

BASIQ INTERNATIONAL CONFERENCE

New Trends in Sustainable Business and Consumption

2016

CONFERENCE PROCEEDINGS

2-3 June 2016
Konstanz, Germany

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INTERNATIONAL PRODUCT LIABILITY IN A GLOBAL BUSINESS ENVIRONMENT: ETHICAL AND LEGAL PERSPECTIVES FOR BUSINESS MANAGERS

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Abstract

This article endeavours to shed some light on the snares of international product liability where defects in products lead to costly class actions, outrageous punitive damages in Common Law realms and the loss of consumer trust and business image, often followed by the tightening of laws and a clamp down of authorities on whole business sectors and management.

The authors have identified a general number of trigger points in the business and legal environment that either have to be observed or should be strictly avoided. No matter how different product liability regulations in different countries might be – some basic rules, diligently and flexibly applied – this research helps to reduce liability risks by great margin.

Keywords

Business management, business administration, product liability, decision making, business ethics, business law

JEL: M10, 16, K33

Introduction

The 'race to the bottom' often begins with a certain ignorance or negligence towards ethical standards not initiated or not followed in business. One might ask: *Business ethics can save me a ton of money? On what planet?*

In everyday corporate activities maybe more than one entrepreneur has been faced with the "issue" of business ethics, particularly when having to deal with international commerce.

In this article, a different approach to Business Ethics is brought forth, having in mind a global environment. The paper provides a strong case framework to understand the subtle, yet strong, forces affecting businesses at many different levels, for there is literally no

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physical boundary that a consumer product cannot and will not cross during the course of manufacturing, marketing, distribution and final use by the consumer.

Business Ethics is both an academic field and a corporate movement. For the purposes of this article it is being considered as the latter. Business Ethics has a wide range of applications and different ramifications such as labour and human resources, consumer well-being, product liability, impact on the environment, amongst other topics and issues.

History has taught us that great scandals are needed for governments to react and regulate business ethics in practice. The greatest scandal of this decade was the case of Enron in 2001 (Peregrine, 2011). The trail of destruction left behind not only affected US economy, but had a domino effect in the World's economy. Over 20,000 people lost their jobs and their retirement savings. A lack of Business Ethics in Enron's practice promoted the debacle with effects still present today.

All in all, this was a case that had monetary repercussions. But there are cases such as the Union Carbide Bhopal incident in India (Edwards, T. 2016) in 1984 where lives were lost, and health issues are still arising from what happened back then.

So, even though Ethics in Business are nothing but an unnecessary protocol for many, cases keep demonstrating over and over again that this is an incorrect judgement.

The motto "Think Global, Act Local" becomes the main idea to be taken in count when applying a code of conduct or ethics in the "real world". Some canons to be considered as a base to create a code of ethics are: integrity, competence, individual responsibilities, professional responsibilities, human concerns and environmental concerns.

What is clear though is that there are four basic forces at work: one, the company or business; two, the government (in the form of a legal framework to regulate a business' activity –aims to protect the consumer or set rules of trading-); three, the society (both as a consumer society and as people that can be harmed by or can benefit from a certain company's activity); and four, Business Ethics.

Methodology

The first part of the paper relates to perspectives about Business Ethics and Legal Liabilities considered in literature, followed by examples of law reports investigated by the authors.

The research continues with the second part that consists in interviews with 14 managers from US, UK and EU companies targeting a discussion around nowadays Business Ethics and Product Liability (5 managers from the US and 9 from UK and EU). The interviews were organized face to face or through video conferences in the period November 2015 – February 2016 and consisted of seven questions and two rating evaluations on the mentioned topics.

Business Ethics

One must think of a business as a well-oiled machine, where a minimum failure or mistake can bring about the downfall of the whole entity. Hence it is important to understand the role of proper ethical behavior at the core of every process and interaction between the entity and any internal or external agents.

As Ethics refer to conduct, it might be implied that it is merely an individual process, but history has taught us that even management is highly responsible for the ethical decisions that take place in everyday activities. So we have mainly two influences at work: the

working environment which provides the guidelines and the employees that will adapt their moral behavior to it.

A Code of Ethics (McNamara, 2016) is a tool that specifies the ethical rules of operation within a company highlighting what is to be avoided. A Code of Conduct is a set of conventional principles and expectations that are considered binding on any person who is a member of a particular group. A Code of Conduct can be regarded either as a mask to cover for corrupt practices in a company or the golden key to enhance corporate productivity, credibility and profitability. It becomes a central guide and a reference to support employees in their everyday decision making (Biegelmann, T. and Barlow, 2012). It will help to clarify an organization's mission, values and principles, linking them with standards of professional conduct.

A Code of Ethics and/or Conduct by itself isn't enough to help a company develop proper business ethics savoir-faire. In this case a proper ethical guidance might look pretty, but an organization could be sued for breach of contract if its practices are not according to its policies.

Quality Management is a very important tool that a business can count on in order to help implement a Code of Conduct along with policies and procedures. By diligently following the ISO 9000 standard, for example, a company will achieve most effective tools in the prevention of quality problems as well as potential product liability incidence (Finlay, 1992; Bläsing, J., 1992).

Legal Liability

So now we're moving from the realm of Business Ethics to the more specific realm of Legal Liability. International Product Liability is the inevitable consequence of the need for global trade and the necessary protection of individual consumer rights. Consumers have suffered personal injuries, property damages and economic losses occasioned by defective products manufactured, distributed and sold in more than one country (Andre, Claire and Velasquez Manuel, 1991). International bodies and national courts have struggled with this problem with little overall success. Harmonisation of law and practice – currently struggled for in Europe – may eventually bring solutions (by 1997 all 15 Member States of the European Union except France had harmonized their rules to the extent required by the Product Liability Directive 374/85/EEC of the European Union.).

International Product Liability has emerged particularly with the increased number of multinational co-operations that appear to have no physical boundaries and are not always effectively controlled by the laws of the statuses of incorporation. The growth of international trade fired by the entrance of IT based trade in the international markets has made foreign companies and foreign consumers aware of the dangers inherent in the use of the many products that travel internationally. In addition, the relative ease of moving people and products abroad has encouraged litigation in the product liability area at home and abroad (Freedman, 1990).

Corporations must fully understand the legal aspects of product liability in the U.S. and abroad and must find in-house ways to ensure their own future. They will have to institute effective programs and safeguards to avoid future legal actions and possible losses.

Some of the world's most common aspects of product liability are listed in Table no. 1.

Table no. 1 Product liability aspects

Nr. crt.	Product liability aspect	Description	Law reports/reference s
1.	Reasonable care	The first general rule of liability in all non-contractual cases, namely for suppliers and producers of goods is that they must take “reasonable care” to ensure the safety of the goods for those likely to use them. Failure to take such care is the wrong, or tort of negligence	The duty of ‘reasonable care’ is sometimes reinforced by the criminal law, as under the Health and Safety at Work-Act (1974)
2.	Safety of material	The producer of raw materials will have to ensure that his employees observe certain precautions, if not the producer will be liable to them in damages. If the producer sells the materials for others to use, he will have to make sure that they are packed as safely as reasonably practicable and that the user has adequate information for their proper use. Sometimes it is feasible and necessary to simply ban or withdraw an exceptionally dangerous product from the market	Hawes (1952)
3.	Safe Design	From dangers created by the extraction or processing of materials, it is a short way to those resulting from defective design or construction. The designer’s objective has to be that of ensuring that materials are reasonably safe in the circumstances of their likely use	Gallant vs. Beitz (1983)
4.	Research	The manufacturer is obliged to keep up to date through conducting continuous research into safety aspects of his products; in particular to seek, and respond to, information from users as to operating hazardous side effects of medication, etc.	Bayer will rely on the ruling in Girdler v. SE Kent (1997) with a similar problem area
5.	Recalls	The manufacturer, who recalls his goods or modifies or even withdraws them, does not thereby admit liability for them. He might, for example, have been prompted to take remedial action by some unforeseeable accident for which he would not be liable and his action might serve only to downplay his anxiety to ensure that no such accident should happen again	Walton v. British Leyland (1978) The Times
6.	Obvious	A fault can very hardly be seen in the	An excellent

	dangers	questions of liability or injury caused by dangers which are or are ought to be obvious to the user. Of course, there must be a point at which a risk is so obvious, that there can be no ground for complaint, as when one hits one's thumb with a hammer or cuts oneself when shaving. These products were fit for their normal purposes and without any risk other than those plainly inherent in their use. It is different when a machine is one in which its design disregards the basic safety principles (e.g., a motor lawn mower with sticking out rotating blades.	illustration of the problem is provided by the English case of Crow v. Barford (1963)
7.	Durability	Nobody expects manufacturers to produce gear which will never wear out, nor suffer from the consequences of wear and tear. What matters is whether the goods were reasonably safe when first sold and used	Henningsen v. Bloomfield Motors (1960)
8.	Packaging	Design liabilities extend to the safety of packaging, e.g., provision of containers which do not break, or leak, or open too easily, particularly when they may be harmful to children, or others ignorant of their contents	Samways vs. Westgate (1962)
9.	Advice and warning	The kind of information a manufacturer must give, varies with a product (such as details, the various hazards, precautions and warnings). Different levels of information may be necessary for different purposes, and different classes of users	Eidenmüller, Rose and Bittner Capelle (2014)

Source: authors

According to the prevailing claims-handling practice in Europe, most product liability claims are settled without the initiation of a lawsuit. Compared to the situation in the U.S., product liability court decisions are relatively rare and the few decisions available form factual, but no legal precedence (except in the U.K.).

Companies slowly began to recognize the demand for and the importance of selling high quality products eventually triggering the Total Quality Management effort (Kassebohm and Malorny, 1994). During all this focus on improved quality, the whole area of product liability and the numerous lawsuits involved had grown out of control in the United States. Numerous manufacturing corporations went out of business because of the impact of multiple product liability lawsuits even with a certifiable quality programme in place.

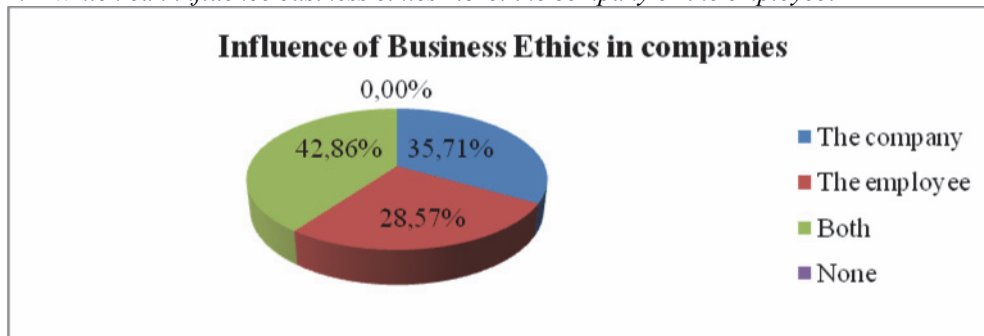
Product liability prevention shed a totally new light on quality programs. As manufacturers successfully learned to track quality costs, losses due to scrap, reverse, warranty and other areas of failure, they at first neglected to tract other key financial line items, such as insurance or liability costs (see Davis v. Gibson Products Co., 68 N.J. 1, 342 A. 2d 181, 184).

There is no golden set of rules to assure a perfect, pure and chaste way of doing business; there will always be mistakes taking place, corruption or lack of commitment from be the personnel of a company, its shareholders, the government,...., the list can go on forever. In spite of this realization, we have found some interesting answers along the way. Even though there is no statistical data gathered to this date to prove once and for all lawsuits can be avoided by businesses that apply a Global Ethic code, a Code of Conduct, diligently implemented along Total Quality Management steps (e.g.: guidelines, prevention teams etc.) reduces the risk of a lawsuit considerably.

Results

The results of the investigation were measured based on the questionnaire during the interviews. Question number 5a targeted the US managers, while 5b was answered by the UK and EU managers.

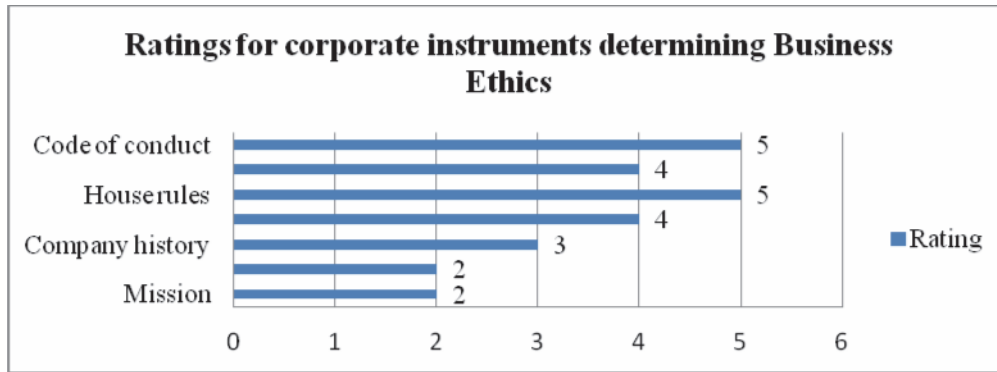
1. Which can influence business ethics more: the company or the employee?



Source: authors

Almost 43% of the interviewees have answered that both employees and the company policies, history and culture are responsible for Business Ethics. Around 36% of the managers agreed that companies influence Business Ethics through their mission statement, vision, historical background and the way they measure performance.

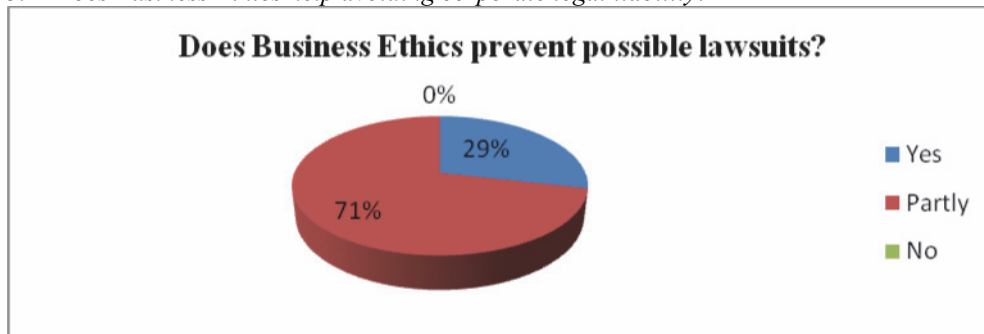
2. Please rate from 0 to 5 the following instruments that can be used by companies in order to provide proper Business Ethics: mission, vision, company history, performance measurements, house rules, code of ethics or a code of conduct.



