multiplied by the invested capital.

Market Value Added (MVA) represents the difference between the current market value of the company and the investors' capital. For the listed companies, the market value is determined by multiplying the price per share by the number of shares. For the companies that are not listed, the market value is estimated as being

the present value of the future cash flows generated for the (Petrescu 2008). The invested capital is considered to be the sum of the present value of the initial capital invested by shareholders and the present value of reinvested profits.

A positive value of the MVA is interpreted as the company has an effective market added value, the company creates value and the capital generated is higher than the one invested. A negative MVA is interpreted as the value of the firm is compromised; the value of the managerial activity and of the investments is lower than the invested capital. The company is destroying value. The higher the MVA the more favorable it is for investors, as the company created value for them.

Cash Value Added (CVA) was introduced by the American consulting firm Boston Consulting Group (BCG) and has as a starting point the gross cash-flow out of which is deducted depreciation and the opportunity cost of capital. CVA is similar to EVA, but it takes into account only the cash flows and not the economic results of the company.

Cash Flow Return on Investment (CFROI) is an indicator introduced in 2002 by CFSB Holt Value Associates Chicago and is considered the best to measure the value created by the company. CFROI represents the internal rate of return of the investment, the discount rate for which the present value of the cash flows plus the present value of the residual value is equal to the investment. An investment adds value to its investors if CFROI is higher than the opportunity cost of invested capital

3 Methodology

The research targets the Premium listed companies at Bucharest Stock Exchange in order to evaluate if these companies are creating value. Taking into account the comparability and homogeneity of the activity, were analyzed the companies operating in the industry field, presented in Table 1.

The indicators were computed based on the models (Petcu 2009; Petrescu 2008; Atril 2006; Tabara and Dicu 2007; Berceanu et al. 2010) presented in Table 2, using the financial statements available on the BVB site www.bvb.ro.

When computing of the indicators referring to the stock market capitalization (MVA1, MVA2, MVA3), it was considered that the companies S.N.G.N. ROMGAZ S.A. and S.N. NUCLEARELECTRICA S.A. were listed on the BSE in 2007, respectively 2013, thus the above-mentioned indicators have been calculated starting with that year.

Because the individual values earned by each company for EVA; MVA; CVA and CFROI are very heterogeneous, with a very high coefficient of variation, the mean values, being unrepresentative, were not used in the data interpretation.

As a result, for the homogeneity and comparability of the data, the following aspects were (Niculescu 2005).

Creating value for the enterprise takes place when the company obtains a return of capital invested in assets that excess the cost of resources mobilized to fund them (Petcu 2009). Equity compensation must be made at an attractive rate for investors,

Table 1 Premium listed companies at Bucharest stock exchange, acting in industry field

Symbol	Company	CAEN Cod	Section	Market	Category
SNP	OMV PETROM S.A.	610	BSE	REGS	Premium
SNG	S.N.G.N. ROMGAZ S.A.	620	BSE	REGS	Premium
ATB	ANTIBIOTICE S.A.	2110	BSE	REGS	Premium
BIO	BIOFARM S.A.	2120	BSE	REGS	Premium
ELMA	ELECTROMAGNETICA SA	2651	BSE	REGS	Premium
SNN	S.N. NUCLEARELECTRICA S.A.	3511	BSE	REGS	Premium
TEL	C.N.T.E.E. TRANSELECTRICA	3512	BSE	REGS	Premium
IMP	IMPACT DEVELOPER & CONTRACTOR S.A.	4110	BSE	REGS	Premium

Source www.bvb.ro

Table 2 Models used for computing the value creation indicators

Indicator	Formula	Explanation
EVA	$EVA = NOPAT - (CI * WACC) = \frac{NOPAT}{CI} * CI - CI * WACC = ROIC * CI - CI * WACC = (ROIC - WACC) \times CI$	ROIC—return on invested capital $ROIC = \frac{NOPAT}{CI}$ WACC—weight average cost of capital CI—invested capital, CI = Assets—current liabilities, net assets of the business
MVA	$MVA_1 = \text{Market value} - \text{Invested capital}$ $MVA_2 = \text{Market capitalization} - \text{Equity}$ $MVA_3 = \text{Market capitalization} - \text{Net assets}$	
CVA	$CVA = Rnet + D - \frac{(Scp \times Rcp) + (Sd \times d)}{100} \times Ib$	Rnet—net result D—expenses with the interests Scp—share of own capital Sd—debt ratio Rcp—rate of return on equity Ib—gross investments d—the interest rate

(continued)

Table 2 (continued)

Indicator	Formula	Explanation
CFROI	$CFROI = \frac{Cfb - A}{Ib} = \frac{Rnet + D + A - A}{Ib} \times 100$ $= \frac{Rnet + D}{Ib} \times 100 = \frac{Cfs}{Ib} \times 100$ $= \frac{Cfs}{CA} \times \frac{CA}{Ib} \times 100 = Mcf \times Na$	<p>Cfb—gross cash flow Rnet—D + A Rnet—net result D—expenses with the interests A—depreciation Ib—gross investments. Ib = Ai + Ac Ai—gross fixed assets, at the current inflation rate Ac—net current assets Ib = Ai + Ac Cfs—sustainable cash flow Cfs = Cfb - A = Rnet + D $\frac{Cfs}{CA} \times 100 =$ Mcf—cash flow margin $\frac{CA}{Ib} = Na$—asset turnover ratio</p>

Source Petrescu (2008), Atrill (2006), Tabara and Dicu (2007), Berceanu et al. (2010)

superior to that offered by lower-risk investments, thus avoiding capital transfer towards more “tempting” entities (Niculescu 2005) and justifying risk-taking by shareholders (Petcu 2009).

The positive value of EVA indicates the creation of wealth for shareholders, over the remuneration of capital. The negative value shows that the companies don’t cover the cost of capital from the achieved operating result, losing money, even in the situation of a positive accounting result. If the enterprise does not achieve a return rate, at least equal to the level of the market average rate of return, investors are attracted to more profitable investments, in order to avoid the erosion of invested capital.

A positive value of the MVA indicates that the company creates value, the released capital exceeding the value of the invested capital. In the case of a negative result, the companies value is compromised, the value of the managerial activity and of the investments being lower than the value of the capital brought from the market. The enterprise destroys the value. The higher MVA is, the more favorable it is, confirming that the company has created wealth for investors.

The CVA indicator is similar to EVA, but only taking into account the cash flows rather than the company’s output. Taking into account the calculation models for gross cash-flow and the opportunity cost of all capita, a negative value of the indicator shows that the increase in the cost of capital was higher than the increase in the gross cash-flow. In order to indicate an increase in value for investors, this CVA also has to register a positive value.

If case of CFROI, the return on invested capital is estimated taking into account the cash flow generated by the activity that is financed with it. For value added, the company should increase the difference between the level of CFROI and the cost of the capital invested in the enterprise (Mârza 2010).

Considering the above mentioned issues, for each of the analyzed companies was given 1 point if the EVA, MVA, CVA and CFROI indicators recorded positive values and 0 points if they had negative values.

Based on these values, average scores were calculated for each company, each indicator and each year, using the arithmetic mean, thus:

$$\text{Average Annual Score}_{\text{company } i} = \frac{\text{Score}_{EVA} + \text{Score}_{MVA} + \text{Score}_{CVA} + \text{Score}_{CFROI}}{4}$$

Using Average Annual Score_{company i} for each company, it was calculated an Average score_{company i}, an Average score_{year i}, and Annual Score_{indicator I} thus:

$$\begin{aligned} &\text{Average Score}_{\text{company } i} \\ &\text{Average Annual Score}_{\text{company } i 2006} + \text{Average Annual Score}_{\text{company } i 2007} \\ &+ \dots + \text{Average Annual Score}_{\text{company } i 2016} \\ = &\frac{\hspace{10em}}{11} \end{aligned}$$

$$\text{Average Score}_{\text{year } i} = \frac{\sum \text{Average Annual Score}_{\text{company } i}}{8}$$

$$\text{Annual Score}_{\text{indicator } i} = \frac{\sum \text{Annual Indicator Score}_{\text{Company } i \text{ year } i}}{4}$$

4 Data Presentations

Annual average scores, calculated for each company, are presented in Table 3.

As it can be seen, no company gets scores of 1, which means that, in certain periods, the capital invested by shareholders has eroded their value.

Based on the annual average scores of each company, was calculated the Average Annual Score for each analyzed company. The results are presented in Fig. 1.

It can be noticed that, during 2006–2016, the pharmaceutical companies, listed in the Premium category at Bucharest Stock Exchange provide their investors the most efficient use of capital, adding value to the investment. The best Average Annual Score of 0.58 was obtained by Biofarm, followed by Antibiotics SA, with an Average

Table 3 Annual average scores

Company	Evolution of the annual average score																								
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Table 3 (continued)

Company	Evolution of the annual average score
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IMPACT DEVELOPER & CONTRACTOR S.A.	

Source Author's processing

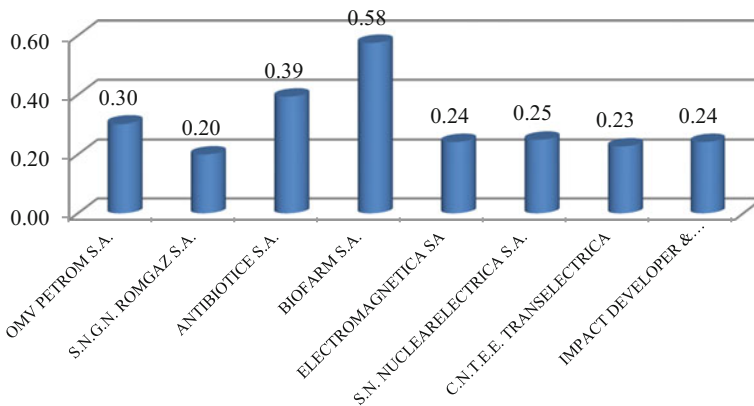


Fig. 1 The average annual score for each company. Source Author's processing

Annual Score of 0.39. Despite this, values recorded for performance scores are far from satisfactory being significantly far from the desirable value of 1.

The analysis of the Average Scores obtained for each indicator is presented in Fig. 2.

The best performances are achieved by the analyzed companies regards CFROI, this being the only indicator that achieves values of 1 or close to it.

The dynamic analysis of financial performance scores, from the perspective of value creation indicators, is presented in Fig. 3.

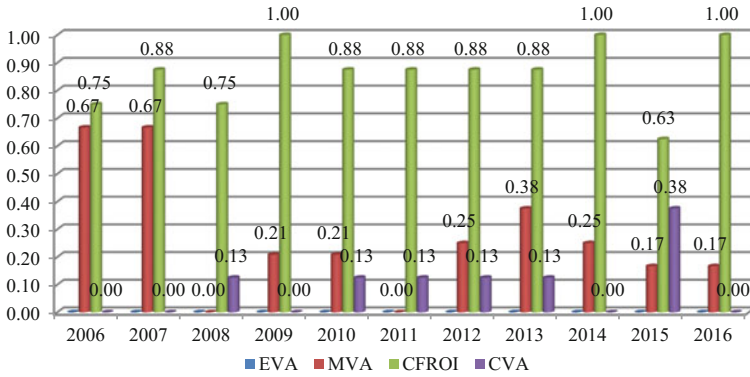


Fig. 2 EVA, MVA, VLA and CFRPI average scores. *Source* Author’s processing

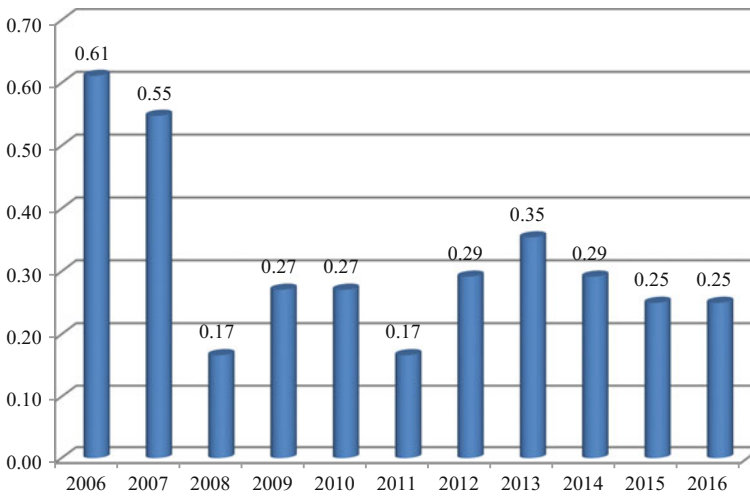


Fig. 3 The dynamic analysis of financial performance scores. *Source* Author’s processing

The best performances were obtained by analyzed companies before the financial crisis. The values recorded in 2006–2007 suffered a dramatic drop in 2008, being unable to reach the performance recorded in 2006. These records indicate a continuing deterioration in the value of the invested capital, even in the situation when a positive accounting result was obtained.

5 Conclusions

Financial theory highlights the importance of maximizing shareholder welfare as the ultimate goal of the company, modern techniques for measuring company performance being developed to provide more flexible tools for financial managers both in terms of operational aspects and in terms of evaluation parameters.

Even if, in most cases, profit has been achieved, the enterprise does not cover the cost of capital from achieved operating result. This study leads to the same conclusions as previous analyses (Balteş and VasIU 2015), made up to the level of 2013: financial performance, recorded before 2008 decreased considerably, and there is no indication that an improvement will occur in the near future.

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www.bvb.ro

Cultural Heritage, Tourism and the Sustainable Development of the Local Communities: The Case of the Saxons' Fortified Churches of Transylvania



Călin Vegheș and Ioana Cecilia Popescu

Abstract Established in the perimeter of the Seven Cities (Braşov, Sibiu, Sebeş, Cluj, Bistriţa, Mediaş and Sighişoara) of the Siebenbürgen, in the first decades of the 13th century, the Transylvanian Saxons have built more than 150 fortified churches with the main scope to defend their small rural communities in front of the various perils of those times. Most of these have succeeded to survive until today as proud remembrance of the heritage conveyed to the future generations. Using secondary data regarding the existing cultural heritage, its tourism marketing related environment and the performances of cultural tourism, as well as the primary data provided by representatives of the stakeholders of this heritage, the paper assesses the ways local communities succeed to care for, promote and capitalize a cultural heritage of more than 800 years old by attracting tourists to discover, explore, experience and enjoy it in order to support their sustainable local development.

Keywords Cultural heritage · Tourism marketing · Sustainable development
Local communities

1 Introduction

The walls of the fortified churches erected by the Transylvanian Saxons are still standing to remember a history that, fortunately, has proven to be slightly milder than expected by their builders and represent nowadays an enormous, yet less acknowledged and undercapitalized heritage by their owners. As a proof of their power to picture vividly the cultural landscape of Transylvania, seven of these fortified

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churches—Biertan, Prejmer, Viscri, Dârjiu, Saschiz, Câlnic and Valea Viilor—have been included, since 2010, on the UNESCO World Heritage List. Still, tens of other fortified churches from the former Saxon villages could deserve to receive a similar honor.

The Saxon architectural heritage reflects two important and uncommon characteristics of its builders: their status as free-men directly under the King of medieval Hungary and their elected structures, from the local and regional level up to the head of the community. Thus, their fortified churches were built as a defensive strongholds of the self-governed communities' equivalent of the feudal castle strongholds, with village structures almost unchanged as imprints of the village structure of medieval Franconia (Nypan 2006).

The heritage in the former villages of the Transylvanian Saxons is undergoing massive changes as the fortified churches are abandoned but still may be saved due to their monument status, while the traditional peasant houses are modernized by their new owners without preserving their original character (Szaktilla 2008). The village residents perceive the heritage in a different way by comparison to the experts and tend to have mixed feelings towards the Transylvanian Saxon heritage and its restoration and development, some accepting to be the custodians of Saxons' heritage, while being disappointed and, thus, less interested about it (Corsale and Iorio 2014).

UNESCO (1972) has defined the cultural heritage as including: *monuments*—architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science; *groups of buildings*—groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science; and *sites*—works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

ICOMOS International Cultural Tourism Committee (2002) has defined cultural heritage as an expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expression and values. Cultural heritage takes the forms of tangible (places of human habitation, villages, towns and cities, buildings, structures, art works, documents, handicrafts, musical instruments, furniture, clothing and items of personal decoration, religious, ritual and funerary objects, tools, machinery and equipment, and industrial systems) or intangible (all forms of traditional and popular or folk culture, the collective works originating in a given community and based on tradition—oral traditions, customs, languages, music, dance, rituals, festivals, traditional medicine and pharmacopeia, popular sports, food and the culinary arts and all kinds of special skill connected with the material aspects of culture) heritage. Cultural tourism is essentially that form of tourism that focuses on the culture, and cultural environments including landscapes of the destination, the values and lifestyles, heritage, visual and performing arts, industries, traditions and leisure pursuits of the

local population or host community encompassing all experiences absorbed by the visitor.

Development of the cultural tourism relies on the existence of a cultural heritage in an appropriate state of preservation in terms of original substance and authenticity, the acknowledgement of this heritage's value by the local communities as well as the persons outside these and the adequate promotion of this heritage in terms of the objectives to be pursued, target audiences to be reached and channels employed to deliver the most suitable proposals to these audiences. Defining, measuring and expressing the value represent the most sensitive matters for both the administrators and promoters of this heritage. The growth of cultural tourism determined an increase in importance of the valuation of cultural heritage which had to consider the definition of culture and of heritage, multiplicity of values in a given cultural item, possibility of population segments assigning negative values to the preservation of heritage and cultural goods, increased role of information in forming the value of cultural goods and formation of preferences and evolution of tastes (Lourenço-Gomes et al. 2013). Assessment of the cultural heritage value must consider its various cultural significance—*aesthetic, historic, research, social, spiritual or other*—of the sites and objects and the proper understanding of this process could determine an increased respect to cultural heritage assets and a more holistic and sustainable approach of its regeneration and, in the end, a better quality of life (Bakri et al. 2015). The representation of dimensions of heritage value, considered in the literature as the central issue and an intrinsic reason regarding the heritage conservation and protection management, over time and in different cultures have been broadly studied and led to the conclusion that heritage is an important part of societal and community well-being and therefore a major component of quality of life (Monteiro et al. 2015).

Under a context which emphasizes the universal value of the heritage, Zan and Bonini Naraldi (2013) have advanced the notion of "heritage chain" to support understanding how heritage differs from a country to another due to the specific role played in the various periods of the past, rate and types of constructions employed, attitudes toward preserving, a vision that be also applied from the level of a country to that of a local community in order to facilitate the assessment of the heritage value existing in the local communities. This is approach appears to be appropriate particularly from the perspective of the regional and rural communities, where cultural heritage can provide a sustainable competitive advantage by creating distinctiveness and opportunities to generate revenues for the local community as a result of the development of tourism activity by commodification of heritage assets, not always welcome by all the stakeholders, as meaningful and memorable tourist experiences (Laing et al. 2014).

Knowing that customer experience has become a key concept in cultural heritage marketing, because tourist satisfaction is often determined by the global experience obtained, Chen and Chen (2010) emphasize the importance of the relationship between the experience quality and the behavioral intentions mediated by the perceived value and satisfaction, in heritage tourism contexts, advancing the idea that enhancing a visitor's experience quality of heritage as a management goal, as well

as ensuring experience quality leading to perceived value, and then satisfaction, are important issues in designating the heritage sustainability strategies.

Assessment of the cultural heritage in terms of value and potential of capitalization, in order to identify and put in practice the most effective solutions to support the sustainable development of the local communities, requires consideration of a multi-dimensional perspective embracing cultural, social, economic or even political aspects. Ferretti and Comino (2015) have proposed a multi-attribute value technique accommodating the complexity of the cultural heritage determined by the multiple-use nature of goods and services provided by the environment, the difficulty in monetary evaluation of the intangible heritage and the involvement of a large number of stakeholders.

In order to explore the ways local communities succeed to capitalize the cultural heritage existing within their areas and employ it for their sustainable local development, a group of church-fortresses was selected taking in the consideration the following elements of reference: (1) inclusion or non-inclusion in the UNESCO World Heritage List—the most representative expression of heritage value recognition at international level; (2) inclusion or non-inclusion on the list of Transilvania Card—the first and, so far, only domestic product of cultural tourism aiming to promote and capitalize the cultural heritage of the church-fortresses erected by the Transylvanian Saxons; (3) the belongingness of the selected church-fortresses to the certain areas sharing common characteristics—geographical, demographical, historical and natural as defined by Fabini (2010); and (4) the homogeneity of the selected church-fortresses in terms of the degree of preservation of the original substance of the church and the surrounding fortification, again according to Fabini (2010).

2 Methodological Notes

The goal was to build an investigated group, homogenous in terms of content and size, leaving from the seven most well-known church-fortresses, included in the World Heritage List (and also covered by the Transilvania Card) and adding other church-fortresses included or not in the Transilvania Card. Employment of all the above mentioned criteria has led to a structure grouping 21 church-fortresses: a first sub-group of seven included in the UNESCO World Heritage and Transilvania Card Lists, a second sub-group of 6 included only in the Transilvania Card List and a third sub-group of eight not included neither on the UNESCO World Heritage and Transilvania Card Lists:

Sub-group 1 (church-fortresses included in the UNESCO World Heritage and Transilvania Card Lists): Biertan, Călnic, Dârjiu, Prejmer, Saschiz, Valea Viilor and Viscri;

Sub-group 2 (church-fortresses not included in the UNESCO World Heritage but included in the Transilvania Card Lists): Apold, Archita, Axente Sever, Gârbova, Hărman and Moşna;

Sub-group 3 (church-fortresses not included both in the UNESCO World Heritage and Transylvania Card Lists): Băgaciu, Boian, Cața, Dacia, Dobârca, Ghimbav, Homorod and Șeica Mică.

The differences in terms of size between the sub-groups are the result of considering the areas of localization and the degree of maintaining the original substance of the church and the surrounding fortification.

The investigated group (detailed in Table 1) includes church-fortresses built by the Transylvanian Saxons during nine generations, between 1211 (Prejmer) and 1400 (Viscri, Cața and Homorod)—seven of them in the 13th century and the other fourteen in the 14th century, located in four (Sebeș-Sibiu, Târnave; Rupea and Țara Bârsei) out of the six area of localization (Hârtibaciu-Olt Valley and Bistrița not being represented), with a high or even very high (almost complete) degree of preservation of the original substance of both the church and the surrounding fortifications, and with a relatively high or very high value of the site defined in terms of the importance, statement and appearance, exterior view, interior status, fortifications and defensive structures and condition, degree of preservation of the original substance of the church and the surrounding fortification.

Assessment of the extent to which the cultural heritage represented by the church-fortresses of the Transylvanian Saxons provides a potential of capitalization in the benefit of the local communities, capable to support their sustainable development, has been conducted using secondary data regarding the following research variables:

- (1) Accessibility of the area of localization in terms of the positioning in connection to the public roads network, national railways network and international airports in the area. The assessment has taken into consideration the density of the public roads, the density of the railways and the existence of a local, regional, national or international airport in the locations' county of origin;
- (2) Accessibility of location by road and rail in terms of the positioning in connection to the closeness to the public national and European roads, respectively the existence of a railway station in the location of the church-fortress;
- (3) Development of the touristic infrastructure of the location's county of origin. The assessment has taken into consideration the existing touristic accommodation capacity and its employment—the staying overnight of the domestic and foreign tourists in the existing touristic facilities;
- (4) Attractiveness of the location's county of origin. The assessment has taken into consideration the arrivals of the domestic and foreign tourists in the county of origin of the locations of the selected church-fortresses;
- (5) Potential for cultural tourism of the location. The assessment has taken into consideration the existing cultural heritage of the county of origin of selected locations and the classification in terms of interest (national/local) of the existing cultural heritage;
- (6) Socio-economic development of the location. The assessment has been made based on the indicators expressing the GDP/capita and the degree of urbanization of the selected locations' counties of origin.

Table 1 The investigated group of church-fortresses and their characteristics

Church-fortress	FDM	GDA	OS-C	OS-F	SV	LH16
Biertan	1283	B	100	100	I	345
Câlnic	1269	A	60	80	I	97
Dârjiu	1334	D	100	80	I	...
Prejmer	1211	E	100	100	I	150
Saschiz	1309	B	100	100	II	180
Valea Viilor	1263	B	100	100	I	122
Viscri	1400	D	100	100	I	48
Apold	1309	B	100	80	I	95
Archita	1341	D	100	80	I	98
Axente Sever	1305	B	100	80	II	84
Gârbova	1291	A	50	90	II	96
Hărman	1240	E	100	80	I	95
Moşna	1283	B	80	90	II	235
Băgaciu	1359	B	100	60	I	119
Boian	1309	B	100	90	II	...
Caţa	1400	D	80	70	II	62
Dacia	1309	D	80	70	II	57
Dobârca	1309	A	100	80	II	80
Ghimbav	1342	E	80	80	II	92
Homorod	1400	D	100	100	I	42
Şeica Mică	1316	B	100	70	I	175

Notes FDM First documentary mention of the church-fortress; GDA geographical and demographical area of belongingness (A—Sebeş-Sibiu; B—Târnave; C—Hârtibaciu-Olt Valley; D—Rupea; E—Ţara Bârsei; and F—Bistriţa); OS-C the degree of preservation of the original substance of the church (expressed as percentage); OS-F the degree of preservation of the original substance of the fortification (expressed as percentage); SV value of the site (four classes—I, II, III and IV); LH16 number of the landowners or households in the 16th century

Source Fabini (2010)

The exploratory research that accompanies the analysis based on the secondary data has involved a qualitative approach aimed to provide data from two categories of stakeholders: representatives of the entities that manage the object of cultural heritage and representatives of the public authorities from the local communities where the selected objects of cultural heritage are located. Potential respondents were identified (first and last names, positions, email addresses and mobile phone numbers) for each object of cultural heritage, respectively category, and invitations to participate the research were sent by electronic mail. In order to increase the participation rate, telephone calls were made approaching the respondents that did not answer the electronic invitation one week after submission.

3 Main Findings

The measurement of each variable involved by the research based on the secondary data has been done using a ratio scale having as reference the best performance for each criterion (awarded with 10 points) and assuming that all criteria contribute to the same extent in the capitalization of the cultural heritage represented by the church-fortresses, thus weighting equally within the measurement conducted (results are presented in Tables 2 and 3).

Measurement of the associations between the reference variables and the number of visitors reveals poor or even very poor connections between the accessibility of location and area of localization ($r=0.0405$), development of the touristic infrastructure ($r=0.0930$), attractiveness of the location's county of origin ($r=0.1167$), potential for cultural tourism ($r=0.1396$) and socio-economic development ($r=0.2605$) and the number of persons visiting the investigated fortified churches. There should be other factors and/or determinants (such as the value of the tangible and intangible heritage preserved from the former Saxons' communities or the image built in the recent years as a result of the activities and projects implemented by the Non-Governmental Organizations active in the area, and the role as image vector and promoter played by His Royal Highness Prince Charles of Wales) to be considered in the assessment of the cultural heritage and cultural tourism contribution to the sustainable development of the investigated local communities. Still, improvements in terms of each of these variables could generate an increase in the number of visitors.

The qualitative part of the study aimed to provide information about the way representatives of the managing entities and local authorities perceive the object of cultural heritage in terms of importance, potential of capitalization through cultural tourism and contribution to the sustainable development of the local communities. In order to facilitate the comparisons between the views of the managing entities and local authorities over the investigated aspects related to the current status and perspectives of the cultural heritage, the questionnaire has included a common set of questions addressed to the both categories of stakeholders.