Source: authors

The top instruments used to define Business Ethics in a company were the code of conduct and the house rules and with a rating of 4 out of 5 the code of ethics and performance measurements.

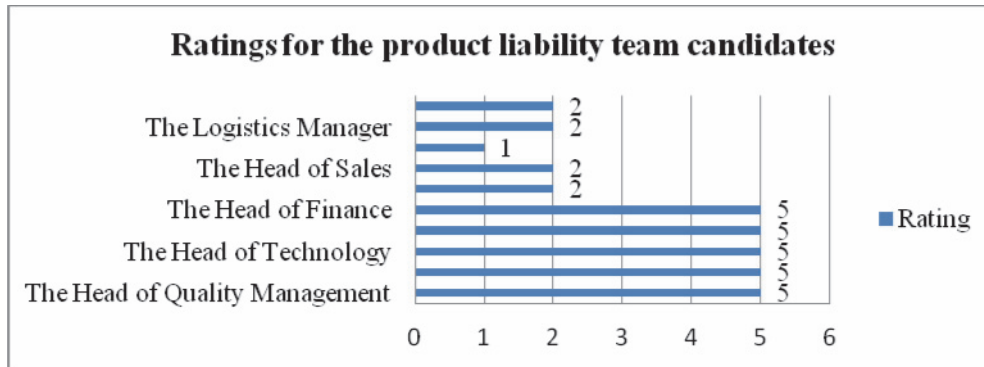
3. *Does Business Ethics help avoiding corporate legal liability?*



Source: authors

In order to avoid any legal liability, legal departments should review codes of conduct and other ethic policies. This is why it is critical for organizations to review their policies at least once a year to ensure they are in accordance with laws and regulations.

4. *Please rate from 0 to 5 the following employees as candidates recommended for the product liability team that focuses on avoiding law suits: Human Resources Manager, Logistics Manager, CEO, Head of Sales, Head of Procurement, Head of Finance, Head of Engineering, Head of Technology, Risk Manager, Head of Quality Management.*



Source: authors

The managers considered these candidates arguing as follows:

- a) **the head of quality management:** product liability is closely related to the quality system and a product liability incident is logically the ultimate quality failure of a product;
- b) **the risk manager:** in most cases the risk manager will already have filled the role of the in-house product liability expert;
- c) **the head of technology:** when a company first learns of a technical failure of its product in the field, this individual has the most in-depth technical knowledge of the product's abilities as well as those of the component parts, especially in the area of electrical or electronic products. In addition, the individual can become a well-trained expert witness in a trial environment;
- d) **the head of engineering:** engineering is commonly the first department ever involved in the product liability prevention effort, although typically from the product perspective as it relates to design, labels or other product safeguards;
- e) **the head of finance:** whether the company carries liability insurance or is self-insured, the head of finance will normally control the expenses and typically serve as the main contact with the insurance carrier.

5a. *Are consumer safety regulations considered in the EU?*

All the European interviewees considered that consumer safety regulations are at a steady rise in the European Union. The current focus is on banking and capital market provisions but generally giving consumers more and more protection against designers, producers and retailers of faulty and harmful products.

5b. *Are product liability standards harmonized in the US?*

The US managers have answered that in the US there is still much to achieve by further harmonizing product liability standards as regulated in the Uniform Commercial Code, Article 2. Most states have adopted all of these UCC regulations concerning product liability in the field of sales of goods but some still go on different routes.

6. *Are consumer and product safety measures standardized globally?*

To resume the discussions with the managers, unfortunately there is no global standardization at the moment. Consumer and product safety measures and definitions differ widely, depending on the influence of EU legal sources, common law standards as

implemented by the USA or UK/ Commonwealth dominated countries, especially in Asia and Africa.

7. How are consumers protected in terms of service liability?

At the moment, managers answer that consumers are not protected from service liabilities. However, litigation possibilities for consumers in the EU will balloon when and if the plans mature to introduce service liability in direct analogy to the overcome product liability criteria.

8. Is there any perspective on standardizing safety in terms of products, services and manufacturing?

The interviewees have answered that product safety and a whole bunch of standards that will be harmonized touching on everything from the definition of 'defect' to 'compensation' will be part of the Transatlantic Trade and Investment Partnership, TTIP, the prospective largest Free Trade Zone of the world. Negotiations of numerous chapters have just begun and will change the product liability universe through changes in newly defined standards for products, services and manufacturing.

Conclusions

As a conclusion, it can be said that even though this topic is only the tip of the iceberg, there is much yet to be researched on this particular subject. The support of many is needed in order to understand even better the subtle, yet very imperious relationship between Business Ethics, Product Liability and Business Transactions.

As the litigious nature of society grew and personal injury awards, as well as punitive damages continued to grow to heights never seen before, it became a real necessity for corporations to focus on product liability prevention and incorporate it into their quality programme and effort (Whincup, 1999). If for some reason, it is needed to go to court, it is recommended for companies to have a product liability team that should consist of up to five members with focus on a long term work relationship. This team, along with a Total Quality Management team will provide the necessary effort to avoid a product liability issue in a company.

The responsible parties for corporate Business Ethics are both the company and the employees that mostly follow the company's house rules and code of conduct. Quality and Assurance, Risk, IT, Engineering and Finance departments are the most relevant cabinets for the implementation of a successful Business Ethics program. And it is so that Business Ethics applied from a TQM perspective will prevent to a certain extent any foreseeable product liability issue for a company.

When it comes to Business Ethics, one could summarise it in a simple expression: *'Walk your Talk'* and *'Don't strive to do what you can do but rather strive to do what you should do'*. This is the gist of all compliance rules and Corporate Governance frameworks (from the extremely strict measures of the US Sarbanes Oxley Act to the more allowing and voluntary German Corporate Governance Codex), namely the promise to obey all external and internal rules and regulations and thus to avoid as good as possible damaging effects on third parties. This applies to manufacturing processes just as well as to service providing or customer relations. Therefore an ethical approach helps considerably in minimizing product liability risks.

All these developments are showing their potential for coming legal and business debates. However they will not do away with the basic guidelines identified in this work to minimize legal and business risks stemming from product liability issues.

The authors are looking into performing another full-scale global research on this particular subject, but with international cooperation between companies, legal advisors, business scholars, colleges, and so on, to begin creating a global guideline that could at some point become a structure and guidance for corporations in all branches and in any country in the world.

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RESEARCH ON KEY FACTORS IMPACTING PROCESS SUSTAINABILITY IN GLOBAL COMPANIES

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Abstract

Processes are part of the infrastructure of every company and are an essential component in the analysis of corporate performance when it comes to business sustainability. Process design and process management have to consider the top impacting factors that ensure sustainable processes.

The objective of the paper is to identify the key criteria that affect process sustainability, but also to research on the degree of process sustainability in global companies. The methodology used involves interviews with managers and process specialists from 15 global companies in order to gather information about 56 processes that are analysed from sustainability point of view. All gathered key criteria are applied in a case study in order to propose a method of analysing processes and determining the level of sustainability.

Results show which are the weakest, but also strongest links when designing sustainable processes and highlights concerns related to possible impacting risks. Authors also show how prepared are each of the investigated departments when it comes to sustainable processes. Finally, the study indicates the interviewees' thoughts on the important factors that ensure that there are no process failures or interruptions.

The proposed framework is also intended to bring an important contribution for business analysts in order to determine the degree of process sustainability and the related company risks.

Keywords

process sustainability, process management, key factors on sustainability, process design, process monitoring and control

JEL Classification

M10

Introduction

Economic development has been determined by global competitive pressure and an increasing complexity of business models for many years. According to Mateescu et al. (2015) in the context of a changing energy environment, enterprises have to react to the changing conditions simply in order to survive. Furthermore international companies but also local ones have started using new management tools and methods (Mateescu et al.,

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2015) and have started focusing on differentiating themselves from the competitors by adapting to the customers' needs and providing high quality services. In this situation, the requirements for sustainable business processes increased tremendously. Consequently, the companies have to be in a position to create integrated business processes which are flexible and adaptable to all changes (internal or external) (Müller, 2011).

To cope with this task, the attention increased regarding process management, risks related to processes and criteria that ensure the required sustainability.

Process management is corresponding of the organization, planning, management and control of the value or value chain of a company with consideration of individual business goals (Wirtschaftslexikon24.com, 2015).

The intention of the article is to accentuate the compatibility and influence of theoretical process with regard to sustainability. Therefore, the authors aim to research the applicability of a theoretical approach into practice and thus to determine which are the key success factors when focusing on the sustainability of the processes.

In order to create a sustainable process all specific characteristics must be clearly defined and marked, all steps of the process management must be documented and shared with all involved parties and all risks related to the process must be identified and analyzed.

The authors have investigated the main criteria that affect process sustainability and also the existing degree of sustainability when it comes to business processes. Therefore, the results of this paper might share insights that help managers focus on the researched key indicators that affect business processes in terms of sustainability.

Theoretical aspects

1. Processes – Definition and types

Mateescu, Lange and Heinemann (2015) suggest that at the core of any organizational objectives are a number of business processes that determine the success rate of the company's goals. It can be stated, that processes exist in every company and its departments and not just to make physical goods (Harvard, 2010). Porter (2014) describes a process as follows: "Every company is a collection of activities designed by the product, manufactured, distributed, delivered and supported. All these activities can be represented in a value chain." (Porter, 2014, p.65). Further, different types of processes exist within the company – i.a. depending on the (directly) extent of integration in the creation of customer value or the organization's structure, an operative- or strategic process as well a primary and secondary business process (Karavul, 2015). Generalized and as elementary summarization, it can be stated that a business process receive an initiating input and ends with achievement of the process objective. Processes exist detached from the enterprise organization, whereby process orientation might cross barriers of structural departments.

The classification of types of processes is based on process-oriented thinking and analytical approach. According to literature findings, orientation towards processes may facilitate the reduction of costs and achievement of goals (Fischer et al., 2006).

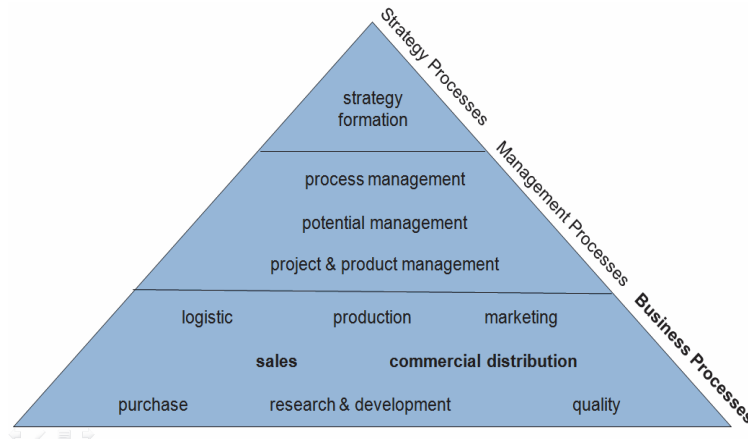


Fig. no. 1 Classification of process types
Source: authors' design based on Porter (1990)

The different process types may be visualized as a process pyramid (fig. no. 1). The development of corporate strategies is part of the top level, while the conceptual orientation of processes is classified at the management level. The operational implementation and realization of overarching strategic goals is part of the (execution) business processes. It can be generally said, that business processes link people, technology and information to create valuable outputs and thereby constitute enterprise activities to carry out its mission, archive the goals set and measure the business performance (Harvard et al.,2010). There are two types of business processes: primary and support processes. The classification depends on whether a process is directly involved in the creation of customer value or concerned with the organization's internal activities. Within the context of this model, *primary activities* of enterprises are e.g. logistics, marketing and sales. In general primary processes within the value chain (Porter, 1985) are those, which are directly involved in the creation of value by producing goods or services – as this, primary business processes are characterized by serving benefits directly for customers. The remaining processes have a supportive function and are termed in the literature as *secondary activities or processes*. As examples for these activities i.a. procuring, controlling and human resources can be named. Generalized can be stated, that secondary business processes provide the primary business processes with support and service provision.

2. Criteria related to process sustainability

Regarding the *characteristics of the processes* various approaches are named in literature. This paper focuses on the criteria that impact the sustainability of the business processes. A sustainable process involves a detailed and precise *description of business processes* by identifying the following criteria for each particular process (Brocke et al., 2014): requirements of (internal) customers, inputs & (demanded) results, service production & creation of value, process owner & persons involved, objectives & measurements to control and improvement the process performance. The *degree of formality* can be one of the aspects that affect process performance over time. “Informal” means that the enterprise has not documented its processes as set of steps which should be executed under certain conditions. In order to achieve sustainability processes

should be (highly) formalized to gain awareness and knowledge, as well as to enhance a common understanding. Processes might be visualized with a flowchart as a sequence of activities with interleaving decision points. The process matrix as a sequence of activities with relevance rules based on data in the process might be another form of representation for formality of business processes. Occasionally, processes might be an informal procedure, before the enterprise increase the degree of formality by documentation and / or description (Harvard et al., 2010).

Other characteristics are the distinction according to the *level of involvement* in the procedure and *transfer of information*. The responsibility and knowledge of the process owners, access to information for all involves parties, but also communication can be factors that influence process performance and determine its sustainability.

Business processes might be cross-functional and therefore range over several business functions, but are embedded in the overall value chain and as this in the organizational structure (Rummler et al., 1995). Thus, it can be stated that one of the main criteria that determines the degree of sustainability is *risk management at each process junction: interaction between two processes, between two steps of a process or between two parties involved in the process*.

Monitoring, control and optimization of the process are highly important for ensuring a sustainable process. Process owners and other assigned responsible employees have to constantly observe any deviation from the process protocol including all activities, time frames, involved parties and outputs (results).

Methodology

As a prerequisite for the practical research, 15 global companies are investigated (Table no. 1). The investigations were performed during interviews with managers or process specialists in order to determine the degree of sustainability in 3-5 processes of each company, but also to highlight the interviewees' opinion on the main factors that affect process sustainability. The interviews involved 18 questions related to the key factors that affect process sustainability and one question regarding the interviewee's opinion on the success criteria that influence sustainable processes.

Between November 2015 and February 2016 the authors have analyzed a number of 56 processes from the following lines of business: operational/core processes (production, sales), support processes (purchasing, human resources, accounting).

Each interview was structured in order to gather information regarding: company profile and structure (A), main core and support processes (B), process description (C), degree of formality (D), level of involvement (E), transfer of information (F), risk management at process junctions (G), monitoring, control and optimization of the process (H).

The description of each process was made by identifying Brocke's criteria mentioned above (Brocke et al., 2014). The results of the interviews were calculated by counting each answer "YES" for each question. Each question was used for each of the investigated processes within each company. In order to present a sample of the applied methodology, one of the case studies is presented with regard to the purchasing process within one of the companies. The process is shown using the value chain method also revealing the more detailed daily accurate representation for each step of the process.

Table no. 1 Investigation on global companies from process sustainability point of view

Nr. crt.	No. companies	No. processes	Total no. processes	Departments
1	7	3	21	production
				sales
				accounting
2	5	4	20	production
				purchasing
				sales
				human resources
3	3	5	15	production
				purchasing
				sales
				human resources
Total no.	15		56	accounting

Source: authors

Case study

A. Company profile and structure: The company of investigation is a global enterprise with multiple factories and subsidiaries. Its commercial activity is geared toward profitable growth and a sustained increase in value to secure company's long-term future. The company is perceived by its customers, suppliers and the society as a competent and reliable partner along the entire value chain.

Due to changes of markets, products and customer requirements, the company's organization has to be flexible in order not just to react to these changes but to anticipate them. Therefore the company strives for success and sustainability – also in process design.

B. Main core and support processes: production, sales and logistics are the main core processes, while purchasing, accounting, IT and human resources are supporting the company's activity.

C. Process description: The process begins with the planning and construction phase, followed by the request phase, offer phase and the hearing. Finally there the supplier is chosen which completes the process.

A detailed description of business processes requires a number of criteria that need to be identified for the process before a sustainable business process can be created. These criteria are identified in the theoretical part of this paper and can used for the analysis of the procurement process now. Here, each of the five criteria used and analysed individually:

1) Requirements of (internal) customers

In this part a detailed presentation of the purchasing process involving one or more suppliers is mandatory. In addition, it is ensured that all employees involved in the process have also obtained detailed information on this process. Furthermore, a training tool is in place for new employees. These requirements are met in the preparation of the process.

Moreover, the sustainability and a future-oriented use of the process are guaranteed by a continuous monitoring and process optimisation.

2) Inputs & (needed) results

The present process provides an added value in the field of transactions. In addition, a regulated flow is ensured with temporal milestones and detailed steps. This means that a long-term use of the process for all persons in the purchasing department is reliably secured by accurate process detection and level of detail. This also includes employees who have no previous knowledge in purchasing.

3) Service production & creation of value

The process serves each person as a source of information. Furthermore, it is ensured that even uninformed employees can procure products from a supplier by using the available documentation. This means the document is to provide added value in the implementation of the process by facilitating and ensuring constant process performance independent of manual-input. In addition, access is created through the process database on the intranet for every person and thus is given a company-wide long-term value.

4) Process owner & persons involved

The process owner for this process is the head of the department. This ensures a comprehensive and specialized perspective. In addition, the quality of the process can be enhanced by the personnel's experience in the quality department. Besides these above mentioned squads all purchasing staff can be seen as involved people. The proof for this is that all purchasing employees constantly use documentation and bring signification contribution to the process.

5) Objectives & measurements to control and improvement the process performance

The aim of the process is to achieve long-term procurement efficiency without compromising quality of service. Nevertheless, it is important to perform a continuous review and optimisation of the process in order to achieve sustainability.

D. Degree of formality: The purchasing process is well documented, all steps of the process as well as the sequence of activities are clearly defined.

E. Level of involvement: The process owner is the head of the purchasing department, however there is no backup in case the employee is on vacation or takes a sick leave. Using the training tool would require a two weeks long on boarding process.

F. Transfer of information: Information is gathered within one standard operating manual (intranet database). Information can be gathered by the impacted or interested departments by interacting with the purchasing department's employees.

G. Risk management at process junctions: This process offers information for other primary business processes such as logistics, marketing, sales support and service. A risk management process is in place at company level, but does not monitor all communications between the purchasing department and other departments. Also, there are high impacting risks regarding knowledge transfer in case an employee leaves the company - no consolidated database for process documentation.

H. Monitoring, control and optimization of the process are carried out by the department's personnel.

I. The interviewee's opinion on the key criteria affecting process sustainability: solid process documentation, involved staff, communication between departments.

Results

The interviews with the managers and process specialists showed that when it comes to ensuring sustainability only 71,74% of the companies are well prepared (see Table 1).

Process definition is one of the weakest links when it comes to ensuring sustainability, the main reason being that only 33,33% of the companies have a back-up plan described in the documentation. 66,67% of the companies have a suitable database with information clear for all employees.

Personnel is highly involved, unfortunately results regarding communication between departments are not satisfying – 24% of all information is not transmitted correctly or is lost leading to high risks for the companies' activities.

Table no. 2 Questionnaire and results

Nr. crt.	Process sustainability criteria (PSC)	Interview question	Companies (% answer YES)	Overall result/ PSC
A	Process description	Is the process defined completely and correctly?	80,00%	55,56 %
		Is the time frame clear for each of the process steps/activities?	53,33%	
		Is there a back-up plan in place in case of the process steps fails?	33,33%	
B	Degree of formality	Is the process fully documented in a database?	60,00%	66,67 %
		Is the sequence of activities clear for all employees?	73,33%	
C	Level of involvement	Is the process owner specialized for all operations required for the process?	86,67%	75,56 %
		Is there a back-up employee in case the process owner takes a sick leave or is on vacation?	53,33%	
		Does the process owner have any experience with quality management?	86,67%	
D	Transfer of information	Is all detailed information available for the involved employees?	86,67%	76,00 %
		Do all involved personnel have the right access level for the process?	80,00%	
		Is all information available in case of personnel change?	86,67%	
		Is the process performance independent of manual input?	53,33%	
		Is there a secured database in place for all information?	73,33%	
E	Risk management at process junctions	Is there a risk management process in place for all process interactions?	80,00%	76,67 %
		Are process-related risks identified being monitored and controlled?	73,33%	

F	Monitoring, control and optimization of the process	Are all steps of the process constantly optimized?	80,00%	80,00 %
		Is the process permanently monitored?	86,67%	
		Does the review of the process consider both quantitative and qualitative evaluation methods?	73,33%	
Average result process sustainability/company			71,74%	

Source: authors

Risk management is linked to monitoring and controlling, so that 76,67% of the companies a risk management process in place in order to identify, analyze and handle risks related to processes. A satisfying result is that 80% of the companies are focused on monitoring, control and optimization of the process.

Figure 2 shows results for each of the departments investigated – these are also calculated based on the answers “YES”. The average result shows how prepared are the indicated departments when it comes to process sustainability. The results are similar, accounting scoring the best results especially because 78% of the departments manage to perform correct and complete information transfers. It is reinsuring that companies started focusing on risk management for all accounting processes, so that in case of 95% of these processes risks are being monitored and controlled.

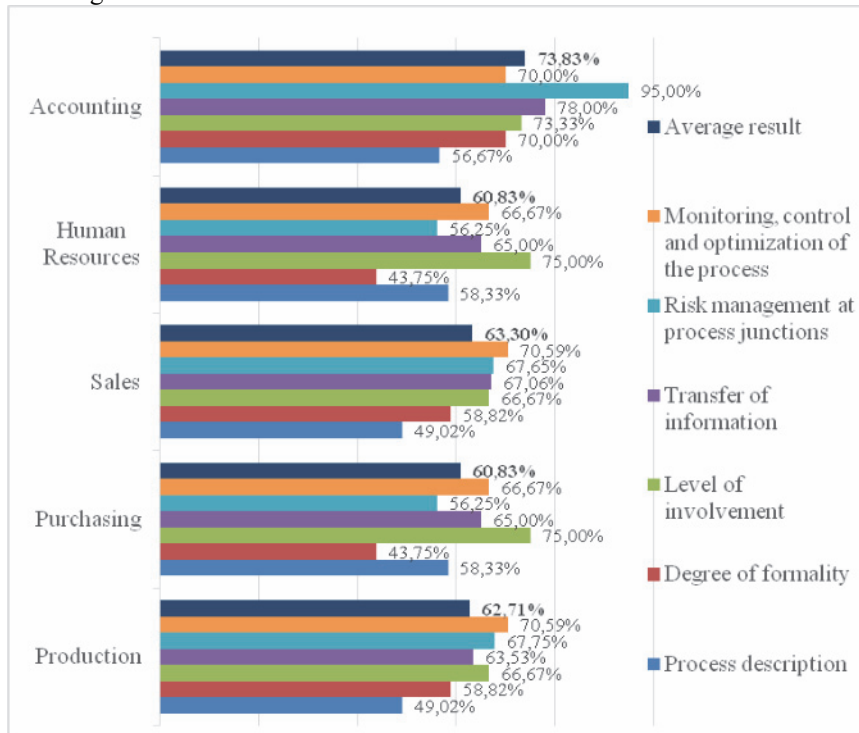


Fig. no. 2 Results of the interviews for each department

Source: authors

During the second phase of the interview the managers and specialists highlighted the key factors that affect process sustainability. The highest percentages were registered in case of monitoring and control of the process, solid process documentation and complete and secure information (see figure no. 3).

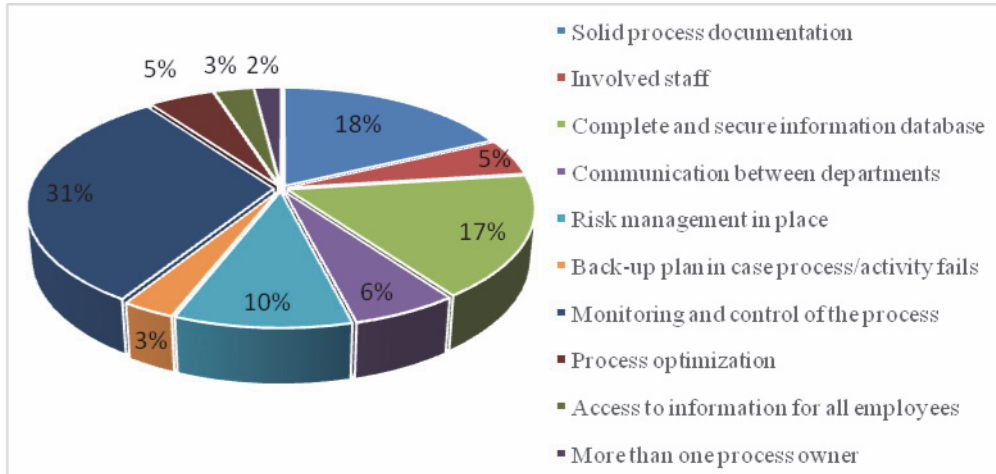


Fig. no. 3 Interview results: key criteria in process sustainability

Source: authors

Conclusions

The performance of the processes depend on each process’ efficiency and effectiveness. However, performance cannot be sustained if processes are not properly defined and controlled. According to Mocan et al. (2015) all processes are designed for resistance. Sustainability plays an important role for the success of a company and should not be disregarded in the process design. Using the author’s method and the selected process example companies are able to determine the degree of sustainability of their processes. The authors research showed that companies are monitoring and controlling processes and have developed risk management processes in order to avoid process failure or interruptions. Transfer of information is also a very important factor, while not neglected by the companies, losing information or incorrectly sharing it within organizations can lead to serious risks for companies. Information regarding a process that is not well defined and documented can also be useless; despite the fact that solid process documentation was the second most rated criteria by the managers, in practice almost half of the companies do not define processes correctly and completely. This is mainly caused by the fact that when defining processes there is no setup of a back-up plan in case of process failure or interruptions; only 3% of the managers considered this setup as of importance for the processes’ sustainability.

This paper highlights the importance of sustainability as a key factor in process design and may offer guidance for further research on process management and sustainability.

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HOW DO ROMANIAN CONSUMERS PERCEIVE ORGANIC FOOD? A MARKET REVIEW

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Abstract

New trends in modern consumption are changing the main reasons that stand as determinants for the buying decision of food products. Social media, the internet, TV programs, newspapers and magazines, all promote the same directions, based on wellness concepts and green - environmental activities. Thus, this new approach has reorganize the way in which consumers see food, as eating habits are considered to represent the starting point in building a healthy and balanced human – environment lifestyle.

The main response of the modern food market to the new consumers' requirements is represented by the organic segment, a food segment that comes with multiple benefits but also with a higher financial cost for both producer and consumer.

In this context, the central objective of the present paper is to analyze how organic food is perceived by the consumers. Romanian organic food market was chosen as research region, previous studies identifying a gap between the level of production and the low level of consumption of organic food. The research method included a quantitative research (based on a questioner) and also a set of recommendations that could be applied for Romanian organic food market, in accordance with the questioner main findings.

The results show that Romanians are not totally aware of the benefits of organic food and production methods and also that they don't understand the cost – price relationship. The qualitative research points out a set of recommendations that can determine a more flexible market and an optimized cost – price ratio through governmental and legal support.

Keywords: Organic food, consumer requirements, modern buying determinants, Romanian organic food market, cost – price relation, organic food benefits.

JEL Classification: Q11, Q13, Q52, O13

Introduction

In the last decade, the organic food market has rapidly developed, transforming itself from a niche segment to an independent global market. In this context, the growth of the organic sector is evaluated exponentially higher than the registered values for many regions and the

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main question that researchers are raising is what causes the gap between the high level of production and complex benefits and the low level of consumption? (Manika, 2015)

The organic food market represents a dynamic sector in Romania, registering in the last year an ascending evolution, in both plant and livestock producing sectors (MADR, 2016). But, despite of the positive perspective, the Romanian market is seen by the international organizations as a highly export oriented one (IFOAM, 2016). Thus, Romanian consumers prefer conventional food instead of organic, most of the organic production being exported. Given this conditions, the main objective of the present paper is to identify and analyze the Romanian consumer's perception on organic food and how the price of these products influences their behavior. Past studies on Romanian organic food market have highlighted that price was one of the main determinants that conducted the buying decision and that Romanians are mainly unsatisfied by the high price of organic food (Toma, 2015).

Before the price subject, it is important to define the market overview, more exactly to find out if Romanian consumers are familiarized with the organic food concept, if they can differentiate an organic food product from a conventional one and other questions that can help in building their profile. The results highlight a generally uninformed public.