The research questionnaire has been uploaded on the online platform www.isondaje.ro and the respondents were sent the link to the questionnaire and asked to fill it in. 14 (out of 21) representatives of the entities managing the objects of cultural heritage—site managers, priests and curators, respectively 11 (out of 21) representatives of the local authorities—mayors, vice-mayors and mayor secretaries—have answered positively the invitation to participate the research. For nine (out of 21) objects of cultural heritage—Biertan, Călnic, Dârjiu, Valea Viilor, Viscri, Cața, Dacia, Homorod and Șeica Mică—have answered representatives of the both categories of stakeholders. Five out of these nine church-fortresses are included in the UNESCO World Heritage List. In the cases of Archita, Băgaciu, Dobârca, Hărman and Saschiz only the representatives of the object of cultural heritage have answered, while in the cases of Apold and Boian the answers were provided only by the representatives of the local authorities.

Table 2 The potential of capitalization of the selected church-fortresses in terms of regional and local accessibility, tourism infrastructure, tourism attractiveness, cultural value and economic and social development

Church-fortress	Accessibility (regional)				Accessibility (local)				Infrastructure			Attractiveness			Cultural value			Development	
	DPR	DR	Air	DNR	DER	RailL	ETAC	SO	ArrD	ArrF	CTI	CT2	GDPc	Urb					
Biertan	30.891	2.67	Yes	8.6	27.4	No	10,036	830,295	360,766	142,854	1053	A	34,742.2	65.88					
Călnic	48.494	3.68	No	4.1	4.1	No	4748	313,415	140,889	27,081	686	A	32,681.4	58.23					
Dârjiu	31.405	3.12	No	18.1	21.1	No	8931	470,255	136,240	47,845	742	A	22,932.1	42.62					
Prejmer	30.99	6.58	No	0	5.6	Yes	28,320	2,213,002	935,674	178,721	986	A	39,947.7	71.64					
Saschiz	31.933	4.20	Yes	0	0	Yes	11,030	1,035,705	432,131	84,980	1018	A	26,397.2	49.88					
Valea Viilor	30.891	2.67	Yes	4.4	45.4	No	10,036	830,295	360,766	142,854	1053	A	34,742.2	65.88					
Viscri	30.99	6.58	No	8.5	8.5	No	28,320	2,213,002	935,674	178,721	986	A	39,947.7	71.64					
Apold	31.933	4.20	Yes	16	16	No	11,030	1,035,705	432,131	84,980	1018	A	26,397.2	49.88					
Archita	31.933	4.20	Yes	11.4	11.4	Yes	11,030	1,035,705	432,131	84,980	1018	A	26,397.2	49.88					
Axente Sever	30.891	2.67	Yes	0	36.4	Yes	10,036	830,295	360,766	142,854	1053	A	34,742.2	65.88					
Gârbova	48.494	3.68	No	5.5	5.5	No	4748	313,415	140,889	27,081	686	A	32,681.4	58.23					
Hărman	30.99	6.58	No	1.8	1.8	Yes	28,320	2,213,002	935,674	178,721	986	A	39,947.7	71.64					
Moşna	30.891	2.67	Yes	8.6	43.5	No	10,036	830,295	360,766	142,854	1053	A	32,681.4	65.88					

(continued)

Table 2 (continued)

Church-fortress	Accessibility (regional)			Accessibility (local)			Infrastructure		Attractiveness		Cultural value		Development	
	DPR	DR	Air	DNR	DER	RaiIL	ETAC	SO	ArrD	ArrF	CTI	CT2	GDPc	Urb
Băgaciu	31.933	4.20	Yes	9.9	30.2	No	11,030	1,035,705	432,131	84,980	1018	A	26,397.2	49.88
Boian	30.891	2.67	Yes	8.5	39.3	No	10,036	830,295	360,766	142,854	1053	A	34,742.2	65.88
Cața	30.99	6.58	No	9.5	9.5	Yes	28,320	2,213,002	935,674	178,721	986	A	39,947.7	71.64
Dacia	30.99	6.58	No	6.1	6.1	No	28,320	2,213,002	935,674	178,721	986	B	39,947.7	71.64
Dobârca	30.891	2.67	Yes	4.5	4.5	No	10,036	830,295	360,766	142,854	1053	A	34,742.2	65.88
Ghimbaș	30.99	6.58	No	0	0	Yes	28,320	2,213,002	935,674	178,721	986	A	39,947.7	71.64
Homorod	30.99	6.58	No	3.2	3.2	No	28,320	2,213,002	935,674	178,721	986	A	39,947.7	71.64
Șeica Mică	30.891	2.67	Yes	5.1	33	No	10,036	830,295	360,766	142,854	1053	A	34,742.2	65.88

Notes: *DPR* Density of the public roads (in kilometres per 100 km² of territory, 2016); *DR* density of railways (in kilometres per 100 km² of territory, 2016); *Azi* Presence of the international I domestic airport within the limits of the county of origin); *DNR* distance to the closest National Road (in kilometres); *DER* distance to the closest European Road (in kilometres); *RaiIL* presence of a railway station in the location; *ETAC* existing touristic accommodation in the counties origin (in places, 2016); *SO* staying overnight of the domestic and foreign tourists (in thousand nights per person, 2016); *ArrD* arrival of domestic tourists (2016); *ArrF*- Arrivals of foreign tourists (2016); *CTI* number of cultural and historical monuments in the counties of origin; *CT2* classification of the church-fortresses in terms of the national I local interest; *GDPc* gross domestic product per capita of the county of origin (lei, 2014); *Urb* weight of the urban population in the total population of the county (2014)

Table 3 Assessment of the potential of capitalization of the selected church-fortresses in terms of regional and local accessibility, tourism infrastructure, tourism attractiveness, cultural value and economic and social development

Church-fortress	Accessibility (regional)			Accessibility (local)			Infrastructure			Attractiveness			Cultural value			Development	
	DPR	DR	Air	DNR	DER	RaiL	ETAC	SO	ArrD	ArrF	CTI	CT2	GDPc	Urb			
Biertan	6.37	4.06	10.00	5.72	4.57	0.00	3.54	3.75	3.86	7.99	10.00	10.00	8.70	9.20			
Călnic	10.00	5.60	0.00	7.96	9.19	0.00	1.68	1.42	1.51	1.52	6.51	10.00	8.18	8.13			
Dârjiu	6.48	4.74	0.00	1.00	5.82	0.00	3.15	2.12	1.46	2.68	7.05	10.00	5.74	5.95			
Prejmer	6.39	10.00	0.00	10.00	8.89	10.00	10.00	10.00	10.00	10.00	9.36	10.00	10.00	10.00			
Saschiz	6.59	6.38	10.00	10.00	10.00	10.00	3.89	4.68	4.62	4.75	9.67	10.00	6.61	6.96			
Valea Viilor	6.37	4.06	10.00	7.81	1.00	0.00	3.54	3.75	3.86	7.99	10.00	10.00	8.70	9.20			
Viscri	6.39	10.00	0.00	5.77	8.31	0.00	10.00	10.00	10.00	10.00	9.36	10.00	10.00	10.00			
Apold	6.59	6.38	10.00	1.99	6.83	0.00	3.89	4.68	4.62	4.75	9.67	10.00	6.61	6.96			
Archita	6.59	6.38	10.00	4.33	7.74	10.00	3.89	4.68	4.62	4.75	9.67	10.00	6.61	6.96			
Axente Sever	6.37	4.06	10.00	10.00	2.78	10.00	3.54	3.75	3.86	7.99	10.00	10.00	8.70	9.20			
Gârbova	10.00	5.60	0.00	7.26	8.91	0.00	1.68	1.42	1.51	1.52	6.51	10.00	8.18	8.13			
Hârman	6.39	10.00	0.00	9.05	9.64	10.00	10.00	10.00	10.00	10.00	9.36	10.00	10.00	10.00			
Moşna	6.37	4.06	10.00	5.72	1.38	0.00	3.54	3.75	3.86	7.99	10.00	10.00	8.18	9.20			

(continued)

Table 3 (continued)

Church-fortress	Accessibility (regional)				Accessibility (local)				Infrastructure		Attractiveness		Cultural value		Development	
	DPR	DR	Air	DNR	DER	RaiIL	ETAC	SO	ArrD	ArrF	CTI	CT2	GDPc	Urb		
	Băgaciu	6.59	6.38	10.00	5.08	4.01	0.00	3.89	4.68	4.62	4.75	9.67	10.00	6.61	6.96	
Boian	6.37	4.06	10.00	5.77	2.21	0.00	3.54	3.75	3.86	7.99	10.00	10.00	8.70	9.20		
Cața	6.39	10.00	0.00	5.28	8.12	10.00	10.00	10.00	10.00	10.00	9.36	10.00	10.00	10.00		
Dacia	6.39	10.00	0.00	6.97	8.79	0.00	10.00	10.00	10.00	10.00	9.36	5.00	10.00	10.00		
Dobârca	6.37	4.06	10.00	7.76	9.11	0.00	3.54	3.75	3.86	7.99	10.00	10.00	8.70	9.20		
Ghimbav	6.39	10.00	0.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	9.36	10.00	10.00	10.00		
Homorod	6.39	10.00	0.00	8.41	9.37	0.00	10.00	10.00	10.00	10.00	9.36	10.00	10.00	10.00		
Șeica Mică	6.37	4.06	10.00	7.46	3.46	0.00	3.54	3.75	3.86	7.99	10.00	10.00	8.70	9.20		

Notes DPR Density of the public roads (in kilometres per 100 km² of territory, 2016); DR density of railways (in kilometres per 100 km² of territory, 2016); Air Presence of the international I domestic airport within the limits of the county of origin; DNR distance to the closest National Road (in kilometres); DER distance to the closest European Road (in kilometres); RaiIL presence of a railway station in the location; ETAC existing touristic accommodation in the counties origin (in places, 2016); SO staying overnight of the domestic and foreign tourists (in thousand nights per person, 2016); ArrD arrival of domestic tourists (2016); ArrF arrivals of foreign tourists (2016); CTI number of cultural and historical monuments in the counties of origin; CT2 classification of the church-fortresses in terms of the national I local interest; GDPc gross domestic product per capita of the county of origin (lei, 2014); Urb weight of the urban population in the total population of the county (2014)

The majority of the respondents from the both categories of stakeholders appreciate that church-fortresses have an international importance, which may be translated through a relevance from a domestic (local, regional or national) to an international level. There are differences in terms of this perception between the representatives of managing entities and those of the local authorities. Thus, the six representatives of the managing entities of the church-fortresses included in the UNESCO World Heritage have assessed their importance as “international” while only four out of five representatives of the local authorities share the same perception (the respondent from Călnic perceives the importance as “local”). If the church-fortress of Daia is considered by both representatives of national importance, in the case of Homorod the representative of the managing entity associates only a regional importance while that of the local authority gives it an international one. The church-fortress of Băgaciu is assessed by the representative of the managing entity as important at national level while no one from the part of the local authorities has answered, which may suggest a certain lack of interest from the part local authority.

The majority of the representatives of the both categories of stakeholders (10 out of 11 in the case of the local authorities and 8 out 14 in the case of the managing entities) consider that church-fortress is a resource that could contribute to a large or even very large extent to the sustainable development of the local community. Still, for six out of 14 representatives of the managing entities (Biertan, Saschiz, Archita, Băgaciu, Homorod and Cața), this contribution could be of an average extent one, or even of a small extent. There is an obvious difference between the stakeholders: the representatives of the local authorities tend to be more optimistic, while those of the managing entities more reserved regarding the potential contribution of the church-fortresses to the sustainable development of the local communities. More close to the day-to-day problems of managing the cultural heritage site, the rather reserved view of the representatives of the managing entities appears to be more grounded and suggests that, on a hand, the heritage sites have a significant potential to support the sustainable growth, and, on the other hand, capitalization of this potential requires a more consistent involvement of the local authorities.

The current contribution of the church-fortress to the sustainable development of the local communities can be assessed as a moderate one. As far as the contribution of the fortified church to the sustainable development of the local community is concerned, most of the answers indicate an average contribution (five respondents from the communalities and five from the church-fortresses). However, it is remarkable, in the case of the representatives of the fortified churches, the response from Viscri, indicating a contribution of a “large extent”, as well as, at the opposite, the answers from Biertan, Homorod, Cața, Băgaciu, Archita—contributions “to a very low extent”. In the most cases where comparisons between the categories can be made, representatives of the local authorities and managing entities have different views on this issue: representatives from the communalities having generally higher expectations than those of the fortified churches, a result confirmed by the responses regarding the current contribution. Several notable exceptions are provided by the local authorities’ representatives of Biertan and Homorod which appreciate that the fortified church contributes “to an average extent” and, respectively “to a

large extent” to the sustainable development of their local communities. An in-depth investigation of this topic in a future research could lead to helpful conclusions to improve the understanding of the opinion’s differences between the two categories of respondents.

A topic of particular interest in this research attempt aimed to identify the specific ways in which fortified churches contribute to the sustainable development of the local community. In overall terms, the representatives of the local authorities consider this contribution as rather modest, while the representatives of the fortified make a slightly more favorable assessment. Four communalities indicated the new jobs creation in the community, other four indicated the products and/or services acquired from the local suppliers, and one referred to the amount of money supplied under the form of the local taxes and/or contributions. Also, four communalities (Câlnic, Homorod, Cața and Apold) mentioned tourism as a source of development in connection to the heritage objectives. Nine of the representatives of entities managing the fortified churches have indicated the new jobs created within the community, six have mentioned the products and cases the products and/or services acquired from the local suppliers, and three the amount of money supplied under the form of the local taxes and/or contributions. The administrator of Viscri added on this subject encouraging of local entrepreneurship, a response that expresses a more complex economic approach that actually brings together all three already mentioned aspects, while the representative from Dacia referred to the social contribution through the form of international meetings of youth groups, workshops and after-school works hosted in the premises of the heritage objective.