Nevertheless, the industry is permanently defending its position, in a very transparent manner. All food organizations and European Union organisms that are promoting organic food consumption provide educational materials and informational platforms in order to help consumers better understand the benefits of organic food products and the reasons that stand as a main cause for the higher prices values, in report with conventional food.

1. Romanian organic food market costs and benefits. Literature review

Organic agriculture and its market represent today one of the most important growing sectors at a global level, having a significant impact from both an economic and social point of view. All regions record a growing number of "green consumers" that integrate environmental considerations into daily purchases, asking for healthier, safer and higher quality foods (Behrens, 2015). But, beside this positive overview, organic agriculture is creating cross-cultural differences, generating acceptance issues. The main issue raised involves accepting the compromise of more rigid production standards (from producer's perspective) and higher prices (from consumer's perspective) in contrast with faster methods of production and cheaper food products.

Latest studies highlight that, in general, consumers have a positive opinion regarding organic food products, as they are associated with: superior taste, environment - friendliness, health, food safety and animal welfare. In the meantime, the following factors are identified as being the main barriers for organic purchase: high premiums prices, unavailability in all regions/stores, scepticism towards certification bodies and organic labels, insufficient marketing efforts and sensory defects (for example organic fruits or vegetables are smaller in dimensions than conventional ones) (Marian, 2014).

In this context, Romania, is characterized by increasing numbers in the organic production sector. Analyzing the plant sector, we can see that it has registered an upward evolution in the last 5 years, the total area used for organic agriculture reaching 289.251,79 ha in 2014, excluding the 1.78 million hectares from spontaneous flora harvesting (table no. 1).

Table no. 1: Dynamics in organic farming sector Period: 2000 – 2014

Indicator	2010	2011	2012	2013	2014
Total Organic Operators	3.155	9.703	15.544	15.194	14.470
Processors	84	95	103	88	61
Total organic land (ha):	182.705	229.945,7	288.260,8	301.148	289.251,79
- Grains	72.297	79.166	105.148	109.105.3	102.531
- Protein Crops	5.560	3.147	2.764	2.397	2.314
- Root Plants	504,3	1.074.9	1.124,9	740,75	626,99
- Industrial crops	47.815,07	47.879,68	44.788,73	51.770,78	54.145,17
- Green crops	10.325,4	4.788,49	11.082,93	13.184,14	13.493,53
- Vegetables	34,32	914,08	896,32	1.067,67	1.928,36
- Vineyards	3.093,04	4.166,62	7.781,33	9.400,31	9.438
- Grasslands	31.579,11	78.197,51	105.835,57	103.701,5	95.684
Spontaneous flora*	7.294,35	33.8051	1.082.138	944.546,2	1.787.548

Source: Ministry of Agriculture and rural Development official data

Apart from these numbers, Romania ranks as one of the 10 leading countries for: global largest wild collection area, global largest number of organic beehives, European largest number of producers (FiBL, 2016). So, from a production point of view, Romania represent an important player on the global and European organic market. But, moving forward to the consumption area, Romanians are characterized as having low awareness on organic quality and not willing to pay a higher price for organic food. Also, consumers don't ask for certified products, even if they buy and use organic produces, a wide spread assumption existing, that home-grown products are in fact organic products (IFOAM, 2016).

There is a general misunderstanding regarding the reasons that determine higher costs for organic food. Consumers, in general, consider organic food as being more expensive based on the extent of the new movements on environment protection and healthy lifestyle. A set of guidelines must be establish from the beginning, regarding certified organic food and their higher prices than their conventional counterparts (FAO, 2016):

- organic food supply is limited as compared to the global demand;
- production costs are higher because of greater labor inputs per unit of output and because greater diversity of enterprises means economies of scale cannot be achieved;
- post-harvest handling of relatively small quantities of organic foods results in higher costs because of the mandatory segregation of organic and conventional produce, especially for processing and transportation;
- marketing and the distribution chain for organic products is relatively inefficient and costs are higher because of relatively small volumes;
- prices of organic food include not only the cost of the food production, but also a range of other factors that are usually not captured in the price of conventional food, such as: environmental enhancement and protection, higher standards for animal welfare, avoidance of health risks to farmers due to inappropriate handling of pesticides (and avoidance of future medical expenses for the government), rural

development by growing employment rate at the local farms and assuring a fair income to producers.

The above principles are also applicable for Romanian organic food market. But, as we can see from figure no 1, these principle are not understood by the consumers, which prefer conventional food products. Romania ranks among the last positions in the consumption level per capita, measured as EUR spent/year. As it can be seen, other European countries like Denmark or Austria are exceeding 100 EUR/capita yearly. Also comparing the 4 EUR/capita consumption level with the total sales for Romania, 80 mil EUR, we can confirm the assumption that Romania's organic food market is highly export oriented.

	2006	2011	Difference		2006	2011	Difference	
			€	%		Mio €		%
Austria	64	127	63	98	496	1 065	569	115
Belgium	23	40	17	72	258	435	178	69
Bulgaria	0	1	1	900	1	7	6	775
Cyprus	2	2	1	33	2	2	1	33
Czech Republic	3	7	4	104	27	59	32	109
Denmark	80	162	82	103	434	901	467	108
Estonia	-	-	-	-	-	-	-	-
Finland	11	22	11	105	57	120	63	112
France	26	58	32	120	1 700	3 756	2 056	121
Germany	56	81	25	45	4 600	6 590	1 990	43
Greece	5	5	0	0	55	58	3	5
Hungary	2	3	1	67	20	25	5	25
Ireland	16	22	6	40	57	99	42	72
Italy	19	28	9	46	1 130	1 720	590	52
Latvia	-	2	-	-	-	4	-	-
Lithuania	-	2	-	-	-	6	-	-
Luxembourg	85	134	50	59	41	68	27	66
Netherlands	28	46	18	64	458	761	303	66
Poland	1	3	2	131	50	120	70	140
Portugal	-	2	-	-	-	21	-	-
Romania	1	4	4	700	10	80	70	700
Slovakia	1	1	0	0	4	4	0	- 7
Slovenia	5	19	14	280	4	38	34	850
Spain	2	21	19	1 213	270	965	695	257
Sweden	42	94	52	124	379	885	506	134
United Kingdom	42	30	- 12	- 16	2 557	1 882	- 675	- 16

Figure no. 1: Changes in organic consumption per capita (left) and total sales in EU Member States between 2007 and 2011 (per year)

Source: EU - Development of the EU organic sector and the world market in organic products

Thus, a more deeper understanding is require on what determines this situation; if Romania produces in terms of organic agriculture, why aren't the Romanian consumers willing to buy these products, despite of their wide range of benefits?

Previous studies identified price as main a reason for not purchasing organic, mainly for urban population. The most common reason in Romania is that most of the consumers produce their own food (a wide part of Romania's population comes from rural regions where land and all necessary conditions are available) (Bogza, 2015).

For a new approach, the authors have conducted a questionnaire based research, during January – March 2016, on a group of 90 respondents, age between 20 -35 years, form urban

regions. The main objective was to identify the degree of acceptance of organic food. The respondents were chosen on voluntary basis and were targeted in supermarkets, universities and companies. In the following section of the article the research results are disseminated and brief development proposals are be pointed out, for Romanian organic market.

2. Case Study – Rumanian consumer’s perception on organic food

Because of the human nature, the buying process is influenced by certain determinates that are different from individual to individual, based on economic, social or cultural aspects. Thus, the authors have proposed an exploratory attempt, for the Romanian region, an agricultural region that has a high potential for the organic sector.

Analysis of the results shows that all respondents consider themselves familiarized with organic food products, even if 1% of the respondents are not sure they have consume such products (figure no. 2). Taking into consideration the age of the respondents and the urban residence this was a general hypothesis that we could assume. Nowadays, the access to information triggers a general state of knowledge and self-confidence.

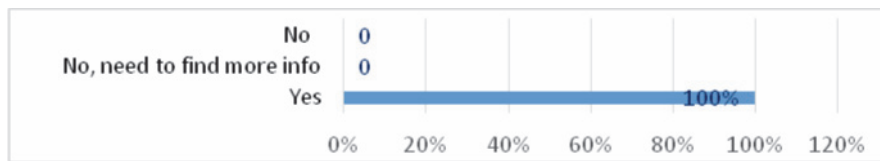


Figure no. 2: Consumer’s awareness of organic food products

Moving forwards, the respondents were asked to shortly define or provide key words that would describe organic food in their perspective. The most encountered key words (68% of the responses) were health/ healthy, natural, without chemical adding, free of food preservatives, protecting the environment (figure no. 3).

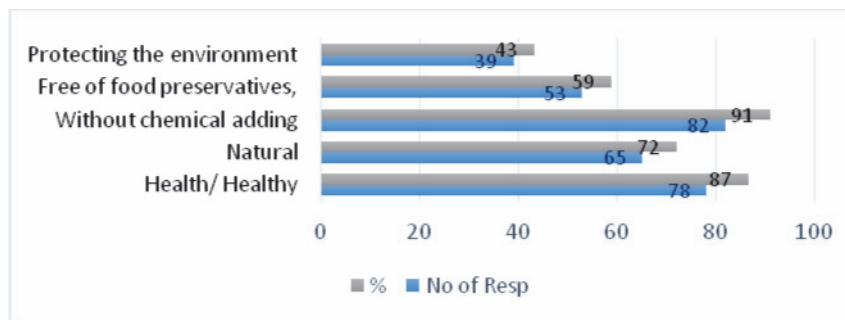


Figure no. 3: Consumer’s perception on organic food products – key words

As it can be seen, the main perception that Romanian consumers have on organic products is closely related to the general health condition and their way of production. None of the respondents mentioned terms like: certification, legislation, specific labels and logos, which are the most important key words in identifying an original organic food product.

One can observe that, despite the consumer’s acceptance of being familiarized with organic food products, Romanians don’t have basic knowledge regarding this sector. This hypothesis is proved by the results of the next question, where the respondents were asked to mark from a given list, the words that they associate with organic food (figure no. 4).

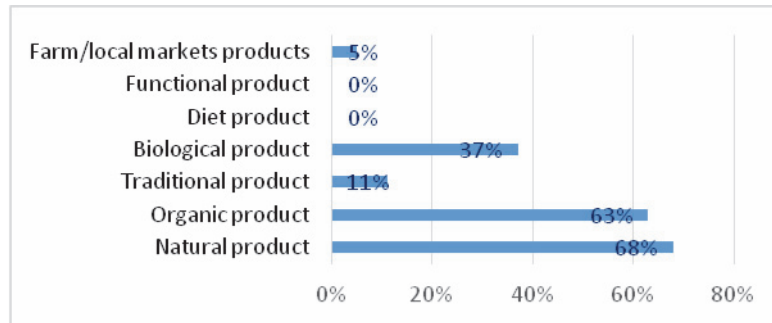


Figure no. 4: Associated words for ecologic food

Most respondents marked the correct answers (organic and biologic) that are equivalent with biologic in Romanian legislation, but most of them connected the subject with other terms like traditional or natural food. One of the biggest confusions encountered on the Romanian market is associating the term natural with food. Only 21% of the respondents have equated ecologic with only organic and biologic terms.

Two type of consumers were identified: that differentiate organic products from conventional ones and that don’t know the differences. At this point, 90% of the respondents didn’t know how to identify an organic product, most of them adding the price or the energy content as a differentiation marks.

Jumping to the next questionnaire section (Main determinates that drive the consumer buying decision) the results highlighted that most of the respondents buy organic food because it is healthier than conventional food. Also, the lack of chemicals and genetically modified organisms was mentioned, by more than half of the respondents (figure no. 5).

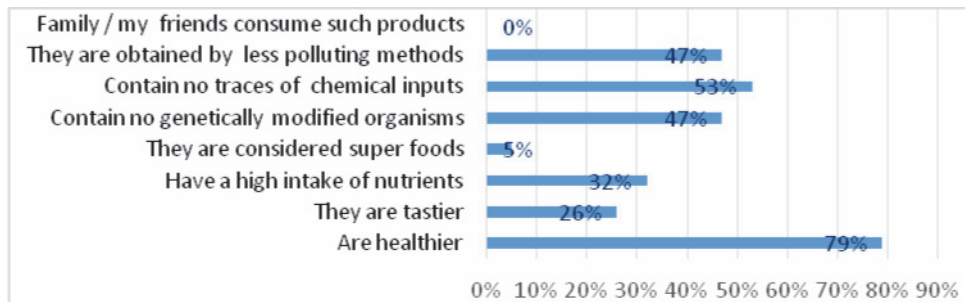


Figure no. 5: Main reasons that determine the buying decision

As resulted from other researches, the price is one of the main barriers for the consumers (figure no. 6). Only 26% of the respondents, considered that the price is a fair one.

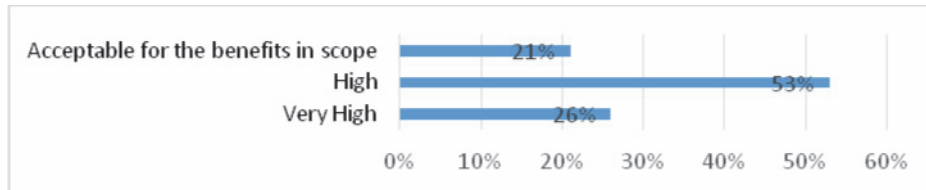


Figure no. 6: Organic food price perception upon Romanian consumers

Based on the above results a series of recommendations have been projected, that can help to a better customer - market relationship and that can make the Romanian food market more flexible to both consumers and producer’s demands. The two main direction that were identified were transposed into the below recommendations:

- a well-structured educational program addressed to all consumers, that can help them better understand the organic market’s role in both their personal and environmental health. This educational programs must be sustained by the legal organisms from Romania, like the Ministry of Agriculture and Rural Development, Ministry of Health, Ministry of Environment, Waters and Forests and the Consumer Protection Authority. All these organisms can highlight, from their own perspective, the benefits of organic food consumption and can bring in the consumer’s attention important aspects like: certification process of organic food, the guarantees that this certification brings and also the strict legislation system that regulates this sector. This educational program should be targeted to all consumer categories and should be communicated by all means and resources, starting with school and university programs, to social media and internet platforms.
- a lower VAT rate for organic food and a lower tax for producers that operate respecting the organic standards. At this point the VAT rate for food products in Romania is 9%, but it can further lower down for certain products that can bring future social benefits like lower governmental costs on the health sector or lower investments in environment recovery. Only by implementing such directives, the causes that determine a low consumption level for organic food will be supervised and kept under control. At a lower price and with an informational back-up, the consumers will accept to buy and experiment organic products’ benefits, actions that will convince them of the superior quality of these new products.

Conclusions

Apart from the benefits that organic food consumption can bring to all individuals and to the environment, this market is driven by the same economic mechanisms as all global good markets, mechanisms that can induce a negative trend if the consumers are not correspondingly informed. This assumption was demonstrated in the present study, on Romanian organic food market. Romania’s situation is characterized by a gap between the 2 main levels of production and consumption. Romanian organic market is developing fast, but not driven by the internal demand of such products, as it is an export-orientated market. In this sense, the present article identified the main reasons that stand for this situation and outlined some general directions of improvement. For Romanian consumers we can state the lack of knowledge regarding organic food and organic food prices, even if they auto characterize themselves as being familiarized with these concepts. Organic food was created to satisfy an emerging need of the modern consumer; thus the product must be adapted to the consumer’s demands also from an informational point of

view, so that any potential consumer can easily identify it and understand its destination. The result of the study identified some serious confusions: for example, consumers, when confronted with different terms such as organic, biologic or ecologic, understand different senses, in spite that these terms designate the same notional aspects, the only dissimilarity being that each EU country can choose by legislation the term for national usage. Nevertheless, by integrating a clear educational - informational program, Romanian organic food market would adapt to the consumer's demands and the product lifecycle can be extended throughout a permanent-interactive relationship between consumer and product.

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DIGITALIZATION PROGRESSES IN EUROPEAN CATCHING-UP COUNTRIES – THE CASE OF ROMANIA

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Abstract

Digitalization is a process that increasingly arouses interest both in the public and private sectors, given the benefits it brings in social and economic terms. The European Union has set as a strategic objective the development of the Digital Single Market, and this requires that Member States to improve progress in digitization. This will be possible through a proper measurement of the adoption and improvement of digitalization processes by analyzing the DESI composite indicator, the Delab report and other relevant sources that synthesize specific dimensions of this process. This approach is useful for understanding the current level and to identify measures to be taken in order to record progress in digitalization performance. Linked to the evolution of the internet and the development of IT technologies, digitalization has become a tool and a necessity for individuals as well as in the business sector, a drive for economic growth and a focus point at a European level. This article aims to realize an analysis of the evolution of digitization in EU Member States and in particular to provide an insight into the progress of catching-up countries as is the case of Romania.

Keywords

digitalization, IT&C, DESI, Europe, Romania

JEL Classification

O30, O38, O52

Introduction

Throughout human history, people have developed ways of storing and transmitting information. Starting from inscriptions on stone, to paper, which has been until recently used as primary tool for such activities, to the modern era of technology that brought new means for data storage. While in early times, information was scarce, hard to obtain and only few privileged would have had access to it, contemporaries see access to information as a normal, mandatory aspect of their daily personal or professional lives. Generally, there is a need for keeping knowledge safe and sharing it in a controlled manner in all domains, from medical, to economic, arts or technology. Furthermore, Generation Y's traits, such as the need to feel in control of their lives, to be involved in decisions that concern them

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(Procopie et al., 2015) and innovation processes require them to be connected to information whenever and wherever they need.

Digitalization can be defined as the use of internet-based technologies and devices in order to improve and to increase the interaction between market agents, state, citizens and other economic actors (Milkau and Bott, 2015).

1. Short insight into the evolution of digitalization

The progress of information technology has contributed to the status quo and two essential steps in it were the development of the personal computer in the early 90's and the evolution of the internet. The personal computer has also since evolved and the need for easy access to information has led to the development of smart, portable devices. Smartphones have generally become a daily used device, tablets and laptops can be transported conveniently, with all the data one needs and accessories have been developed for these to help increase storage capacities, add more functions to the device, bring more value to users. According to Miller (2014) and Ericsson Report (2015), laptops are expected to gain further popularity, at the expense of the traditional desktop, with lengthening life cycles, increased performances and the most important factor: portability (Euromonitor Report, 2016).

Digitalization has changed also the way of thinking and expectations regarding the interaction between market agents in the sense of improving communication standards, once with the evolution of emails, developing multilateral communication channels, represented by social media, the proliferation of mobile devices, internet based technologies and devices that increase the transparency of information about products and prices, simplifying payments methods and the emergence of new digital business models that offers free services and monetize the digital traces of their consumer behaviors (Milkau and Bott, 2015).

Another aspect related to the digitalized society is increased internet availability. In the past years, there has been an increase in internet access worldwide. While the European Union showed an internet penetration of 79.3% on Nov 15, 2015, the world average was 46.4% in the same year and the trend is expected to maintain ascending (Euromonitor Report, 2016).

Other studies (Miller, 2014; Ericsson Report 2015) show that the development of social networks have played a big part in the recent increase in popularity of the internet. These have brought changes in the consumer's lifestyles, shopping or communication preferences. A study conducted by Ericsson on more than 45,000 people in 24 countries, showed that almost half of the repliers - 46%, are active on more than one social network (Ericsson Report, 2015). Besides the obvious reason, that of socializing, they use these networks for gaining certain economic advantages, such as sharing accommodation, transportation means or even for financial activities and, as seen in Fig. no. 1, 34% of respondents have done so.

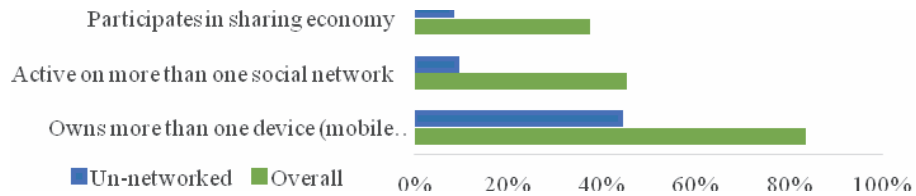


Fig. no. 1 Differences between individuals connected and non-connected to a social network
Source: Ericsson Report, 2015

The main benefit of the social network use is that of communication and information exchange, as 38% of respondents generally prefer to rely on other users’ reviews when making a decision, buying a product for example, than on expert reviews. Another activity based on social networks, that developed along with Facebook is social online gaming. Over half of Facebook users reportedly played at least once such games, in 2012, and due to their viral character, this area is expected to further develop (Miller, 2014). All in all, diverse functions have evolved for social platforms, generating new business models, which over time will probably further contribute to the evolution of digitalization.

Generation Y was the first to benefit from internet and the following generation, generation Z brought along some changes in user traits. One of them is the growth in sharing video content online. While in 2011 around 30 hours of video content were uploaded to YouTube every minute, currently it is estimated that around 300 hours are uploaded every minute. Generation Z users mostly prefer streaming on mobile devices, 59% of their viewing time being spent on these (Ericsson Report, 2015). This highlights the increased need for portable devices among users. The ‘computer’ concept has progressed over years, from machines that occupied one room and performed only simple tasks to the current microprocessors which can transfer a terabit of data per second (Brodkin, 2012). In this context, another aspect highly debated is that of artificial intelligence. Since more and more everyday devices have become ‘smart’, a need for a general system that could manage and connect all these could arise. At the same time, consumers expect, for the future, an increase in technology implementation in even more aspects of daily life, from sensors around the house that can modify air temperature, humidity etc., to transportation customized to one’s schedule and preferences, to well - being or health areas. One attempt in this area has already been made, with Microsoft launching their first Artificial Intelligence bot early this year. The ‘chatbot’ was launched on social platform Twitter and the idea behind it was to learn to communicate through contact with users, developing his ‘knowledge’ from the other users’ tweets. After only 24 hours the bot’s tweets changed from positive to offensive, sexist or racist messages. This raised serious issues for developers in this area on how to get the artificial intelligence to distinguish between right and wrong and not just mimic the most common communication, which, as seen in this case, is mostly negative (Vincent, 2016). The future will probably bring challenges to the evolution of digitizing and new approaches to it. For example, museums already debate if they should digitize collections, medical representatives debate to which extent medical care and information should be digitized and so on.

Furthermore, sharing information online is not without risks. Probably the first one that comes in mind is the risk of hacking. An organization can lose credibility and profit because of it. Two thirds of the Ericsson survey respondents see personal computers,

smartphones and social networks as highly exposed to the risks of hacking (Ericsson Report, 2015). But this not all, legal and ethical aspects also concern internet users, costs, (the costs of mobile data when traveling abroad for example), and socio-psychological risks can also affect them. These can be some of the challenges digitalization might have to face in the future.

The fast advance of technology made possible achieve (1) better services – in terms of increase in quality, more adapted to user’s needs, simplified and personalized; (2) faster services – increase of the efficiency of data processing, reducing time in process information and creating automation of services and (3) cheaper services – cost saving obtained through digitalization (Capgemini Report, 2015).

2. The importance of digitalization in Europe

Once with the evolution of IT&C technologies, with the increasing access to internet, to mobile phones and to electronic data in general, policymakers must ensure that individuals, business and governments use as well as possible the process of digitalization in their advantage. The article will continue with an assessment of the performance and importance given by EU countries to digitalization. A first approach is to analyze the composite index Digital Economy and Society Index (DESI index), which summarizes a number of key indicators on Europe’s digital performance. This index is constructed on the basis of five key dimensions (DESI Report, 2016): (1) connectivity - as the deployment and quality of the broadband infrastructure, (2) human capital - skills needed to interact online and to consume digital goods and services, (3) use of internet - activities performed online and consumption of online content, (4) integration of digital technology - refers to digitization of businesses and the use of online sales channel and (5) digital public services - better public services using instruments such as eGovernment.

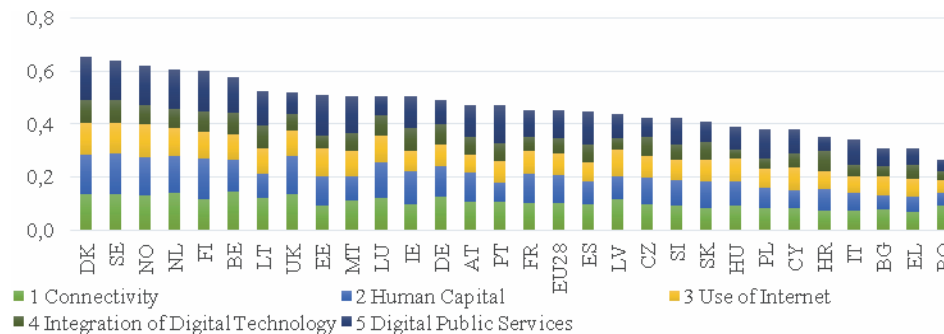


Fig. no. 2 Digital Economy and Society Index (DESI index)
 Source: European Commission, Digital Scoreboard, 2016

The most important three main countries which have registered the greatest values of the DESI index are the Nordic countries - Denmark, Sweden and Norway, which have significant performances in all the five dimensions and their progress was remarkable especially in Digital Public Services (eGovernment users, Open Data, online service completion) and Integration of Digital Technology (Selling online, social media, cloud, e-procurement). At the opposite side there are the Balkan countries - Greece, Bulgaria and

Romania, which occupy the last positions according to DESI hierarchy, because of their low income, with less urbanized population having lower levels of digital skills and higher levels of corruption in the public sector (Capgemini, 2015). However it is important to note that these countries are making real efforts to improve digitization activities, aligning themselves with the common policy of the EU Member States and the Digital Single Market strategy which aims to remove barriers in the companies' approach to sell online their products and services. This is proved by the evolution of the last three years according to Fig. no. 3.

Countries that have reached a high degree of digitalization adoption, as the Nordic countries, have experienced an important and positive social and economic impact due to it and they have also succeeded in improving their operating mechanisms for the public sector both by increasing efficiency and transparency. Better regulation and digitalization are mandatory in order to improve the relation between public administration, citizens and economic actors (Natalini and Stolfi, 2012).

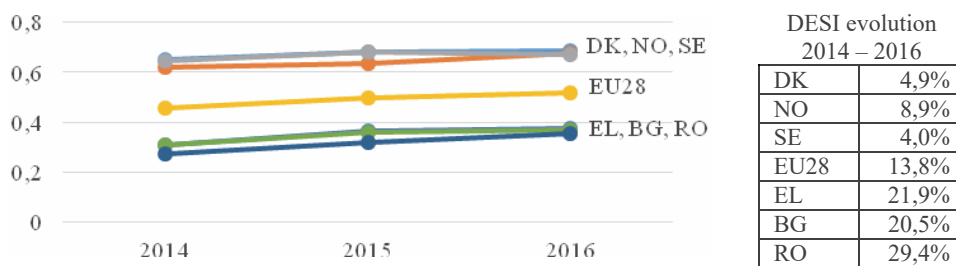


Fig. no. 3. DESI index evolution in 2014-2016

Source: Own representation based on data provided by the European Commission, Digital Scoreboard 2016

Thus, as seen in the previous figure, Romania, although positioned on the last place according to the DESI index, recorded the highest percentage growth in 2014 – 2016, 29.4%, well above the European average of 13.8% and with even a greater difference compared to countries which occupy top positions that have a growth rate between 5-9%. A more detail evaluation of Romania's performance in terms of its digital performance shows which are the main dimensions of DESI that have registered growth.

As seen in Fig. no. 4, Human Capital, Digital Public Services and Use of the Internet registered the biggest improvements over the three-year time period, these dimensions being those with the biggest gap compared to the European average.

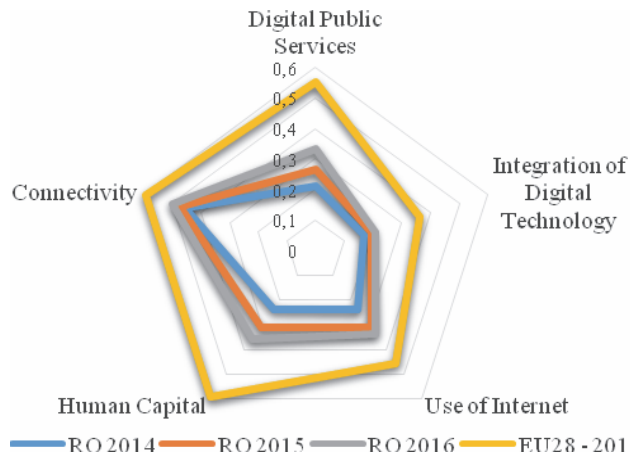


Fig. no. 4 Romania DESI index evolution 2014 - 2016 compared to EU28 average (2016)

Source: Own representation based on data provided by the European Commission, Digital Scoreboard 2016

Among the main causes for Romania's position on the last place according to the DESI index, one can identify the low level of population's digital competences. 32% of the total population of Romania has not used the internet while the EU average is 16%, more than that only 26% of Romanians have basic levels of digital skills (DESI Romania - Country Profile, 2016). The low level of the DESI index in Romania is also due to the decrease of the number of graduates aged 20-29 years who finished Science, Technology, Engineering or Mathematics, the so-called STEAM Graduates indicator. Internet usage increased based on the increasing use of social networks (78%), but the low level of digital competences makes only 9.6% of Romanians to use online banking systems and only 18% to buy online, being the lowest level at the European level; moreover companies underuse benefits of social networks (6.5%), ERP type systems technology (22%), online shopping (only 7.4% of SMEs) and only 1.9% in other EU Member States (DESI Romania - Country Profile, 2016; Delab Report, 2016).