The tourism attractiveness of a heritage objective depends on its degree of preservation as well as on the restoration works conducted to maintain the substance and the overall value of the site. The respondents were asked to indicate whether the fortified church benefited from partial of complete works of preservation and/or restoration in the recent years (after 1989) and, where the case, to indicate the sources of funding. Only two of the investigated fortified churches have been completely restored using European funds, respectively private sources (donations or sponsorships). Fortunately, other 16 fortified churches have been restored partially with the support of the private financial sources (donations and/or sponsorships, in the case of half of them), domestic public funds, local public funds and European funds. The good news is that there is a concern for restoring and preserving the heritage represented by the fortified churches erected by the Transylvanian Saxons. Complementary, there is money, maybe not enough—but they are never enough—to be allocated for maintaining the original substance and condition of these heritage sites and objectives. Still, there is plenty to do in this respect and an appropriate understanding of this heritage importance and potential contribution to the sustainable development of the local communities should lead to an increase of the amount of money invested in activities of restoration and preservation.

The number of visitors is an important indicator in the assessment of both the attractiveness of a heritage site, objective or destination and its contribution to the sustainable development of the community owning that heritage. According to the representatives of the local public authorities, 6 of 11 fortified churches had a rather

small number of visitors in 2016, less than 5000 people, three had between 5000 and 10,000 visitors, one (Valea Viilor) between 10,000 and 15,000, while Biertan over 15,000 visitors. The information provided by the representatives of the managing entities were relatively similar, yet more optimistic (seven less than 5000, two between 5000 and 10,000, two between 10,000 and 15,000 and three over 15,000). The annual average number of visitors determined based on these responses was of 8928, which can be a relatively low one if is to consider as reference other heritage sites and/or objectives from the country or abroad, but may represent a good starting point from the perspective of the local development. Due to the fact that representatives of the managing entities are more involved in the daily life of the heritage sites and objectives, their assessment could be seen as a more accurate one. Only the representatives of the fortified churches were also asked to indicate the average daily number of visitors in the first six months of the year 2017: seven of them assessed it as less than 25, three between 26 and 50, two between 51 and 75 and other two (Biertan and Viscri) over 75, leading to an average daily number of 39.46 visitors. Considering this result, the estimated number of visitors, at least for the fortified churches included in the investigated group, could reach more than 14,000, as an average, which appears to be too much by comparison to the estimates for 2016. There are at least two major conclusions to be drawn in this respect. First, there is need for an appropriate monitoring system capable to generate accurate information regarding the number of visitors on daily basis in order to support the future planning of marketing activities aiming to promote and capitalize this heritage. Second, according to these estimative data, the heritage represented by the Saxons' fortified churches in Transylvania is still insufficiently capitalized and, consequently does not generate the expected contribution to the sustainable development of the local communities where is preserved.

Although not very numerous, the public interested in the cultural heritage of Transylvania includes domestic and international visitors coming from European countries with a significant tradition in cultural tourism. The most frequently mentioned countries as visitors' sources of origin in 2016 and the first six months of 2017 (besides Romania—nominated in thirteen cases) were: Germany (ten times), Hungary (nine times), Austria (six times), Italy and Poland (five times), Spain and France (four times each). Other countries mentioned by the respondents were Switzerland, Luxembourg, the Netherlands, Canada, Israel, China and Japan. The highest degree of internationalization of the fortified churches' visitors was measured for Valea Viilor (receiving visitors from 12 countries), Călnic (8 countries) and Hărman (7 countries), while the lowest was determined in the case of the fortified church in Cața (that had only domestic visitors). There are two conclusions to be drawn regarding this aspect. First, it is quite remarkable how the frequency of indicating the countries of origin of the fortified churches' visitors reconstructs the history of their builders: the persons interested to discover, explore and enjoy this heritage come mainly from Germany, Austria, Hungary and Romania. Germany (and the neighboring Luxembourg) represent the land of historical roots of the Saxons, Austria and Hungary are, on a hand, the transiting areas and, on the other hand, profoundly connected with the history of Transylvania, while Romania is the today's owner and heir of this valuable cultural

heritage. Second, the audience interested in this type of heritage forms a niche that, like any other market niche, has an important strength but, as well, a significant weakness. Although a niche has a small size in terms of prospects and customers, it remains very attractive in terms of the value these consumers may generate—a fact that should be considered in the promotion and capitalization of this heritage.

Experience provided to the cultural heritage explorers represent an extremely important determinant of the attractiveness of the heritage site and the study has identified some defining aspects for the quality of this experience: how the visit takes place, what products can be purchased on the occasion of the visit, and whether there are opportunities to attend events organized in the fortified church. In the most cases, visitors can see in full or the most parts of the built-up ensemble. The content of the experiences visitors may enjoy exploring these fortified churches is rather modest: they may visit the church and the surrounding fortifications (fully, in the case of nine sites, respectively partially, in other four cases): there are available guided visits on predetermined routes, also museums or exhibitions are arranged in the premises, unfortunately without interactive facilities or exhibits. Books, brochures, DVDs and CDs can be bought in several fortified churches, as well as merchandising objects (mugs, magnets, lighters or similar items), while free access to information materials is also provided only in few of these sites. Visitors have the possibility to attend events organized within the premises of one-third of these fortified churches. Only in one-third of the investigated sites visitors are solicited to pay an entrance fee while in almost another third they have free access. Donations are welcome both in the free-visiting fortified churches and those soliciting the payment of an entrance fee. The most various experiences are offered by the fortified churches of Viscri, Călnic, Biertan and Dârjiu while the most limited are those in Cața, Băgaciu, Dobârca or Homorod. There is still room for improvement in terms of providing the best experience for the visitors of the fortified churches, but the really positive aspect is that things got definitely better from a year to another.

Who is responsible for the promotion and capitalization of the cultural heritage of the local communities? First thought goes to the owners of this heritage: the private entities that own the fortified churches as concessions or in property (only one of the investigated fortified churches—Homorod—is owned by the local community). The research has confirmed this idea indicating, through the voices of the both representatives of the public authorities and the fortified churches, the heritage owners (eight, respectively nine respondents) as most responsible, respectively the local communities (one, respectively three respondents) as least responsible in this respect. The respondents have been placed in between, in a quite similar manner, the local public authorities, the Ministry of Culture and National Identity, and the Government of Romania. Non-Governmental Organizations active in the field of heritage restoration, conservation and protection have been credited with a relatively lower responsibility. There are two main conclusions: first, the key role in the promotion and capitalization of the cultural heritage should be played by the owners of this heritage and the local public authority. The logical association between these entities is negatively influenced by two major drawbacks: on a hand, the lack of financial resources to be allocated needed to finance the promotion and, on the other hand,

the relatively low competence in the field of marketing necessary to identify opportunities to be capitalized. Second, there is an expectation regarding the support that should be provided by the public authorities at national level through the Ministry of Culture and National Identity and the Government of Romania. Development of the public and private partnerships involving directly or indirectly all stakeholders and consider the particular needs of the community members could answer the problem and support the sustainable development of the local communities.

4 Conclusions

The assessment of the potential of capitalization of the cultural heritage represented by the church-fortresses of the Transylvanian Saxons reveals that, on a hand, the extent to which these formerly defensive structures transformed in objects of cultural heritage may represent a resource to be capitalized by the local communities influence their attempts to grow sustainably, and, on the other hand, that these church-fortresses can be ranked in terms of their potential of capitalization, thus providing insights about how to make them veritable engines of growth for the local communities.

The current contribution of the heritage sites represented by the Transylvanian Saxons' fortified churches is a rather modest to average one. Representatives of the public local authorities have a more optimistic view over this topic, while those of the entities managing the sites are rather reserved. Knowing that representatives in the second group of respondents are more closely related to the fortified churches and participate actively in their daily life, their assessment could be considered more accurate.

This contribution should be extended in all the suitable forms for supporting the sustainable development of the local communities: every newly created workplace, each product purchased from a local supplier and any amount of money brought to the local budget represent a support for the local economy, providing a solid base for its further development. Currently, the number of workplaces is rather low, the local suppliers of goods and/or services are, usually, just a few, and the money obtained in exchange of the cultural tourism products and services is also few.

Attracting more visitors could change the situation, maybe not dramatically and, maybe, not in months, but years. Currently the average annual number of visitors amounts, at the level of the investigated heritage sites, for 9000. According to the issuers of Transilvania Card (Ziarul Prahova 2017), 655,349 tourists have visited the 50 sites covered by this promotional tool corresponding to an average value of 13,107 tourists per site, respectively an average daily value of 35.90 tourists per site—quite close to estimation provided by the qualitative component of this approach—39.46. Some 720,000 were expected to visit the 52 sites in the 2017 season (lasting from April 1st to October 31st), corresponding to an average value of 13,846 tourists per site, respectively an average daily value of 37.93 tourists per site (higher by 5.6% by comparison to the previous year).

Getting more visitors to explore and enjoy the cultural heritage represented by the fortified churches of the Transylvanian Saxons should be accompanied by two measures: first, an appropriate assessment of the value of this heritage capable to provide the insight and basis for its adequate pricing. Cultural tourists represent a segment that, on a hand, understands the heritage value and, on the other hand, is open to pay a right price for experiencing it. Talking about the right price and tourists' experience, the value of the heritage sites must be enriched by providing visitors an increased amount of opportunities to explore, discover and enjoy the fortified churches. A simple visit, guided or not, through the premises does not offer too much: interactive museums and exhibitions, events organized in the premises, possibility to buy books, printed materials, DVDs or CDs, as well as opportunities to stay overnight and to discover the local gastronomy could represent strong reasons to come and consistent sources of financial inputs for the administrators of the heritage, local entrepreneurs and, last but not least the local authorities. These developments could be seen as elements of a process of heritage commodification but they are nothing else than forms of transforming into reality the heritage cycle proposed by Thurley (2005), stating the importance, logical succession and inter-connection of the heritage understanding, valuing, carrying and enjoying.

The public authorities should assume a more important position in the attempts aiming to restore, preserve, promote and capitalize the heritage of the fortified churches of the Transylvanian Saxons, both at the local and national levels. Communalities and Government, in close connection to the owners of the heritage and the Non-Governmental Organizations active in the field should initiate and/or support public-private partnerships that may have as major results attracting more visitors in these areas, providing the best possible experience in the particular context, creating new workplaces and generating a business environment that facilitates the local entrepreneurial initiatives, promotion and capitalization of the cultural heritage and the sustainable development of the local communities that inherited it.

The most important limitations of the research refer, on a hand, to the lack of more detailed secondary data describing the variables considered in the assessment of the macro-economic determinants of the cultural heritage capitalization (accessibility of location and area of localization, development of the touristic infrastructure, attractiveness of the location's county of origin, potential for cultural tourism and socio-economic development), and, on the other hand, to the reserves of both the representatives of the local public authorities and those of entities managing the heritage sites to participate the research. The results obtained at the level of the investigated group cannot be extended to the entire amount of heritage sites represented by the fortified churches of the Transylvanian Saxons but provide a solid basis for further, in-depth exploration of the field.

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Evaluation of the Structural Transformations Effectiveness of the Regional Economy Based on the Threshold Approach



Yulia Vertakova, Andrey Polyinin and Irina Dokukina

Abstract The study of the industry territorial sectoral structures transformation in the conditions of a transitional stage to an innovative economy presupposes the improvement of methodological methods of studying and the adaptation of methods of public regulation of transformations to modern conditions. The transformation of the territorial-branch structure of industry is an important factor in the dynamics of the economic space. An applied aspect of this research task is assessment the effectiveness of structural transformations of the regional economy based on the threshold approach. The solution of the problems posed in the research is based on the use of general scientific methods of analysis and synthesis, a dialectical method that provides for the study of phenomena in conditions of dynamic development, the interrelationship of individual elements of the system, and the allotment of the leading segments of regional economic complexes as complex socio-economic systems.

Keywords Economic processes · Structural transformation · Regional economy
Threshold approach

1 Introduction

Successful transformation of the socio-economic system and its transfer to a new state, caused by the growing influence of the processes of globalization and the integration of the economy into the world economic system, presupposes the need for structural reorganization of the economy of the country and its regions in order to eliminate accumulated deformations.

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The structural dynamic parameters of the regional economy in the sectoral context can be influenced by a separate type of public economic policy—structural policy. Any progressive development and implementation of reform programs in the economy are unambiguously associated with a purposeful change in the structure of the economy. Regional structural policy is a set of measures aimed at changing the structure of a regional economic complex in the desired direction, establishing its optimal (rational) internal proportions.

Structural policy is aimed at forming and changing the industrial and territorial structure of production, a purposeful influence on the proportions and the ratio between the productions of different types of products.

The overall objective of the regional structural policy is favorable structural changes in the region's economy aimed at increasing its economic and social efficiency by implementing structural reorganization of the regional economy, including diversification, concentration, clustering, allocation of growth poles and propulsive industries, etc. Favorable structural changes are understood to mean such changes in the structure of the regional economy that lead to sustained economic growth in the region, growth of per capita GRP, an increase in the innovativeness of regional production, a reduction in the territorial differentiation of development and the achievement of other positive effects in the socio-economic system of the region.

The authors considered it necessary to supplement the theoretical provisions that reveal the goals and objectives, the effects, the principles of interaction between actors and the mechanisms for implementing structural regional socio-economic policy, by systematic material reflecting the state of contemporary Russian and foreign practice of its development and implementation, and also to justify the need for a new one approach for these goals—threshold approach.

2 Degree of Scientific Elaboration of the Problem

The problem of state management of structural transformations in the economy today seems to be one of the most discussed in the scientific community. Its solution requires the application of a systematic approach and actualizes research work.

The problem of transforming the regional economy was considered in the works of such authors as I. E. Risin (Zheleznyakov and Risin 2017), B. G. Preobrazhenski (Preobrazhenski and Glushkova 2014), Y. I. Treschevsky (Vertakova et al. 2016), Vertakova (2016), Ansoff (2014), Drucker (2001), Kleiner (1977) and many others.

Theoretical basis for the development of the cluster approach as a form of structural transformation is presented in the works of Porter (2014) and Schumpeter (1998).

At the same time, experts note that the growth of innovation in the economic system has a decisive influence on the processes of structural transformations of the regional economy. These issues were considered in the works of both foreign scientists: Carrenbauer and Mullendorf (2015), and others, and Russian economists: T. Bezrukova (Bezrukova et al. 2017), Bodrunov (2016), Plotnikov (Plotnikov and

Vertakova 2015), L. V. Popova (Popova and Rasoulinezhad 2016), Saifulin (2012), and others.

Practical and scientific interest is the application of the threshold approach to assessing the effectiveness of structural transformations of the regional economy. The cost-based approach to innovation and the costs of innovative transformations has been studied in papers of scientists: Cooke and Mayes (1996), D. Massey, P. Quintas (Massey et al. 1992), Twiss (2001), M. Dodgson (Dodgson and Hinze 2000). At the same time, the threshold approach in the context of structural transformations of the regional economy was practically not considered.

Insufficient degree of elaboration of the problems connected with the assessment of the effectiveness of structural transformations of the regional economy based on the threshold approach determined the choice of the topic of this study.

3 Management of Regional Economy Structural Transformations

Regional structural policy is seen as the impact of public authorities on all types of economic structure. At the same time, the composition of the structures (industrial parks, technoparks, special economic zones, territories of advanced development, clusters, etc.), on which the public authorities are targeted, can change situationally, depending on the priorities and key directions of the overall regional policy. The structure of the regional economy is a set of historically established stable, capable of reproducing the functional interrelations between different units of the economy.

Structural policy presupposes the initiation and investment of various structural shifts for the progressive transformation of the regional economy. Structural policy can be built on the basis of two alternative approaches.

In the first case, industrial, innovation, investment and other types of policies are interrelated with structural policy, and the goals and objectives of these types of policies will be based on the goals and objectives of economic restructuring. That is, structural policy can be implemented on the basis of an integrated approach.

Another approach to structural policy involves the allocation of certain aspects of the economy, for example, industries. This approach to understanding structural policy is implemented in sectoral programs such as restructuring programs for the power industry, machine building, food, metallurgy industries in the region, etc. This approach can also be based on changing the territorial structure of production, due to the influence of innovation, cluster or investment policies.

The overall objective of the regional structural policy is favorable structural changes in the region's economy aimed at increasing its economic and social efficiency by implementing structural reorganization of the regional economy, including diversification, concentration, clustering, allocation of growth poles and propulsive industries, etc. Under favorable structural changes such changes in the structure of the regional economy that lead to sustainable economic growth in the region, growth

GRP per capita, increase regional innovation production, reduction of territorial differentiation of development and the achievement of other positive effects in the socio-economic system of the region.

This goal is decomposed into the following main subgoals:

- rational allocation of productive forces and various types of resources in the territories of the region, as well as redistribution of basic types of resources between sectors and sectors of the economy;
- implementation of programs for the development of sectors of the economy and infrastructure, including ensuring faster growth of knowledge-intensive industries, industries that have a high specific gravity of added value, which have a multiplying effect on regional development, etc.;
- the formation of the branches of the “new economy” (including the development of information and communication systems, the defense industry complex, the aviation industry, the rocket and space industry, etc.);
- supporting the functioning and renewal of traditional sectors of the economy, increasing the competitiveness of the sectors that are the basis of modern economic growth and life-supporting infrastructure (fuel and energy, oil, gas, electricity, etc.);
- strategies for the development of innovative sectors that determine the transition from raw to innovative development and form new engines of economic growth. The main attention is directed to the strategy of development of science and innovations;
- zoning of the institutional environment for doing business through the creation of special economic zones, technology and innovation parks, the formation of clusters, the implementation of programs to promote the development of innovation infrastructure, industrial design and engineering services, the development of strategies for the development of certain sectors of the regional economy, etc.;
- increasing the integrity and structural coherence of the regional economy through the introduction of effective forms of spatial organization of business;
- identification and stimulating the development of the most efficient enterprises (types of activity) (propulsion points of growth) and regions (growth poles), where investments will give quick and maximum return and impetus for the development of the region as a whole (forming the economic core and growth poles);
- increasing in the proportion of small businesses and individual entrepreneurship, development of small-business cooperation ties with large and medium-sized enterprises; stimulation of integration interaction of regional economic systems.

The main goals and objectives of structural policy in different countries periodically change (Pinho et al. 2014), depending on the development priorities identified in the strategic and programmatic documents of the regions or the federal authorities (García-Gallego and Chamorro-Mera 2016).

The experience of the structural policy on the creation of the European Union and the gradual expansion of its space through the accession of the states of Eastern Europe is of particular interest (Einaudi 2017).

For example, at the heart of the experience of Japan’s structural policy lie the state plans for the development of the regions, which are aimed at rational allocation

of productive forces, mitigating imbalances between different economic regions and improving the environment (Peck and Miyamachi 1994).

In Russia in 2006, the main goals and objectives of the state structural policy were determined by the Program of Social and Economic Development of the Russian Federation for the medium-term perspective (2006–2008), which was approved by Decree of the Government of the Russian Federation of January 19, 2006 No. 38-r. The program determined that the package of structural policy measures includes the following main areas:

- implementation of system-wide measures aimed at reducing institutional barriers;
- stimulation of demand for scientific and technical products, new equipment and technologies;
- acceleration of retirement of obsolete equipment;
- increasing the effectiveness of existing and the formation of new public financial development institutions, including their resources in the implementation of programs for the development of economic sectors and infrastructure;
- development of a program-targeted approach to structural changes in the economy and infrastructure development based on the implementation of federal and departmental target programs;
- creation of special economic zones and technology and innovation parks, formation of clusters, implementation of programs to promote the development of innovation infrastructure, industrial design and engineering services, development of development strategies for individual sectors of the economy.

As the analysis showed, most of the territorially diversified countries, which have shown consistently high rates of economic growth over the past 40 years, have reached them, as a rule, due to the outstripping growth of several regions. Leading regions become the centers of innovative development of the country and demonstrate a new type of economic and social growth for other territories. For example, in the UK, socio-economic depressiveness is most pronounced in industrial agglomerations, where traditional industries are concentrated—coal mining, steel and textile production. In Germany, the Ruhr region with coal and metallurgy specialization was a depression region. In the United States, such regions include territories with high unemployment and low incomes (Appalachian region).

One of the effective instruments for implementing structural policy, related to the development of promising forms of spatial organization of the economy, is the zoning of the regional institutional environment for doing business. In many countries, the structuring of the regional economic space is carried out through the creation of areas more attractive for economic activities than others, leading to the formation of territories with a special economic status, the so-called “special territories”. In Russia, for example, the following elements of the structuring of the regional economic space:

Clusters, industrial parks, technoparks, business incubators:

- assistance in organizing new production on the principles of equity participation;

- expansion of the practice of joint participation (consortium) of organizations participating in clusters in the implementation of large orders (public procurement, transnational corporations);
- development and solution of issues on implementation of joint projects in the field of cost reduction, competitiveness, logistics, information and communication technologies, etc.

In the conditions of economic development, cluster structures are a common form of organization of territorial relations. This is due to the active development of network structures, the processes of economic globalization and the massive spread of communications. Theoretical and practical interest represents a long-term and economically efficient developing cluster (Vertakova and Risin 2015). Therefore, we will regard this economic category in our study as a complex system of production, economic and managerial decisions that are related to the provision of various resources, the strategic orientation of their distribution leads to the rationalization of costs at various stages of development (Vertakova et al. 2016).

Special economic zones (SEZ)—part of the territory of the Russian Federation on which a special regime of business activities operates, and another customs procedure may be applied (Federal Law of 22.07.2005 № 116-FZ “On Special Economic Zones in the Russian Federation”). Implementation of agreements on the creation of special economic zones and provision of conditions for infrastructure facilities and other facilities for the operation of the SEZ, as well as for the management of these facilities. The PPP mechanism is used to attract private investors to develop business in a certain territory.

Territories of advanced development (TAD), which, unlike SEZs, are created for specific large investors who have concluded preliminary agreements with the authorized federal body that determine the type of planned economic activity, the amount of investments and the number of jobs created (Federal Law of 29.12.2014 № 473-FZ “On the Territories of Advanced Social and Economic Development in the Russian Federation”). The territory of advanced development is created for 70 years, the period of its existence can be extended. An application for the creation of a TAD may be submitted by the leadership of any constituent entity of the Russian Federation. The purpose of creating territories for advanced development is the formation of an enabling environment for attracting investments and ensuring accelerated development of the economy and creating comfortable conditions for life support. The federal law does not impose any strict restrictions on the size of the territory, its administrative affiliation, specialization of economic activities, and therefore the following types of TASED:

- territories of advanced socio-economic development, whose projects are proposed in the Far Eastern Federal District;
- territory of advanced social and economic development in single-profile municipal formations (depressed territorial entities);
- the territory of advanced socio-economic development in closed administrative-territorial entities (CATE)—by the type of cities of Rosatom State Corporation and others.;

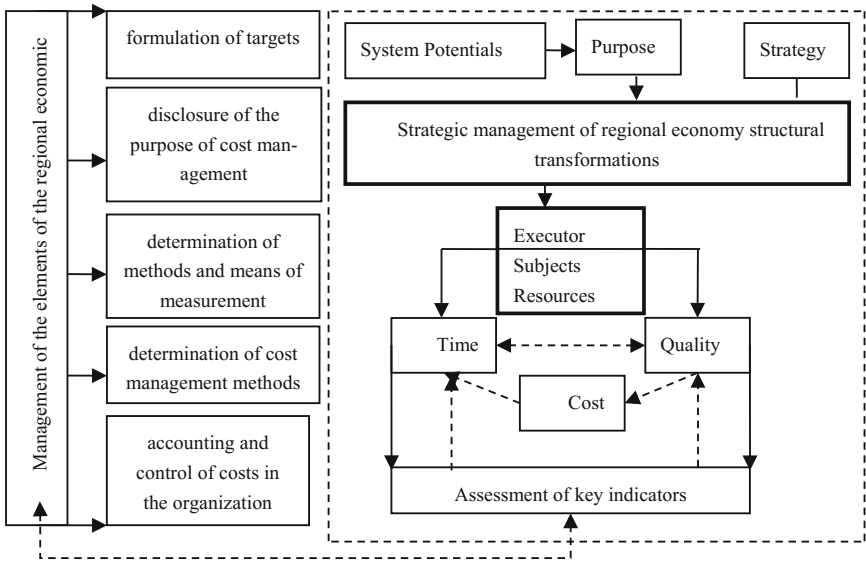


Fig. 1 The economic content of strategic management of regional economy structural transformations. *Source* Developed by the authors

– territory of advanced social and economic development in the Arctic zone of the Russian Federation, more as territories of new development (the Arctic, the Polar Urals, etc.).

At the same time, we note that to the factors of strategic development of management decision making in the field of structural transformation, it is necessary to attribute:

- strengthening the innovative organization of subjects through concentration of knowledge;
- availability of a reliable information base on the saturation of demand and consumer preferences;
- development of a new methodological basis for solving complex problems;
- elasticity and shortening of the time interval for introducing innovations;
- minimization of the level of costs for the introduction of innovations.

These guidelines point to the need to develop a new approach to assessing the effectiveness of structural transformations in the regional economy. Any economic system is affected, and only the development of a new direction will minimize costs. The economic content of strategic management of structural transformations of the regional economy is presented in Fig. 1.

Analysis shows that in the theory of management different approaches are used: system, situational, process. But not one of them does not include an assessment of the stages (landmarks) at the initial levels of strategic management, thereby leading

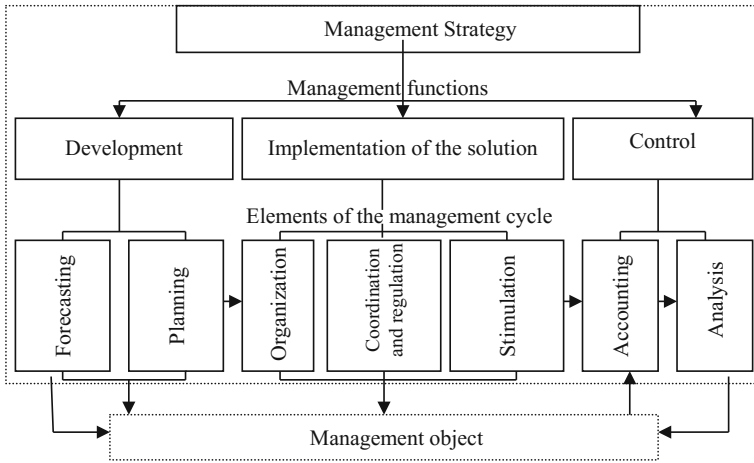


Fig. 2 The mechanism of interaction of management functions in a cluster structure. *Source* Developed by the authors

to large errors in making a decision. We propose to use a new approach, which consists in implementing a set of activities, namely decision making, control of their implementation, and also segmentation of the management cycle at the initial stage. The implementation of the cluster management functions on the basis of the threshold approach in all directions is a control cycle. The management objects in the threshold approach will be the costs of selling, using, disposing of products (services, works), development and production. The scheme for integrating the management functions of the cluster structure is shown in Fig. 2.

From our point of view, these functions need to be implemented in a comprehensive manner. Orientation to cost management will not be considered as the main goal, but it is necessary to multiply the efficiency of the organization and to obtain a certain economic result by the cluster.

Thus, the management in the cluster structure based on the application of the threshold approach is an ever-changing process that represents the aggregate of the management impact of direct and reverse links, the goal of which will be to achieve a better economic result. Unity of management includes the performance of all management functions for all components of the management process aimed at realizing the goals and objectives of the organization in obtaining economic results. It should be borne in mind that, depending on the volume of costs, organizations are required to apply a variety of cost management systems. Thus, this will be the basis of the cluster management strategy within the framework of the applying of the threshold approach.