3. A view on the characteristics of digitalization in Romania

As on a worldwide level, digitalization in Romania can be linked to the development of the internet. If only 3.6% of Romania's population used the internet in 2000, over half of the population, meaning 56.3% of Romanians, accessed it in 2014, and the trend has been ascending, as seen in Table 1 (Internet World Stats, 2012). According to DESI index, connectivity is the area where Romania scored best, with 0.5 points in 2016, increasing with 0.03 compared to 2015 and ranking Romania 23rd among EU countries. Romania generally performs well when it comes to high speed internet access, within the EU. According to the DESI report, in 2016, Romanian networks were capable of ensuring internet speeds of over 30Mbps to 72% of Romanian households compared to 71% - the EU average; the Delab report also ranks Romania 2nd in the EU when it comes to the share of subscriptions to fast internet (Delab Report, 2016). Some aspects can still be improved, for example, when it comes to the coverage of fixed broadband networks, these reach 89% of households compared to 97%, the EU average; also, the number of fixed broadband

subscribers: 60% of households, compared to 72%, the EU average. The United Kingdom, for example, showed a 91% share of households having internet access in 2015, according to Statistics site www.Statista.com, which is 19% more than the situation in Romania 72% (DESI Report, 2016). In addition to this, the subscription price for a household broadband subscription is significantly higher than the EU average, representing 2.7% of an individual's gross income compared to 1.3%, the EU average (DESI Report, 2016).

Table no. 1 Evolution of internet access in Romania

Year	Users	Population	% Pop.
2000	800.000	22.217.700	3,6%
2004	4.000.000	21.377.426	18,7%
2006	4.940.000	21.154.226	23,4%
2010	7.786.700	21.959.278	35,5%
2014	11.178.477	21.729.871	56,3%

Source: Internet World Stats, 2014

As seen in Table no. 1, more people in Romania have internet access one year compared to another, this trend being shown also by the DESI report, however, individuals have the lowest contact with public authorities, through the internet, in the whole European Union (DESI Romania – Country Report, 2016). This is one aspect that can and should be addressed in the future. Furthermore, Romanians seem to have the lowest faith in the security of online transactions, in the EU, with only 9.6% of individuals using online banking and 18% shopping online; this is one of the aspects limiting the development capacity for the digital economy. On the other hand, according to the Delab Report, less than half of Romanian small and medium enterprises (SMEs) have a website, while the average in the top 15 EU countries is 80%. Also, in the business sector, Romania can improve its use of internet tools, such as social-media, cloud based applications or e-commerce.

As seen in Fig. no. 5 and according to the data from the Delab Report, Romanian SMEs can and should focus more on using digital technologies to improve their activity, as most of these tools are valued at a significantly lower level than in the case of the top 15 European countries and even in comparison to the average of the 13 new EU members.

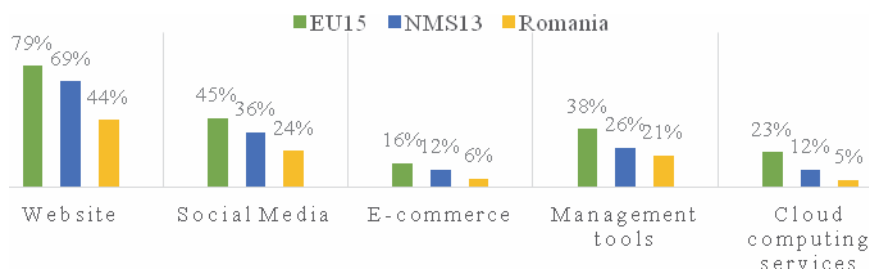


Fig. no. 5 Romania SMEs using digital technologies compared to EU15 and NMS13 in 2015

Source: Delab Report, 2016

The data provided by the Delab report shows that the top 15 EU countries have a 30% share of individuals with basic digital skills, which is almost double than Romania. Thus, the workforce in Romania is considerably less trained in using information technology than in general in EU, although in most working areas this is a necessary requirement. This can be linked to a need for a better education system and can equally affect a country's capacity for economic development. There is more need for trained specialists in the field of IT&C, a positive factor though being that the percentage of these in the total of employed individuals increased in 2014 compared to 2013, from 2.4% to 2.6%, according to the DESI Romania – Country Report.

In general, although improvements have been seen in this area in the past year, Romania is considered to be part of the 'catching up cluster' according to the DESI Report, as it is ranked overall 28th of the 28 EU countries and generally ranks lowest in most indicators in comparison to the top 15 EU countries and to the new 13 EU members, as mentioned in the Delab Report. The premises for development are nonetheless good, with access to one of the fastest internet speeds in the EU and some of the lowest internet subscription prices; so, future years might bring a significant improvement in this area.

Conclusions

Nowadays, the world has become more connected than ever and thus interaction and the physical aspects of equipment have gained a digital dimension. At a European level, Nordic countries - Denmark, Sweden and Norway, recorded the best performance in digitalization as shown by the DESI index, and, on the opposite side, there are the Balkan countries - Greece, Bulgaria and Romania which have to make real efforts to improve digitization performances, to approach the average of EU28, aligning themselves with the common policy of the EU Member States and the Digital Single Market strategy.

Although positioned on the last place according to the DESI index, Romania recorded the highest percentage growth in the 2014 – 2016 period, 29.4%, well above the European average of 13.8% and even greater compared to the growth rate of top EU countries which have between 5-9% increases.

Romanians have access to a higher internet speed compared to the European average, however, the overall household internet access for Romanians is significantly below the EU average. Related to this, the percentage from an individual's gross income assigned to an internet subscription is higher, compared to the EU average, which could explain the difference in coverage. Also, Romanians have the least faith in internet transactions and the least contact with public authorities, through internet, in the whole European Union.

Furthermore, SMEs in Romania are the least digitalized in the EU and engage in a small percentage in e-commerce, using web sites as the main tool for their online activity; those that do, however, have the capacity to provide advanced services for their customers. Although there has been an increase recently in the percentage of IT&C specialists, these are still below the EU average and companies generally invest little in training their employees to gain computer skills. When it comes to digital skills, the indicators show Romanians to possess the lowest computer skills on all levels, from basic to proficient; although there has been an improvement in this area compared to previous years, more focus should be put on education overall.

Thus, companies' success is increasingly conditioned by their ability to adapt to the digital world, particularly through the adoption of software, advanced equipment and advanced knowledge to generate performance and to increase value. At the same time countries must

use as well as possible the process of digitalization in their advantage in order to increase their public services, efficiency and transparency.

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PERSPECTIVES ON BIG DATA AND BUSINESS INTELLIGENCE TECHNOLOGIES IN THE CONTEXT OF AUDIT TASKS

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Abstract

The process of the audit of annual financial figures and other financial information of a company (financial data) primarily relates to the examination of vouchers. Also, the assessment of organizational aspects of the audited company and its competitiveness and stability in total marks essential elements of a financial audit. The growing extent of the vouchers to be examined, the stronger pressure by shorter reporting deadlines, the pervasive character of organizational aspects of the company and, in the end, declining audit fees lead to an increasing demand for modern IT-supported audit tools to enhance the audit process.

In this paper, essential aspects of the audit process will be elaborated. In the next step, the application of bulk processing of data (Big Data) as well as company data analysis techniques (Business Intelligence) in the audit area will be further outlined. The objective of this paper is to elaborate different perspectives for the application of Big Data and Business Intelligence- Technologies in the domain of financial data auditing.

Keywords

Audit; Big Data; Business Intelligence; Audit Process.

JEL Classification

M42

Introduction

The audit of the financial report or other financial data of a company is challenged by the rapid development in IT scenery in two different ways. First, the auditor is obliged to assess the functionality and effectiveness of the client's IT structures upon conduction of the audit. The second question is, whether the auditor himself is capable of applying sophisticated IT-tools to increase both efficiency and effectiveness throughout the audit process.

Besides the widespread IT-application in administrative and productive areas, the use of IT-driven analytical tools for decision making processes via Business Intelligence (BI) solutions has gained in importance in recent years. Moreover, with enhanced tools to extract and analyze bulk data from various sources (Big Data), the question arises, whether

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combined Big Data- /BI-Technologies can be used to detect general risk and economic patterns of an entity. This information can be used by both the entity and the auditor.

Therefore, it is crucial to elaborate which areas are suitable for the application of Big Data- /BI-Technologies either as an audit objective or as a tool for auditing financial data.

Business Intelligence as well as Big Data are phenomena of more current origin. While BI systems have historically developed from Decision Support Systems (DSS) and lie in the tradition of processing and analyzing internal enterprise data, Big Data-technologies with their focus on external data are still emerging. For the last three years, this field has emerged as the new frontier in the wide spectrum of IT innovations. The creation of massive data sets through an extensive array of several new data generating sources (e.g. point of sale, mobile phones, automobiles etc.) has prompted organizations, and their auditors to focus their attention on how to utilize and analyze big data.

The application of Artificial Intelligence (AI) applications in the accountancy or audit domain has a long tradition (Abdolmohammadi, 1987; Bailey et Al., 1987). This mainly aimed at using IT tools for solving specific problems based on data that is provided by the end user (Expert Systems). However, this approach failed due to the lack of user neutrality, as explained from O'Leary (2003).

A more general overview about possible ranges of application offers Baldwin, et Al. (2006) matching audit tasks with existing solutions in specific audit areas. Furthermore, Ul-Huq (2014) differentiates between structured, semi-structured and unstructured audit tasks focusing the application of AI- technologies in developed and developing countries. Regarding Data Analytics as a specialized AI technology for audit engagements, a lot of publications concentrate on the usage of Big Data- /BI-Technologies in risk management (Hu et al., 2012;), going-concern- assumptions (Tsai and Hsu, 2013) or fraud (Murthy, 2010; Whiting et al., 2012).

1. Purpose and Approach in the Audit of Financial Data

An audit aims at reaching audit assertions as e.g. the completeness or correctness of the audit subject (invoice, asset, contractual obligation etc.). Naturally this leads to the risk of giving a positive audit judgment in spite of misstatements in the financial data. The risk of reaching a false positive audit assertion is called "audit risk". The audit risk itself is divided into Inherent Risk, Control Risk and Detection Risk (Botez, 2015). *Inherent Risk* is the susceptibility of an audit area to the appearance of misstatements, while *Control Risk* expresses the danger that mistakes are not uncovered by the internal control system of the entity generating the financial data. Finally, *Detection Risk* shows the risk that the auditor does not recognize misstatements in the financial data through conducting audit procedures. The relation of these components is as follows:

$$\text{Audit Risk} = \text{Inherent Risk} * \text{Control Risk} * \text{Detection Risk}$$

The relation is called "multiple model", meaning that a high Inherent Risk leads to high Audit Risk, given the premises that Control and Detection Risk remain constant. Accordingly, an effective internal control system of a company generating the financial data can lead to a lower Control Risk which reduces Audit Risk.

Therefore the prevailing "risk oriented audit approach" governs an initial risk assessment of the whole entity followed by an estimation of Control Risk through an audit of design ("are the controls appropriate?") and effectiveness ("have the controls been processed?") of the entity's internal control system. With substantive audit procedures (checking invoices,

inspection of contracts and assets, recalculation of valuations etc.) the remaining inherent and detecting risks have to be minimized. For guidance on essential elements of the audit process, refer to ISA, 2012.

2. The Application of Information Technology on Mass Data Capture and Evaluation in the Business Environment for Decision Making and Controlling Purposes

BI Technologies are a major technology when using IT-driven methods for decision making and controlling purposes. Based on the fact of a stronger growing need and demand for processing mass data the integration of additional Big Data functionalities in BI architectures and BI methods is to be expected.

Business Intelligence is not a single application, but rather an architecture of integrated systems for decision making and learning based on existing enterprise resource planning (ERP), supply chain management (SCM), customer relationship management (CRM) or other data. The purpose of BI is to transform the raw, massive data that is collected by various internal or external sources into useful information. A typical BI architecture is set up by connected servers and databases used commonly in an enterprise for data gathering, storage, processing, evaluation and presentation. Essential features of BI systems are their capability of integrating and standardizing data of various sources through Extract-Transform- Load (ETL) tools and the evaluation of the standardized data using mid-tier servers that provide specialized functionality for different BI scenarios, e.g. filtering, drill-down, report rendering, searching, data analysis and building predictive models (Chaudhuri et. al, 2011). The possibilities to extend searches and data analytics across various (internal) sources like product catalogs, emails, survey responses, research reports etc. indicate the potential of a powerful BI solution. Together with data mining abilities, that go well beyond what is offered in traditional relational database management systems, it is possible to generate decision trees, regression models, market based analyses and more.

Regarding the increasing amount of internal or external data sources and the enhanced possibilities of their use, Big Data technologies comes into play especially for data gathering, processing and evaluation. Big Data are high volume, high velocity, and/or high variety information assets (including ‘unstructured data’) that require new forms of processing to enable enhanced decision making, insight discovery and process optimization (Chua 2013). The new aspect which justifies the term ‘Big’ is not just because it involves data that is much more likely to lack ‘form’ and to fall outside traditional relational databases; it is also because it has been accompanied by the development of advanced analytics that allow organizations to unlock insights from data with previously unachievable speed and accuracy.

According to Chua (2013), the main implications of Big Data for the accountancy and finance profession consist in the valuation of data assets and the use of big data in decision making as well as in the management of risk. The data valuation challenge relates to the problem that the value of old data can quickly decay as new data becomes available. Regarding the use of such data in decision making and management risk processes, Big Data technologies may lack effectiveness in this domain.