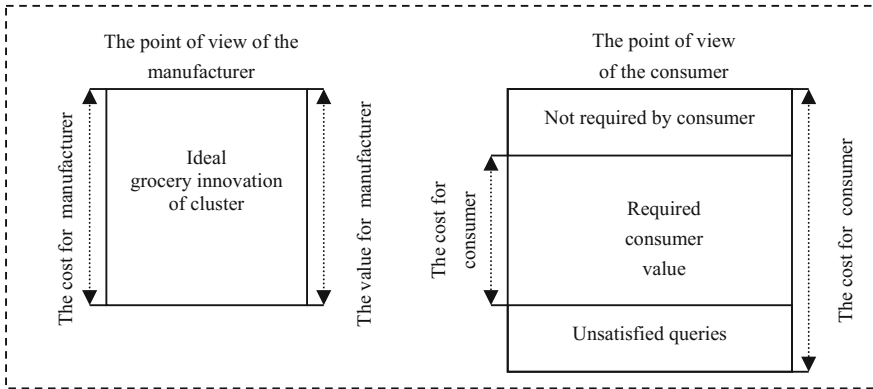


Fig. 3 Algorithm for implementing a threshold approach in a cluster. *Source* Developed by the authors

4 Applying of the Threshold Approach

We have established that the strategy within the threshold approach should comply with the following main provisions:

- analysis of the conditions of institutional development, in which the subjects of cost management interact with the environment;
- a comprehensive analysis of those management situations is necessary, where development conditions constrain the activities of the cluster, and when stimulated;
- accounting the integration interaction of all subjects of cluster interaction (Bezrukova et al. 2017).

We note that the process of cost management based on the application of the threshold assessment can be considered as a set of methodological, theoretical and practical bases, the subject area of which is the coordination of innovation potentials with a finite mass of market economic components and actors united by the driving flows of investment and information (Chakravorty 2000).

Let’s consider the flow of control processes in clusters in more detail. The algorithm for implementing the management strategy is shown in Fig. 3.

The theoretical basis of any approach is the principles that formulate the main external and internal interrelations of the subjects of the management processes (Cziráky et al. 2006).

Thus, based on the foregoing, the following principles of management within the framework of the threshold concept are highlighted:

- principles related to market processes in the context of sustainable economic development;
- principles, objective analysis of possible cost components;
- the principle of effective use of the results of cluster management.

It should be noted that a properly aligned course provides the opportunity to maximize utility and rationalize costs. In this case, the subject of management has such characteristics as:

- the desire for an integrated solution of problems;
- limited rationality;
- potential to maximize utility.

On the example of any cluster, this can be traced. We have established that the cluster at this stage will represent the periphery of the interests of owners, employees, investors, consumers, suppliers, and also the country and can be presented as a socioeconomic system working in the context of reducing costs and saturating the value opportunities of capital.

At the same time, the processes we are considering in cluster structures are guided by a variety of managerial norms and should be focused on the maximum study of their potentials and potentials of the buyer. At the same time, it is necessary to carry out an economic analysis of the policy in the field of innovative transformations of cluster structural elements. In assessing the effectiveness of cluster structure management, we are invited to consider the complex interaction of such methods as factor and expert.

The purpose of the application of expert methods will be the implementation of predictive assessments based on intuition and knowledge of managers and specialists. The purpose of applying factor analysis is to establish the tightness of the connection between the factors of research and their effect on the effectiveness of economic policy.

It is advisable to conduct economic analysis in three areas of managing the types of cluster structure:

- consideration of demand and behavioral styles of consumers;
- synthesis of the level of the innovative potential of the organization and the conditions of competition;
- research of innovation as a commodity.

For a complex analysis of the market potentials of a specific organization, the weak and strong sides of the essential characteristics of the cluster's innovation potential are assessed (Talmaciu 2014). In this case, we would like to note the expediency of applying the threshold approach for evaluating strategic benchmarks:

- consideration of individual market characteristics, which includes the following indicators: analysis of the constancy of the market type, calculation of its capacity, determination of the speed of formation and direction, and also on this basis identification of directions for further development;
- study of consumers, both possible and real.
- comparison with competitors' similar goods of the organization.
- sales and planning methods, including modeling of management processes in the long term.

In our opinion, all this makes it possible to single out the following factors for the development of the cluster structure:

- (1) weak development of the organization's sales network;
- (2) shortcomings of goods produced by the organization;
- (3) shortcomings in the management of commodity flows.

Obviously, the presented methodological aspects of assessing the effectiveness of cluster management make it possible to develop an appropriate methodology for introducing management as a cumulative management system for innovation processes.

The existing level of economic and production processes provide prerequisites for the formation of a new approach to strategic management, the principles of which would meet the current complex situation in the country. Strategic management in clusters is a constantly changing process (Plotnikov and Vertakova 2015). The potential need to develop a new approach in the field of cluster structure management is determined by the reduction in the product life cycle, the greater risk of making managerial decisions, and the increase in the cost of resources.

In our opinion, when applying the threshold approach in the context of forming a strategic concept for the development of cluster development, it is necessary to implement the following measures:

- (1) Maintaining the elasticity of production—an indicator that characterizes the prerequisites for diversification of products, which is associated with the development of new products and goods that are of high quality and have market demand. Thus, it is necessary to form approaches to establish the position of the organization on the market, the activity courses, the establishment of the established authority of the organization on the market. In conjunction with this, in the process of analyzing the commodity market, it is necessary to argue the level of costs for product creation, maintenance, development, research, and technical training (Plotnikov et al. 2018).
- (2) Implementation of works related to the transformation of existing technological solutions and the development of new ones. From this follows a complex of features of modern cluster construction, and among them:
 - appropriate allocation of responsibilities;
 - calculation of production values of the organization;
 - application of flexible production systems;
 - expansion of the scope of management tasks assigned to each performer.
- (3) Stimulating motivation for work and increasing the importance of the human factor. This element of strategic management will allow us to formulate the directions for the development of a cluster structure aimed at forming and business relationships within the organization.
- (4) Application of the program approach with a view of organizational support of the future concept of the organization of manufacture and a substantiation for realization of an innovative policy in clusters. At the same time, the directions of

the transition to an innovation-oriented type of development constitute a target point of strategic management, which includes:

- creation of human potential;
- formation of an institutional environment with a high level of competition;
- integration of the structure of the economy on the basis of innovative processes;
- increasing the boundaries of competitive advantages;
- strengthening foreign economic guidelines, improving the efficiency of labor management;
- creation of a perfect model of spatial development of the economy (Vertakova et al. 2014).

On the basis of the foregoing, it must be concluded that the formation of prerequisites for the transition to a cluster type of development leads to the search for new management decisions that form the conditions for increasing the quality of life of the population based on intensive development of innovation economy and strategic management in the aggregate.

At the same time, the development of innovative processes in clusters implies changes that appear in all spheres and are in the zone of action of risks that hamper development:

- risk of subordination of the economy to the structure of markets and prices for raw materials and products;
- risk of technological backlog;
- the risk caused by infrastructural and institutional constraints;
- the risk of a shortage of labor resources and negative laws in the development of human potential (Thompson 1992).

In this connection, the successful implementation of the organization's management strategies based on the threshold approach will allow minimizing the declared risks. At the same time, I would like to note that the main task is the formation of the required level of costs and reserves, taking into account the ratio of borrowed and own funds. Using this technique will make it possible to determine the shortage or surplus of funds for the formation of reserves and answer the question: will the organization be able to cover its own costs?

The application of the threshold approach will allow us to analyze the organization's potential for efficiently providing newly developed and existing technological equipment. We note that when assessing the analyzed costs, it is also necessary to include the needs for innovations that are needed to introduce new, or basic technology (ΣR_b) and/or improve (ΣR_y) into the economic circulation.

Applying them to the formulas for calculating the absolute, normal, and unsustainable financial condition, the costs of introducing and developing improved innovations and/or basic, we obtain values that show the potential of the sources of costs associated with the sale of certain projects, but to offset current production and economic costs and stocks. Thus, the calculation of the sources of obtaining the results

and costs to ensure the production process and the development of innovations will take the following form, presented in Table 1.

This theoretical development shows that it can be a fundamental element for the classification of the clustering of financial stability, or the innovative potential of the cluster. At this stage, the formation of an effective tool for strategic management is advisable to use a three-component threshold of the threshold scenario:

$$S = \{S1(x1); S2(x2); S3(x3)\} \tag{1}$$

where: $x1 = \pm Ec$; $x2 = \pm E_T$; $x3 = \pm E_\Sigma$.

The values of the function $S(x)$ are arranged as follows:

$$S(x) = 0, \text{ if } x < 0;$$

$$S(x) = 1, \text{ if } x \geq 0.$$

Practical application of the values of the function $S(x)$ must be based on four important types of clustering structures. As a result, we will be able to answer the question: is it possible for the cluster to apply innovations in the organizational

Table 1 Determination of costs when applying a threshold approach in the course of forming a development management strategy in a cluster

Indicators	Calculation formulas
<i>Indicators characterizing financial sustainability</i>	
Shortage (-) or surplus (+) of own working capital for introduction of innovations and maintenance of production process	$\pm E_c = E_c - Z - \Sigma R_b$ $\pm E_c = E_c - Z - \Sigma C$ where: E_c —presence of own circulating assets, Z —costs and holdings; $\Sigma C_u \Sigma R_b$ —the costs needed to study improving or basic innovations, respectively
Shortage (-) or surplus (+) of long-term borrowed sources of formation of implementation costs and production-economic and stocks of own circulating assets	$\pm E_T = E_T - Z - \Sigma R_b = (E_c + K_T) - Z - \Sigma R_b$ $\pm E_T = E_T - Z - \Sigma R_u = (E_c + K_T) - Z - \Sigma R_u$ where: E_c —presence of negotiable own funds; E_T —presence of long-term borrowed sources for formation of expenses and stocks of own circulating assets; Z —costs and reserves; $\Sigma R_u \Sigma R_b$ —the costs needed to master improvements or basic innovations
Shortage (-) or surplus (+) of the final value for the formation of reserves and costs of the most important sources	$\pm E_\Sigma = E_\Sigma - Z - \Sigma R_b = (E_c + K_T + K_t) - Z - \Sigma R_b$ $\pm E_\Sigma = E_\Sigma - Z - \Sigma R_y = (E_c + K_T + K_t) - Z - \Sigma R_y$ where: K_t —short-term loans and credits; E_Σ —the total amount for the main source of funds for the formation of results and cost; K_T —long-term loans and borrowings; E_c —presence of own circulating assets; Z —costs and reserves; $\Sigma R_u \Sigma R_b$ —the costs needed to master improvements or basic innovations

Source Developed by the authors

process while consistently meeting the financial needs of current production and economic activities?

Analysis of Table 2 allows us to identify potential types of cluster structures.

In summary, it should be noted that the assessment of innovative capabilities allows, first of all, to consider the financial stability of the cluster. The developed approach will be the basis for the formation of strategic management and the basis for the commercialization of new technologies.

In addition to the survey, we note that organizations now have an algorithm for assessing the development of cluster potentials. And we cannot help ignoring, in our opinion, the fact that the organization can identify, at the stage of developing

Table 2 Recommendations for choosing a strategy for managing the development of a cluster structure

Innovative capacity index and sources of cost coverage	The main characteristic of the type of organization innovative development	Basic strategy of innovative development
<i>Large innovative features</i>		
S = (1,1,1) Funds own	Implementation of strategies for innovative development of the organization will probably be carried out without external borrowing. Greater availability of own resources	Learning new technologies—the leader
<i>Medium innovative features</i>		
S = (0,1,1) Long-term loans plus own facilities	Normal provision of production with the necessary financial resources. For the effective involvement of new technologies in the economic circulation, a certain amount of borrowed funds must be used	Studying of improving or new technology—leader or follower
<i>Small innovative features</i>		
S = (0,0,1) short-term and long-term loans and loans plus own facilities	Satisfactory financial support for costs and current production stocks. To implement innovative development strategies, it is necessary to attract a large amount of financial resources from external sources	Study improving technology—follower
<i>Indifferent innovative opportunities</i>		
S = (0,0,0)	Absence of sources of development of expenses or deficiency	–

Source Developed by the authors

strategic plans, impossible (from the point of view of financial security) directions from among the analyzed possibilities.

5 Conclusions

Factors of structural transformations of the regional economy are divided into groups: external and internal, extensive and intensive. The most significant factor determining the positive effect of structural transformations is the intensive factor that increases the efficiency of using the factors of production available in the region (investments, innovations, market competition, etc.). The influence of extensive factors should not be neglected, at the same time, authorities should understand that their importance is decreasing.

Currently, there are the following effects of the implementation of the regional structural policy:

- Stimulating—acceleration of regional development, encouragement of new types of activity, economic relations, economic development of new territories;
- Compensating—redistribution of income to reduce damage from uneven regional development in the form of assistance to backward and depressed areas and industries through the provision of subsidies, benefits, vocational retraining of the able-bodied population, etc.;
- Adaptive—adaptation of more mobile and controllable components of regional development to inertia, less manageable and assessed as unavoidable (for example, concentration of housing, industrial and other construction in places that have become attractive to the population);
- Counteracting—“slowing down” or complete suppression of negative economic processes (for example, development of shadow economic activity).

The threshold scenario implies improving the competitiveness of production not only in the generally accepted sectors of the economy, but also in knowledge-intensive new areas, and the fusion of innovation factors into the main source of economic growth, as well as maintaining significant investment initiatives and implementing a number of large projects. In the cluster variant of development, an increase in costs is envisaged. This approach should be described as a scenario of vigorous economic diversification and structural movements in favor of the “new economy”, manufacturing industries and services that consider the development of the regional economy in the assignment of the knowledge economy and the postindustrial way.

This reference point will facilitate the transition of the economy to an innovative cost-oriented type of development through:

- formation of an effective innovative regional system ensuring the creation of sustainable development of cluster structures as the main factor of social and economic growth;
- implementation of long-term projects within the framework of public-private partnership in the markets of high-tech goods and services in the region;

- strengthening the pace of innovation in the economic sectors, ensuring their technological modernization and increasing competitiveness;
- realization of regional projects and targeted programs for the development of a class of innovatively motivated people and a significant improvement in the quality of human capital;
- formation of institutions that strengthen strategic planning, contributing to the reduction of administrative barriers.

Thus, the use of the threshold approach plays an important role in clusters, where the volume of costs is influenced by a set of weakly predictable factors. And it is obvious that the system of strategic management based on the threshold approach is based on indicative principles, and it will be aimed at coordinating the potentials and resources of the organization with the needs of innovative market relations.

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Key Predictors of Customer Loyalty for Facebook Brand Pages. Empirical Research on Social Media Marketing



Simona Vinerean and Alin Opreana

Abstract The new marketing practices and developments have had incredible impact on consumers' purchasing process and information-acquisition process, and most notably, social media is changing marketing. The research setting for this paper refers to consumer behavior on social media services, particularly Facebook and consumers' interactions with brands on this social platform. Through this research, we examine which consumer behavior concept has a higher impact in generating loyalty for the brands consumers interact with on Facebook. Using Automatic Linear Modeling, we forecast and model a target variable (namely, consumer loyalty) based on linear relationships between the target variable and its established predictors (Involvement, Satisfaction, Customer-to-Customer Interactions or electronic-Word-of-Mouth/eWOM, and Consumer Participation). Results show that the variable with the most significant impact on consumers' loyalty for a particular brand on Facebook is consumer involvement. Based on the findings, we establish various managerial recommendations for online marketing strategies and tactics on social media and we propose future directions for research, aimed at expanding the current study.

Keywords Customer loyalty · Consumer participation · Consumer involvement · Customer satisfaction · eWOM · C2C · Branding · Social media marketing

1 Introduction

The new marketing practices and changes have an had incredible impact on consumers' purchasing process and information-acquisition process. The linear purchasing process does no longer apply and marketers have to develop new ways in which to interact, learn and persuade consumer to buy certain products and services.

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The path to purchase of consumers all around the world is experiencing changes, with multiple challenges and opportunities for marketers. In terms of technologies' impact on marketing, social media represents a development that is changing traditional marketing frameworks.

For marketing purposes, social media represents an important channel that can facilitate many marketing activities including 'customer relationship management, customer service, buyer research, lead generation, sales promotion delivery channel, paid advertising channel, and branding' (Ashley and Tuten 2015). Murdough (2009) states that social media provides the right tools for communicating, participating, attracting, engaging consumers and sharing targeted branded messages to audience segments.

One of the most prevalent social media platforms is Facebook. In 2017, at the end of the fourth quarter of 2017, Facebook reported 2.13 billion monthly active Facebook users (MUAs) and 1.4 billion daily active users (DAUs), on average (Facebook 2018). Monthly active users represent people who have logged in at least once in the last 30 days, and daily active users are those people who have logged in at least once during a day. According to Nielsen (2017), 29% of consumers who use social media platforms frequently expressed the importance they place on supporting their preferred brands, mentioning how important it is for them to find and share brand related information on Facebook. Also, 61% of Facebook users who interact with a brand or company about something they saw on TV are female (Nielsen 2017).

Online media opened the opportunity to learn from this consumer behavior because marketers can address consumers directly. Marketers also have the tools to monitor and screen consumers' discussions about the brands, their brand attitudes and perceptions, electronic-word-of-mouth and interactions between consumers regarding certain brands (C2C/eWOM), consumer participation and involvement, loyalty and satisfaction. Eventually, all these concepts are related to relationship marketing. A recent research by Jung et al. (2012) found that online social networks could provide new relationship marketing opportunities and that can add new types of value for an online or offline business that aims to succeed in understanding its customers.

Overall, this paper's contribution is threefold. First, we contribute to marketing knowledge by proposing and testing a conceptual framework of how online consumer activity on Facebook can influence consumer loyalty. Second, our empirical contribution is based on the quantification of different variables on consumer loyalty. Third, we present theoretical and managerial contributions of the empirical findings, as well as inputs regarding limitations of the research and future directions for further examination and exploration of the current research subject.

2 Conceptual Framework

2.1 Customer Loyalty

Typically, literature classifies customer loyalty as behavioral and attitudinal dimension of consumer behavior. On one hand, behavioral loyalty is measured through a brand's purchasing frequency by its loyal customers (Yi and Jeon 2003). On the other hand, attitudinal loyalty is defined by Oliver (1997) as a commitment to rebuy a particular brand, while disregarding other competitive offers. High competition levels in international markets have strengthened the significance of loyalty which can be harnessed to accomplish sustainable competitive advantage (Aksoy 2013). Marketing managers have to develop and execute innovative strategies to achieve consumer trust and loyalty (Dominici and Guzzo 2010). Consumer loyalty is also related to positive word of mouth (WOM) (Reichheld and Sasser 1990; Kandampully et al. 2015).

Nonetheless, customer loyalty to a particular company is the result of the satisfaction they experience from the consumption of their offer. Thus, customer loyalty is considered by some authors to be superior to customer satisfaction to the company in question, a condition that can be achieved by overcoming the initial expectations of customers by a company's performance. Oliver and Swan (1989) and Oliver (1999) define loyalty as a deep commitment held by a customer to continue to rebuy a certain brand in the future, ignoring the situational factors or marketing efforts of competitors that try to influence his/her purchasing decisions.

In the online context, Srinivasan et al. (2002, p. 43) have defined loyalty (e-loyalty), with an emphasis on behavioral dimension, as "the customer's favorable attitude towards a web retailer resulting in repeated purchasing behavior." Thus, loyalty can be measured by focusing on future buying behavior and profit for the company a consumer usually buys from. Loyal customers that are in a long-term relationship with a company tend to extend their relationship, providing cumulative rewards to the firm (Srinivasan et al. 2002; Kandampully et al. 2015).

2.2 Customer Satisfaction

Oliver (1980) proposed that customer satisfaction refers to the psychological state that summarizes the results when the emotion surrounding the expectations is associated with consumer sentiments, regarding the previous consumer experience. Bloemer and Ruyter (1998) consider that the satisfaction for a brand represents a person's experiences following the consumption of a particular brand, more specifically it represents a subjective assessment of the client, of the extent to which the performance of the brand has initially responded to its expectations.

Delivering superior customer value and satisfaction is crucial to a firm's competitiveness (Kotler and Armstrong 2018). It is essential to know what customers value

most, and this information further helps firms in allocating resources for a continuous improvement based on their needs and wants. To deliver superior service quality, an online business must first understand how customers perceive and evaluate its service quality (Lee et al. 2016).

Lee et al. (2016) and Pappas et al. (2014) establish that a satisfied customer is more likely to provide repeat business for a company. Thus, consumer satisfaction is not only a crucial element that impacts customers' online purchasing behavior, but it is also a key factor for generating customer loyalty. Hsu et al. (2007) note that consumer satisfaction has a positive influence on customers' intention to repeat their online purchases, which further leads to behavioral loyalty. Meanwhile, in e-commerce, Anderson and Srinivasan (2003) define satisfaction as "the contentment of the customer with respect to his or her prior purchasing experience with a given electronic commerce firm".

In researching consumer satisfaction, marketing academics have focused their research efforts on the measurement of service quality to better comprehend satisfaction. Nonetheless, both academics and marketing practitioners agree that customer satisfaction is an important concept for retention and enhancement of the value of companies. Especially in an online setting, there is a direct relationship between customer satisfaction and e-stores' performance (Anderson and Srinivasan 2003).

2.3 Consumer Participation

Customer or consumer participation is an aspect mentioned in various studies from multiple marketing perspectives. For instance, Prahalad and Ramaswamy (2004) emphasized the idea of an "active co-producer" involved in the process of delivering and consuming a service. Using a similar idea, Vargo and Lusch (2004, 2008) have established that a client always participates as a co-producer.

Since 1990, Dabholkar (1990) has defined consumer participation as "the extent to which a customer is involved in producing and delivering services." As observed from this definition, customer participation, as well as related concepts of co-production and co-creation have viewed the customer's connection with organizations only in exchange situations. In line with these premises, Vivek (2009) states that the notion of participation involves the customer's connection with organizations only in exchange situations, as the client's engagement is a wider term that goes beyond basic exchanges.

Customer participation in existing research is only studied in the context of an exchange. Customer participation can occur at different times: during the purchasing decision process, after a purchase decision has been made, during the exchange process, or after the exchange or transaction. According to Eisingerich and Bell (2006), customer participation has a significant impact on loyalty. As clients participate and have a higher level of involvement with a company, they tend to share the credit, and the fault, for service results, and in addition they will tend to develop new brand-related connections in online settings. It is vital for companies to keep their clients

involved in all stages of a product's life cycle and develop or adjust products that best reflect the needs and wants of their targeted consumers.

As indicated by the service-dominant logic, clients are seen 'proactive value co-creators' as opposed to uninvolved and passive receivers of value (Payne et al. 2008; Chen and Wang 2016). Therefore, companies have to facilitate the value co-creation process. On one hand, customer participation reflects the efforts of co-creation on consumer's side (Chan et al. 2010), and on the other hand, companies can engage in closer, longer and more profitable relationships with their customers (Bendapudi and Leone 2003; Payne et al. 2008; Chen and Wang 2016).

2.4 Consumer Involvement

Consumer involvement has been broadly defined as a targeted objective of motivation that indicates the extent to which the decision is viewed as personally relevant to client (Mittal and Lee 1989). Involvement is interpreted as a consumer's motivation to look for information that can be used to manage and mitigate any potential and inherent risk in the decision-making process, in order to facilitate a decision regarding a particular alternative choice (Delgado-Ballester and Munuera-Aleman 2001).

Within this emerging body of work, consumer brand 'involvement,' which reflects a consumer's level of interest in, and personal relevance of a brand, has gained significant attention (Zaichkowsky 1985, 1994; Coulter et al. 2003). Various authors (Zaichkowsky 1994; Mittal 1995) defined consumer involvement as an individual's level of interest and personal relevance in relation to a focal object/decision in terms of one's basic values, goals and self-concept.

Gordon et al. (1998) note that a state of involvement with a brand generates a sense of psychological attachment with regard to customers' subsequent thoughts, feelings, and behaviors. Moreover, if the client is involved, he/she is more likely to respond positively to marketing efforts that try to customize his/her acquisition experience or his/her brand interaction, especially in creating a basis for consumer loyalty. Likewise, Oliver (1997) argued that customers with a high degree of involvement with their preferred brands tend to be more loyal in the long term.

Vivek (2009) proposed that involvement may arise as a situational concept or a long-term concept in consumer's perceptions, attitudes and behavior. The situational involvement of consumers represents a temporary elation or shift in consumer's interest that fluctuates during the time allocated to the final acquisition decision, while the long-term involvement is a stable phenomenon that represents consumer's personal interest over a longer period of time (Vivek 2009). Consumer involvement with a particular marketing object provides the ability and motivation to initiate brand-related conversations with others, exhibit brand advocacy behavior and develop loyalty. In online settings, involvement takes the form of reviews posted on the Internet, associated with different products of services (Hollebeek et al. 2014), that consumers tend to buy on a regular basis.

2.5 Consumer-to-Consumer Interactions About Brands and eWOM

Word-of-mouth (WOM) represents the informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and/or their sellers (Matos and Rossi 2008; Verma et al. 2016). WOM has been recognized as the most essential path for managers to distinguish consumer loyalty and commitment among clients (Matos and Rossi 2008). Electronic WOM (eWOM), both negative and positive, is known to strongly affect shoppers when contrasted with other data sources (Bickart and Schindler 2001).

Additionally, WOM cannot be specifically controlled by the marketers as consumers can freely share experiences on different social platforms. Furthermore, eWOM has been specifically connected to online purchases. Verma et al. (2016) discovered that eWOM was for the most part related to relationship marketing efforts, followed by customer loyalty and 'expectation of continuity'. Customer-provided WOM, online or offline, positive or negative, is closely reviewed by current and potential customers (Brown et al. 2007; Khare et al. 2011; Kandampully et al. 2015). Thus, WOM is a very powerful tool that needs to be harnessed in the scope of consumer loyalty. In addition, loyal clients frequently advocate a company or a brand on social media networks (electronic WOM), linking networks of friends and prospects to a particular company (See-To and Ho 2014), thus generating brand-related consumer-to-consumer interactions.

2.6 Research Hypotheses

Bases on the conceptual framework described in the previous sections, we propose the following research hypotheses that will be examined in this study:

- H1. Customer satisfaction has a positive and direct impact on customer loyalty for brands that activate on social media.
- H2. Consumer participation has a positive and direct impact on customer loyalty for brands that activate on social media.
- H3. Consumer involvement has a positive and direct impact on customer loyalty for brands that activate on social media.
- H4. Consumer-to-consumer interactions about brands and eWOM activities have a positive and direct impact on customer loyalty for brands that activate on social media.

3 Research Methodology

3.1 Research Design

The research setting for this paper refers to consumer behavior on social media services, particularly Facebook and consumer interactions with brands on this social platform. Through this research we will examine which consumer behavior concept has a higher impact in generating loyalty for the brands consumers interact with on Facebook.

The investigated and proposed model is based on a quantitative marketing research from primary sources. This research aimed to discover new ways in which to develop and enhance online customer loyalty as a result of people using Facebook as a platform of interaction with brands.

3.2 Data Collection and Research Instrument

This primary research used an online survey for data collection. The present research uses as a method the pilot survey, using a convenience sample technique. The constructs examined in this study are presented in Table 1.