Regarding the BI architecture, it can be reasonably assumed, that Big Data is another evolutionary step towards a better usage of mass unstructured data from multiple sources which can enhance current and future BI solutions. The relation between BI and Big Data solutions can be characterized as follows:

Business intelligence is one possible objective of data analysis. Big Data analysis is one possible means of achieving that objective. One can possibly obtain business intelligence without doing Big Data analysis. On the other hand, Big Data analysis can be used to achieve different objectives, not just business intelligence. Furthermore, Big Data is an extension of the current analytic set of databases. Because of its volume and dynamic characteristics, it creates an entire new set of technical challenges.

3. Information technologies in the audit process

Concerning the application of these technologies in the audit domain the following questions for structuring arise:

- To what extent can these technologies be used to generate audit assertions?
- Which Big Data/BI technologies are available to support the respective audit tasks?
- Which requirements exist for the proper application of these technologies?

Taking into account these questions, perspectives of the application of Big Data/BI Technologies arise concerning their assurance character, solutions and usage.

3.1. Perspective Evidential Character

Regarding their evidential character, it is appropriate to focus on Big Data technologies because of their extensive use of external data from various sources. Traditional BI solutions, on the other hand, rely on internal data from the entity and its immediate environment, which are broadly considered as "traditional" audit evidence, if they satisfy the following principles. According to applicable audit professional standards, audit evidence needs to be "sufficient and appropriate", where "appropriate" refers to "reliable" and "relevant" (SAS No. 106, AICPA 2004).

Big Data contributes to the "sufficiency" requirement because of its volume and the variety of data provided on a real-time basis (velocity). "Sufficiency" itself depends on the risk of misstatement and the appropriateness (i.e., reliability and relevance) of the audit evidence collected where more evidence from Big Data is needed when it has lower reliability and relevance (SAS No. 106, AICPA 2004).

Regarding "sufficiency", the scope and quality of collected audit evidence are mainly affected by technology (i.e. computerized vs. manual evidence) and cost/benefit constraints. With Big Data technologies the major disadvantage of information abundance provided from traditional data analytic/BI-tools in massive quantities can be addressed with advanced data analytics which are powerful enough for processing larger data sets and are compliant to unstructured data (Russom, 2011). In fact, the ability to collect and analyze data which does not automatically fit a formal data structure is one major advantage of Big Data technologies in contrast to the widely used database schemes in traditional databank management solutions.

The major concern regarding reliability of Big Data-/BI-generated audit evidence relates to their probabilistic nature (e.g. auditor's predictive model is 3 percent below management's numbers). However, this nature of Big Data-generated assertions calls for a proper application of those technologies in the audit process and their respective interpretation and do not contradict the requirement of reliability.

With reference to relevance, Big Data/BI- Technologies can generate evidence that is more timely and specific to the audit objectives compared to the traditional audit approach. The

major challenge lies here as well their appropriate application and interpretation, as Big Data analytic results regularly suggest association, not causation (Cao et al. (2015). To sum it up, in assessing the evidential character of audit evidence generated by Big Data or Big Data- enhanced BI technologies, it is crucial to point out applicable audit tasks and data sources and necessary skills and restrictions when using the results in order to reach a conclusion.

3.2. Perspectives on Solutions

Regarding perspectives on solutions, it is reasonable to differentiate between focusing on certain tasks processed by Big Data/BI- Technologies (task perspective) or an certain data to be processed (data perspective).

a) Task Perspective

With reference to the approach and essential elements in the audit of financial data (Section 1) and to typical BI architecture including Big Data technologies, the following table depicts existing/ probable Big Data/BI- solutions, databases, and their possible application in the major elements of the audit process to support audit objectives (Table no. 1).

b) Data Perspective

Going one step further, the mapping of Big Data/BI- solutions to audit tasks can lead to the general question, whether data collected and processed via Big Data/BI- Technologies for non-audit purposes can be used in the auditing domain as well. Such an approach can be enabled by the prevailing implementation of those technologies in the entity’s production, marketing and administration processes (e.g. embedded chips in inventory, production site cameras). For auditing purposes, there will generally be many uses for the data collected, e.g. Table no. 2:

Table no. 2 Usage of Big Data sources for audit purposes

Data	Use 1	Use 2
Security Videos	Receipt and exit confirmation	Shipping Costs Confirmation
News Videos	Overall market position	Product/ service problems
Social Networks	Customer satisfaction	Fraud Detection
RFID	Inventory Confirmation	Pricing of Goods
Web hits	Predict Purchases	Predict Revenue

Source: Adapted from Vasarhelyi et. al, 2015

Table no. 1 Mapping of Big Data/ BI- Solutions to Audit Tasks

Solutions	Database	Examples in the Audit Area					Forming Overall Conclusion
		Pre-Engagement Risk Assessment	Initial Risk Assessment	Audit of Controls	Audit of financial Data		
Prediction of daily fluctuations of the Dow Jones Industrial Average Index (Bollen et al., 2011)	Twitter Data (Google's Profile of Mood States)	Unusual stock price fluctuation of entity	Fraud Risk evaluation; overall financial state of a firm	Risk Management controls	Financial instruments revaluation	Return on investments on financial instruments	
Prediction of Customer Behavior to personalize landing pages or management inventories (Cao et al., 2015)	-IP-Addresses of User -US Census data -Transactional Data -Weather Data	Customer Complaints regarding entity	Focusing resources on more risky parts of the business.	Controls on Stock Management	Inventories valuation	Overall analytical procedures	
Prediction of optimal drilling sites in oil and gas exploration (Cao et al., 2015)	-Geographical Data -Weather Data	Impact of geographical operation sites	Focusing resources on more risky parts of the business.	Budgeting or Risk Management controls	Valuation of drilling rights	Earnings Return	
Predictive Policing: Prediction of the most likely timing and location of crimes on a day to deploy forces most effectively (REF)	-Police Data Base -Existing "Prediction Boxes"	Entity's past activities or outcomes of past audits	Fraud Risk Evaluation	Assessment of failure Controls	Sample Selection based on past experience	Overall analytical procedures	
Monitoring of market events, seek out financial statement fraud, and identification of audit failures by SEC (Arnold and Wong, 2014)	-Regulatory Filings and other reportings to SEC -Databases on MicroCap Securities	Failures according to public reportings	Fraud Risk and Bankruptcy Risk Evaluation	Financial Statements preparation controls	Sample Selection based on current information	Overall analytical procedures	
Improving community health regarding restaurant hygiene (Public CIO, 2015)	Database on restaurants (operation time, history of critical violations, complaints, etc.)	Past audits and customer complaints	Evaluation of bankruptcy risk	Assessment of production controls	Sample Selection based on risk characteristics	Going Concern Assumption	

Text Analysis regarding news articles, product discussion forums, and social Networks (Yoon et. al, 2015)	Public Information	Customer and other complaints	Understanding of production volume and inventory levels	Assessment of general controls	Use as hypothesis in analytical procedures	Performance prediction
Automated text mining to identify disgruntled employees (Holton, 2009)	Emails of employees	Evaluation of business practices	Evaluation of bankruptcy risk	Assessment of fraud detection controls	Identifying a person's motivation and probable rationalization for Fraud	Financial damage prediction
GPS Data for Localization of Shipments (Yoon et. al, 2015)	Available GPS Data	Operating Areas	Assessment of obsolescence Risk	Assessment of shipping controls	Verifying shipping documents	Financial damage prediction
Automated text mining to identify deceptive language (Lareker and Zakolyukina, 2012)	Conference Call and other Minutes	Evaluation of external pressure	Assessment of high-level fraud	Risk Management controls	Revaluation on business operations	Going Concern assumption

Source: Own elaboration

3.3. Perspective Usage

Regarding the usage of Big Data/BI Technologies, challenges regarding auditor qualification, design of appropriate audit tools and usage standards have to be addressed.

With respect to a necessary domain-specific training of auditors it is not only necessary to educate on technological aspects of these new audit technologies. Also, the appropriate use of Big Data/BI Technologies can depend on behavioral factors like the individual ambiguity tolerance level. Therefore, it is crucial to be aware of subjective factors hindering the proper use of those new audit tools.

Also, another important factor will be the adoption of appropriate data analytic tools. In fact, deciding which tool to use will play an important role in the usefulness of Big Data. While traditional data analytic tools, such as Computer Assisted Audit Techniques (CAATs) are essentially data extraction tools focused on entity-internal data that allow auditors to perform data analysis using queries and do not consider the vast amount of external, unstructured and/ or non-financial data which is specific for Big Data Technologies.

Regarding the appropriate usage standards, the traditional audit standards largely provide guidance related to internal or documented audit evidence. However, they have to deal with the fact, that the quantity of the audited population is not an issue anymore with Big Data. Focus will shift to the auditor's use of various data analytic tools as mentioned before. Traditional approaches regarding relevance and reliability can also not apply without significant adaptations to the specifics of Big Data/BI-Technologies. Many tests will be formalized using algorithmic procedures which require standards for their design, appropriate use and incorporation in the general audit process. Guidance is also necessary for the probabilistic, unstructured nature of this new audit evidence and their corroboration by traditional audit techniques. Eventually, manually made judgments must be integrated into the new Big Data/ BI- driven audit, including a feedback system.

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Conclusions

In order to benefit from the new opportunities provided by Big Data/BI-Technologies, the traditional audit process has to be adjusted profoundly, which requires further research regarding the outlined perspectives. In view of the general principles regarding sufficiency, reliability and relevance, the new technologies have to be incorporated in a new audit framework which supports the auditor in the appropriate use, interpretation and judgment on additional traditional audit procedures.

Main features of this new audit framework should relate to the fact that beyond traditional approaches aiming to identify causation relations, it is now possible to identify and make

use of (audit-related) correlations. Furthermore, it will be possible to analyze the whole set of data rather than just a small subset or sample. A Big Data/BI- driven audit also needs to consider using a hierarchy of audit procedures with Big Data analytics to identify general business patterns, risks and trends, supplemental traditional manual or computer-assisted audit techniques to conduct a more detailed analysis of potential issues and lastly the audit judgment to determine the impact of findings on financial reporting.

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WIND ENERGY – AN OPPORTUNITY FOR ALSO SMALL AND MEDIUM INVESTORS

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Abstract

In this paper, we aimed at highlighting the importance of renewable energy, particularly of wind energy, in reducing the impact of economic activities on the environment, in ensuring the quality of life, being aware that there are major concerns in this regard globally, and especially at European level. Not only did Romania, as an EU member country, adopt all the European regulations in the field, but it also followed closely their implementation, supported rulemaking and the projects aimed at helping the investors on the renewable energy market. In the second part of this paper, we presented a study on the installation of a double effect wind turbine at Elda Mec Company, in Constanta County, Romania. This wind turbine was installed through the implementation of a project funded by the Partnerships in priority areas Program, which aimed at informing small and medium investors that it is possible to obtain and use wind power even without a wind farm.

Keywords

Wind energy, renewable energy, environment, environmental protection.

JEL Classification

Q27, Q28, Q42, Q48,

Introduction

Currently, we are dealing more and more with the issue of ensuring the quality of life and sustainable development. We cannot talk about sustainable development without talking about environmental protection. Sustainable development policies include policies for environmental protection and the environmental protection conditions sustainable development.

Worldwide, a leading role in environmental protection and sustainable development was played, over the years, by the following events: United Nations Conference on Human Environment, Stockholm, 5-16 June 1972; UN World Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992); the World Summit on Sustainable Development (Johannesburg, 26 August - 4 September 2002) and the Maastricht Treaty in

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1992 (ADRC, 2012) and the Kyoto Protocol to the United Nations Framework Convention on Climate Change (December 1997). (Arion, Tabuleac)

Moreover, an important role in ensuring the quality of life in terms of environmental protection is played by the implementation of the environmental management system in all companies that want or need (as a result of their activities) to determine and, respectively, to control the impact of their activities on the surrounding environment. Thus, as specified by the ISO 14001: 2004 standard (SRAC, 2015), the senior staff/ managers appointed by the management in this regard must inform the relevant authorities about the activity of their company, about the impact of its products, services or processes on the environment. They must implement the declared environmental policy, record and monitor all the actions taken in order to protect the environment. On 15 September, 2015 the new ISO 14001:2015 standard was published in English, French and Spanish. The Romanian version will appear in October 2016.

Given that, in most cases, the economic growth has led to a decrease in many natural resources, to a massive increase in pollution and in greenhouse gas emissions; one of the main objectives of the environmental policy is to develop renewable energy sources as a clean global energy resource.

For this purpose, the European Commission prepared the White Paper "Energy for the Future: Renewable Energy Sources" (1997) and the Green Paper (November 2000) "Towards a European strategy for security of energy supply. (Bejan, Rusu and Balan)

This paper aims at highlighting the role and the benefits of wind energy as far as the quality of life is concerned, in the context of sustainable development, with reference to a case study that involves installing a wind turbine at Elda Mec Constanta company, at the premises from Topraisar, Constanta County, Romania.

1. Renewable energy - global priority

According to the policies presented in the documents mentioned above, one of the main objectives of the European Commission was to increase the share of renewable energy in the overall energy consumption from 6%, in 1997, to 12%, in 2010; this threshold was exceeded by many European countries, and by the UE28 average. (Eurostat, 2015)

In December 2008, the European Union adopted a package of regulations on "climate and energy", which obliges Member States to implement measures that aim at increasing the share of renewable energy to over 20% of Europe's total energy production until 2020. (E.C., 2011)

It can be said that, at present, renewable energy demand for electricity reached a high level worldwide, particularly in Europe.

According to Eurostat (2015), the share of renewable energy in total energy consumption across Europe has increased from year to year, from 2005 to 2014 (Table 1); the best result among the EU countries was registered in Sweden.

On 1 January 2007, only slightly more than 1% of the global electricity was provided by wind generators (approx. 74,000 MW). (Duma, 2007)

As far as wind energy is concerned, which is an important renewable source of energy across Europe, in 2008, it represented approximately 4.8% of the total EU energy consumption (E.C., 2011). Based on these figures, it is expected that, by the end of 2020, this percentage will exceed 12 units, and more than 34% of the total electricity consumption will be provided by renewable energy sources.