The online survey was applied on a global scale, generating 391 usable responses from international respondents who live in USA (14.6%), Italy (6.4%), France

Table 1 Constructs explored in the empirical study

Dimension	Definition
Customer loyalty ('Loyalty')	The result of the satisfaction felt by consumers from the usage or consumption of a product or service
Customer satisfaction ('Satisfaction')	The psychological state of synthesis that arises when the emotion around the disconcerted expectations is associated with consumer sentiments from the previous period, in relation to consumer's experience
Consumer involvement ('Involvement')	Represents an unobservable state of motivation or interest in the consumption of a product or service
Consumer-to-consumer interactions /electronic-Word-of-Mouth ('C2C-eWOM')	Informal communications from one person to the other, in online settings, in connection to a brand, product, organization, or service
Consumer participation ('Consumer Participation')	Consumer connection and active participation in creating the offer. This can be achieved by sharing inventiveness or ideas, co-designing or sharing the production of related products

(5.4%), Canada (4.9%), and Germany (4.9%). The respondents were male in a proportion of 69.6%, with 97.4% of respondents with Bachelor, Master or Ph.D. Studies. Table 2 provides additional information on the profile of the respondents.

Moreover, extending the profile of the respondents, we've examined the familiarity of the respondents with Facebook. Table 3 shows descriptive statistics and their related questions.

Table 2 Respondents' profile

Feature		Frequency	(%)
Annual income level	1—Less than \$25,000	3	0.8
	2—\$25,001 to \$75,000	183	46.8
	3—\$75,001 to \$125,000	64	16.4
	4—\$125,001 to \$175,000	34	8.7
	5—More than \$175,001	46	11.8
	6—Do not wish to answer	61	15.6
Industry of favorite brand	1—Apparel and accessories	68	17.4
	2—Cosmetics	33	8.4
	3—Retail stores	82	21
	4—Entertainment and leisure	88	22.5
	5—Electronics	40	10.2
	6—Food and beverages	39	10
	7—Publications and magazines	41	10.5

Table 3 Familiarity of respondents with Facebook

Questions about respondents' favorite brand and Facebook	Minimum	Maximum	Average	Standard deviation
Experience with Facebook	1	10	6.47	2.271
Number of hours spent on Facebook, weekly	1	36	7.10	8.245

4 Results of the Empirical Analysis

4.1 Exploratory Factor Analysis

In this research, the Exploratory Factor Analysis is used to create a summary of the scales used to examine the model for consumer loyalty based on different behavioral constructs that highlight social media interaction with brands. EFA was conducted in SPSS, using the Principal Components method, in order to extract the factors. The results for the exploratory factor analysis are shown in Table 4.

Table 4 Exploratory Factor Analysis results

Dimension	No. of factors extracted	Extraction sums of squared loadings		Component matrix		KMO test
		Total	% of Variance	Items	Component	
Customer loyalty	1	3.354	67.084	LOYB1	0.815	0.855
				LOYB2	0.822	
				LOYB3	0.800	
				LOYA1	0.834	
				LOYA2	0.824	
Consumer involvement	1	2.369	78.976	INV1	0.878	0.737
				INV2	0.899	
				INV3	0.889	
Customer satisfaction	1	2.363	78.756	SATIS1	0.879	0.737
				SATIS2	0.887	
				SATIS3	0.896	
C2C-eWOM	1	2.948	73.697	C2C-WOM1	0.868	0.833
				C2C-WOM2	0.868	
				C2C-WOM3	0.868	
				C2C-WOM4	0.843	
Consumer participation	1	1.618	80.898	CC-CP1	0.899	0.601
				CC-CP2	0.899	

The factor analysis helped reduce the number of scale items associated with each dimension. Additionally, we used the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) in order to examine the relevancy of this econometric technique. For each dimension one factor was extracted that summarized each dimension in a relevant manner, as showcased by the adequate KMO scores for each newly created factor, as each KMO score is higher than the 0.5 threshold. High values (between 0.5 and 1.0) indicate that the factor is adequate (Table 4).

Further, these factors will be included in an Automatic Linear Modeling that explores which dimension has a higher impact on consumer loyalty.

4.2 Results of the Automatic Linear Modeling

At this stage of the empirical analysis, a SPSS specific procedure was employed, namely Automatic Linear Modeling (ALM).

This econometric technique is used to forecast and model a continuous target variable (in this case, consumer loyalty) based on linear relationships between the target variable and its established predictors (Involvement, Satisfaction, Customer-to-Customer Interactions or electronic Word-of-Mouth, and Consumer Participation).

The model used the Forward Stepwise method which adds effects and removes them at each step of the procedure, based on the Information Criterion (AICC). Also, the preparation of the data was automatic. The accuracy value is reflected by an adjusted R-square of 0.620 or 62%.

Figure 1 shows the importance of the predictors examined in the model, regarding the target variable of consumer loyalty. Also, according to IBM Corp. (2017), ‘the importance of a predictor represents the residual sum of squares with the predictor removed from the model’. For generating consumer loyalty using a particular social media platform, the model shows that the most important variable is ‘Involvement’.

The ANOVA table presents explanations about the model, by exploring how the predictors (or independent variables) associate with each other and what impacts

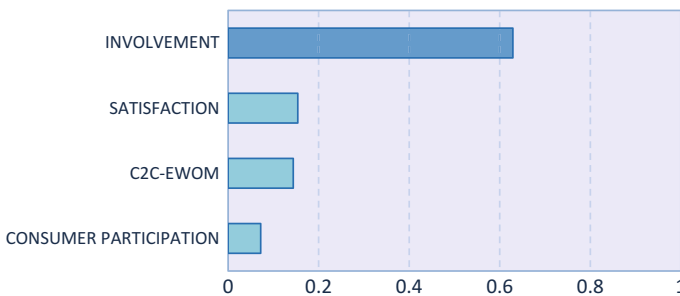


Fig. 1 Predictor importance in relation to target variable (consumer loyalty)

these collaborations have on the target variable. Table 5 displays the factors that are statistically significant as indicated by the F test.

For this model with four independent variables (Involvement, Satisfaction, Customer-to-Customer Interactions or electronic Word-of-Mouth, and Consumer Participation) included in the Automatic Linear Modeling procedure, we notice the significant interaction between these predictors and loyalty that is generated by consumers' use of social media in relation to brands (Table 5). More specifically, involvement generated a F-score of 82.201 (Sig. <0.000), satisfaction registered a F-score of 20.090 (Sig. <0.000), and interactions between customers in online settings (C2C-eWOM) reported a F-score of 18.860 (Sig. <0.000), while the lowest F-score was observed for consumer participation, with a value of 9.443 (Sig. <0.000). All the relationships in this model were deemed significant.

Table 6 shows the assessments for parameters incorporated into the general model and their individual effects on the target variable on consumer loyalty for brands on Facebook. The coefficient of each independent variable shows the relationship of each predictor to the model's target variable. As it can be observed, all the predictors have positive estimates, except the intercept of the automatic linear model.

Table 5 Analysis of variance statistics for the model

Model/Variable in the model	Sum of squares	df	Mean square	F	Sig.	Importance
Corrected Model	243.15	4	60.787	159.781	0.000	
Involvement	31.273	1	31.273	82.201	0.000	0.629
Satisfaction	7.643	1	7.643	20.090	0.000	0.154
C2C-eWOM	7.175	1	7.175	18.860	0.000	0.144
Consumer participation	3.592	1	0.380	9.443	0.002	0.072
Residual	146.85	386				
Corrected total	390	390				

Table 6 Coefficients results

Variable in the model	Coefficient	Std. error	t	Sig.	95% Confidence interval		Importance
					Lower	Upper	
Intercept	-0.000	0.031	0.000	1.000	-0.061	0.061	
Involvement	0.0393	0.043	9.066	0.000	0.308	0.479	0.629
Satisfaction	0.210	0.047	4.482	0.000	0.118	0.302	0.154
C2C-eWOM	0.208	0.048	4.343	0.000	0.114	0.302	0.144
Consumer participation	0.119	0.039	3.073	0.000	0.043	0.196	0.072

First, as it can be observed in Table 6, consumer involvement has been established as the concept that has the greatest importance (0.629) in driving customer loyalty, in this particular proposed model. Involvement also highlighted the highest score for the t test, namely 9.066, at a significance level of 0.000. This finding supports previously reported results (Hollebeek et al. 2014; Zaichkowsky 1985, 1994; Mittal 1995). As previously reported and highlighted in this paper, the consumer behavior variable with the most significant impact on consumers' loyalty for a particular brand on Facebook is consumer involvement. Therefore, this variable should play a key role in online marketing strategies and tactics, as they relate to developing better relationships with consumers.

Second, the results of this study demonstrate that the customer loyalty of satisfied customers was affected by customer satisfaction (t test value of 4.482. and an importance value of 0.154). Also, numerous studies have presented the positive and direct relationship between customer satisfaction and customer loyalty (Chen and Wang 2016; Payne et al. 2008). Thus, this empirical study contributes to important digital marketing knowledge by highlighting the idea that customer satisfaction positively affects customer loyalty.

Lastly, online customer interactions (t test value of 4.343, significant at a $p < 0.000$) regarding brands and their participation (t test value of 3.073, significant at a $p < 0.000$) in brand-related activities also developed positive and noteworthy relationships with the target variable from this empirical research, namely customer loyalty. Both of these relationships are aligned with previous research, particularly in relation to the positive relationship between customer participation and customer loyalty (Bendapudi and Leone 2003; Vargo and Lusch 2016) and between electronic-Word-of-Mouth and customer loyalty (Jahn and Kunz 2012; Kara 2015; Kandampully et al. 2015).

5 Discussion

5.1 Theoretical Contributions

This study contributes to online marketing literature in several ways. First, this study contributes to online marketing literature as this paper shows that the customer satisfaction and customer involvement are valuable triggers for customer loyalty in online settings, particularly in social media marketing used for developing relationships with targeted customers. In this paper we also highlight the critical role of eWOM and consumer participation in driving loyalty. The key findings of this study are discussed in more detail, below.

This research provides empirical evidence in support of the importance of consumer involvement and satisfaction in consumer loyalty for brands that are active and use social media as a medium for communication with targeted audiences (Dholakia

and Zhao 2010). These two concepts will be a prerequisite for a company's efforts in improving its value and overall performance.

Although the positive effect of customer satisfaction on loyalty, as our results reveal, has been widely accepted in the literature, this paper adds additional contributions by highlighting the importance of consumer involvement on social media. Furthermore, this empirical study adds novel insights by demonstrating that social media usage plays a key role in developing loyalty by amplifying consumer satisfaction and involvement.

For generating consumer loyalty using social media platforms, the model shows that the most important variable is 'Involvement'. Holbrook and Hirschman (1982) clarified that involvement includes cognitive engagement and orientation reaction in their clarification of consumer buying behavior (Brodie et al. 2013). On one hand, cognitive engagement is related to situations in which consumers get to solve problems using logic. On the other hand, orientation reaction reflects emotional and enthusiastic activities for consumers.

Moreover, through customer participation, customers get the opportunity to develop economic and relational benefits, as well as engage in joyful experiences, thus allowing organizations to create customer satisfaction and loyalty, which are seen as key competitive advantages (Chen and Wang 2016; Payne et al. 2008; Vargo and Lusch 2016; Hollebeek et al. 2016).

5.2 *Managerial Implications*

We trust that our empirical investigation has essential ramifications for marketers. Social media networks will continue to facilitate consumer interactions with and about different preferred brands, and it is expected that consumers will continue to pursue, develop and participate in discussions about their brand experience on social networks. Therefore, marketing managers have to monitor and adjust their social media strategies based on dissemination of information and patterns of consumers' behavior regarding brand-related discussions on social networks.

These monitored activities will be aimed at creating consumer involvement and satisfaction, which will further lead to consumer loyalty. Marketing managers have to develop interesting online activities that engage and involve consumers, such as games, quizzes, questions about product performance, product improvement or general brand experience, so that consumers can develop a deep sense of involvement with a particular brand on social media, and further improve loyalty, customer relationships and firm performance. Therefore, marketing managers should develop customer relationship building activities on social media, which will emphasize consumer loyalty (Srinivasan et al. 2002; Brodie et al. 2013; Wirtz et al. 2013; Hollebeek et al. 2016), involvement (Vivek 2009; Mittal 1995), satisfaction (Oliver 1999; Lee et al. 2009; Pappas et al. 2014), and consumer participation/co-creation (Prahalad and Ramaswamy 2004; Payne et al. 2008; Vargo and Lusch 2016).

For social media strategies that generate consumer involvement and loyalty, Jahn and Kunz (2012) developed a study on Facebook using Katz's (1959) gratification theory. In their study, Jahn and Kunz (2012) examined consumer participation in brand pages and discovered that utilitarian and hedonic content were both generating participation and could provide a prerequisite for consumer loyalty. According to Ashley and Tuten (2015), gratification theory suggests social media participants are likely to desire both entertainment, and information, however, entertainment may provide a stronger factor engagement with well-known brands, rather than information because consumers are already familiar with their features and benefits.

Considering the expansion of consumer involvement, participation and engagement in WOM practices via social media networks by actively posting their evaluations, reviews and opinions about brands or products, marketers should try to contact particular consumers and include them in the process of developing a brand on social media. As Kara (2015) suggests, companies could also offer these consumers' incentives for their social media postings regarding their brand experiences. Moreover, this type of consumer involvement in developing the brand on social media and generating WOM or C2C interactions (Khare et al. 2011) should not go without an official reply from the brand.

5.3 Future Directions for Research and Limitations

To gain a more thorough understanding of the research questions and objectives of this empirical study, additional studies could help further examine the influences of customer loyalty in social media marketing and their impact on consumer behavior. Further academic papers should include a more comprehensive list of concepts that explain consumer behavior on social media and test their impact on consumer loyalty. Thus, we encourage research that explores the antecedents of customer loyalty and identify potential factors of the relationship between customer loyalty and their antecedents. Finally, future research should examine the effectiveness of online social media practices with actual brand acquisitions and consumer loyalty.

Another direction for research would be to segment the consumers in high-experienced and low-experienced consumers. As Dholakia and Zhao (2010) noted, high-experienced customers tend to be more difficult to experience satisfaction and therefore, their loyalty may also be more difficult to establish in an online setting.

Furthermore, the convenience sample of this study limits the generalization of the findings, thus future studies should focus on more objective measures.

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