Over the last decade, most of the wind energy produced in the EU is, in fact, the result of the operation of numerous wind farms in only some Member States (until the end of 2008, Germany, Spain, Denmark, Italy, France, Portugal, Netherlands, Sweden, Ireland, Greece, the United Kingdom installed over 1,000 MW of wind power on their territory). Also, in 2008, the largest share of wind power in electricity demand was registered by Denmark (20.30%), followed by Spain (12.30%), Portugal (11.40%), Ireland (9.30%) and Germany (6.90%). In the other countries, the share of wind energy in total energy consumption is much lower. (C.E., 2011)

Table no. 1 Eurostat Share of renewable energy in gross final energy consumption

Geo \ time	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2020 Target
EU 28	9.00	9.50	10.4	11.0	12.4	12.8	13.1	14.3	15.0	16.0	20
Norway	59.8	60.3	60.2	61.8	64.9	61.2	64.8	65.9	66.7	69.2	67.5
Iceland	60.1	60.8	71.5	67.5	69.7	70.4	71.6	73.2	72.2	77.1	64
Sweden	40.6	42.7	44.2	45.3	48.2	47.2	49	51.1	52	52.6	49
Latvia	32.3	31.1	29.6	29.8	34.3	30.4	33.5	35.7	37.1	38.7	40
Finland	28.8	30.0	29.6	31.4	31.4	32.4	32.8	34.4	36.7	38.7	38
Austria	23.8	25.3	27.3	28.2	30.2	30.6	30.8	31.6	32.3	33.1	34
Denmark	16.2	16.4	17.8	18.6	20.0	22.1	23.5	25.6	27.3	29.2	30
Portugal	19.5	20.8	21.9	23.0	24.4	24.2	24.7	25.0	25.7	27.0	31
Estonia	17.5	16.1	17.1	18.9	23.0	24.6	25.5	25.8	25.6	26.5	25
Slovenia	16.0	15.6	15.6	15.0	20.0	20.5	20.2	20.9	22.5	21.9	25
Romania	17.6	17.1	18.3	20.5	22.7	23.4	21.4	22.8	23.9	24.9	24
France	9.6	9.3	10.2	11.1	12.1	12.6	11.1	13.4	14.0	14.3	23
Lithuania	17	17	16.7	18.0	20.0	19.8	20.2	21.7	23.0	23.9	23
Spain	8.4	9.2	9.7	10.8	13.0	13.8	13.2	14.3	15.3	16.2	20
Croatia	23.8	22.7	22.2	22.0	23.6	25.1	25.4	26.8	28.1	27.9	20
Germany	6.7	7.7	9.1	8.6	9.9	10.5	11.4	12.1	12.4	13.8	18
Greece	7.0	7.2	8.2	8.0	8.5	9.8	10.9	13.4	15.0	15.3	18
Italy	7.5	8.4	9.8	11.5	12.8	13.0	12.9	15.4	16.7	17.1	17
Bulgaria	9.4	9.6	9.2	10.5	12.1	14.1	14.3	16.0	19.0	18.0	16
Ireland	2.9	3.1	3.6	4.1	5.1	5.6	6.6	7.1	7.7	8.6	16
United Kingdom	1.4	1.6	1.8	2.7	3.3	3.7	4.2	4.6	5.6	7.0	15
Poland	6.9	6.9	6.9	7.7	8.7	9.2	10.3	10.9	11.3	11.4	15
Hungary	4.5	5.1	5.9	6.5	8.0	8.6	9.1	9.6	9.5	9.5	14.65
Slovakia	6.4	6.6	7.8	7.7	9.4	9.1	10.3	10.4	10.1	11.6	14
Netherlands	2.5	2.8	3.3	3.6	4.3	3.9	4.5	4.7	4.8	5.5	14
Belgium	2.3	2.7	3.4	3.8	5.1	5.5	6.2	7.2	7.5	8.0	13
Czech Republic	6.0	6.4	7.4	7.6	8.5	9.5	9.5	11.4	12.4	13.4	13
Cyprus	3.1	3.3	4.0	5.1	5.6	6.0	6.0	6.8	8.1	9.0	13
Luxembourg	1.4	1.5	2.7	2.8	2.9	2.9	2.9	3.1	3.6	4.5	11
Malta	0.2	0.2	0.2	0.2	0.2	1.1	1.9	2.9	3.7	4.7	10

Source: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_31&plugin=1

According to the statistics published by the European Association of Wind Energy, in early 2013, the world leaders in terms of the capacity of the wind turbines installed in 2012 are China (13,200 MW), USA (13,120 MW) and Germany (2,439 MW), countries closely followed by India (2,336 MW), UK (1,897 MW), Italy (1,273 MW), Spain (1122 MW), Brazil (1,077 MW), Canada (935 MW) and Romania (923 MW). (Petrescu, 2013)

These differences arise because of the fact that the wind resource, as well as any other type of resource, varies greatly from country to country. In recent years, there has been registered a certain development of the offshore wind energy, in the North Sea and the Baltic Sea, in areas with water depth less than 30 meters, at a distance of up to 40 km from the shore. Compared to onshore wind power, the offshore wind power represents only about 2% of the total installed capacity in Europe (C.E., 2011). This result is explained by the fact that, in offshore wind farms, plants are more complex, and, therefore, more expensive; the operating and maintenance costs are higher; the service personnel of these facilities is less numerous and the working conditions are difficult.

At the same time, we found significant differences in the capacity of the transmission networks of other electricity generation plants, which take over the produced wind energy.

2. Wind energy - an important element in the development programs of investors, in Romania

As evident from the statistics provided by Eurostat (2015) and by the European Wind Energy Association (Petrescu, 2013), we can state that, in our country, there are major concerns with renewable energy development, particularly with wind power.

According to a study conducted by PHARE (Lascu, 2011), Romania's wind potential is of approximately 14,000 MW of installed capacity, respectively 23,000 GWh of electricity production per year. Considering only the technical and the economic conversion potential of about 2,500 MW, the corresponding electricity production would be of approximately 6,000 GWh per year, which would mean 11% of the total electricity production of the country.

According to the data published on 01.04.2013 by Transelectrica, in Romania, at that time, there were 25 large wind farms under the responsibility of the energy dispatcher, with a total capacity of approximately 1,900 MW. Numerous other smaller wind farms, which did not fall under the control of the national energy dispatcher and whose aggregate capacity was 200 MW, were added. (Petrescu, 2013)

In 2013, the main wind market investors were CEZ, Enel and Energias de Portugal. (Petrescu, 2013)

The CEZ Group (2016) invested in Dobrogea 1.1 billion Euros in the construction of the biggest onshore wind farm in Europe, with a total installed power of 600 MW. The entire capacity of CEZ Wind Farms (139 wind turbines in Fantanele, with a capacity of 347.5 MW; 101 wind turbines in Cogealac and Gradina, with a capacity of 252.5 MW) was put into operation in late 2012.

Regarding the concerns of Enel Group (2016) with renewable energy, the wind projects of Enel Green Power Romania in Banat and Dobrogea regions became operational in late 2012, the net installed capacity being of about 500 MW.

Energias de Portugal Group operated several wind farms, both in Dobrogea (Pestera and Cernavoda - Constanta County; Sarichioi - Tulcea County) and Moldova (Vutcani - Vaslui County).

If we analyze the geographic areas where the above mentioned wind farms are installed, we notice that these are areas where the wind speed reaches over 6.5 m/s (Fig. 1), knowing that the wind speed is one of the decisive factors in installing wind turbines.

At the national level, taking into account all the wind farms installed and operated at the end of 2015, we can state that the leader in the production of wind energy is Constanta County, where there are wind turbines with a capacity of 1,636 MW. At the level of Tulcea

County, wind power amounts to 796 MW. Through the investments in wind energy, in those counties, at present, Dobrogea is seen as the area with the greatest potential in the Southeast of Europe. (Cernat, 2016)

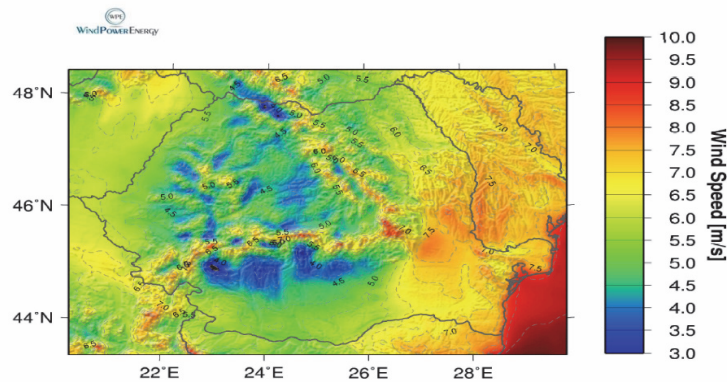


Fig. no. 1 Romania's wind resources at 50 m high, for different topographic conditions

Source: Lascu, M., 2011. Energia eoliană – harta de vânt a României, potențial de 14.000MW

According to Agerpres (Cernat, 2016), the national ranking continues with the following counties: Giurgiu (193 MW), Prahova (188 MW), Galati (166 MW), Brasov (152 MW), Ialomita (142 MW) and Braila (110 MW). In other counties, wind energy is worth less than 100W, the worst results being recorded in Salaj (4.7 MW), Covasna (6.4 MW) and Ilfov (6.5 MW).

The data presented by Transelectrica in early 2016 reveal that, by the end of 2015, there were signed contracts for the connection to the national electricity network for renewable energy projects totaling 10,789 MW, of which 7,521 MW was represented by the wind power.

In order to incentivize the production of renewable energy, the investors in this sector receive for free the so-called "green certificates"; these certificates are paid both by the natural and the legal persons in Romania, with the electricity bill. By their marketing on a specialized market, these certificates contribute to the increase in the revenue of renewable energy producers. For 2016, the mandatory quota of the electricity produced from renewable energy, benefiting from the promotion system through green certificates, is 12.15% of the gross final electricity consumption, higher by 0.6%, compared to 2015. (H.G. 1015, 2015)

3. Wind energy – a current concern of the management of Elda Mec Constanta Company

Elda Mec Company, located in Constanta, Romania, is a limited liability company with private capital, founded in 1996; its main activity is represented by the *Manufacture of dairy products and cheese*, as well as by their trade (since May 2000).

Throughout its activity, the company management was also concerned with the production and market delivery of top quality products, safe for consumption. Thus, in 2006, it began the construction and equipping works for a new factory of dairy and cheese production, by SAPARD European funds, at the premises in Topraisar, Constanta County. From July 2007 and until nowadays, the company undertook several actions in order to achieve, maintain and improve the quality of the products marketed under the brand ELDA. We highlight, among these, the implementation and certification, in January 2014, of the *Quality management system*, in accordance with the requirements of SR EN ISO 9001:2008 and of the *System of Food Safety Management*, in accordance with the requirements of SR EN ISO 22000:2005.

Being also concerned with ensuring environmental protection, in 2012, the company management decided to become a co-financing partner within the Project PN-II-PCCA No. 39/2012, entitled "Power Generation System which uses a Double - Effect Wind Turbine in Order to Ensure the Energy Autonomy in Specific Applications (Double T-VAX)", the contractor being the National Institute for Research and Development in Electrical Engineering INC DIE ICPE-CA (Engineer Sergiu Nicolaie - project manager) and the contracting authority – the Executive Unit for Financing Higher Education, Research, Development and Innovation through Partnerships in priority areas.

As indicated in the project, this year, Elda Mec Company will take over the double-effect wind turbine prototype, made by the other partners in the project, and will put it into operation at the premises from Topraisar, Constanta County. Thus, it will ensure a high degree of autonomy and protection against the accidental interruption of power supply from the public network, which is particularly important, considering the company's objects of activity (both raw milk and other dairy products depreciate quite fast in the absence of an appropriate temperature throughout the production process).

The specialists involved in this project thought of making a double effect wind turbine (counter-rotating) for wind energy use, based on the idea that one can thus increase the maximum power that can be extracted from the air stream. For the mechanical-electrical energy conversion, the electric generator used in the double effect of wind energy plants must be placed in a dedicated building, with both mobile armatures (inductor and induced, respectively), each coupled to one of the two wind rotors. In phase 4 of the project (INC DIE ICPE-CA, 2015), the team began the construction of the permanent magnet electric generator, both armatures of the electrical machine being able to rotate independently. In case of accidental interruption of power supply from the national network, the wind plant should ensure the operation of two pumps from the technological equipment for minimum 15 minutes, time required to retrieve the raw materials/ intermediate products from the technological devices in operation and to store them safely. Thus, the counter-rotating wind power installation can operate in two modes, namely: either as a source of electricity, the wind generator debiting the electrical power to the national grid, or to provide the necessary electrical power for the recovery of raw materials/ intermediate products, as an ordinary "UPS".

Given the way in which the wind facility is to be used and the equipment which is to be supplied with electricity, the project team determined that the turbine will be made so as to operate at the following nominal parameters: nominal power = min. 10 kW and a nominal voltage = 3x400 V, under a wind speed of 10 m/s, to which there is estimated a relative speed between the two counter-rotating armatures of about 300 rev/min.

Also, in order to provide an enhanced operational safety, the wind facility equipped with two counter-rotating wind turbines will be connected to the national electrical network.

Among the main benefits to Elda Mec Company, brought by the commissioning of the wind turbine, are:

- ✓ Ensuring the electricity for intervention in case of power failures in the supply of electricity, leading to the avoidance of losses in raw materials, of locking the machines in operation and of other major property damage etc.;
- ✓ Providing electricity to the national power network, providing thus free electricity, which entails lower production costs.

Conclusions

After analyzing the impact that the installation and operation of wind facilities have on the environment, but also on the economic and daily life, worldwide, can say that the benefits of wind energy are undeniable. Of these, we mention the following (C.E., 2011; Duma, 2007):

- ✓ Zero emissions of pollutants and greenhouse gases;
- ✓ Reducing the consumption of cooling water, associated with many conventional energy production technologies;
- ✓ Waste is not generated in obtaining wind energy;
- ✓ Reduced costs per unit of energy produced; in recent years, following the application of various technologies for the production of wind turbines, their technical parameters have improved greatly, which led to lower prices of energy production to just 4 cents / 1 kW;
- ✓ Reduced costs for repairing, replacing parts/ sub-assemblies, if applicable;
- ✓ Reduced negative impact on the habitat of birds and animals, on the environment as a whole.

Starting from the results of the commissioning of a double effect wind turbine at Elda Mec Company, we can state the following:

- ✓ It is possible to produce a wind turbine prototype, which operates at wind speeds lower than those required to turbine generators in wind farms (these conditions are often encountered in practice);
- ✓ The wind turbine can be installed and operated in many remote areas, where, until now, wind generators could not be used due to the average wind speed lower than 10 m/s;
- ✓ The supporting pillar of the double effect wind turbine is only 12 m high, being thus easier to install and operate; moreover, the costs for these operations are lower;
- ✓ The propellers used in the double effect wind turbine are much smaller than those used in wind parks and do not vibrate at the time of their actuation by the wind, which results in lower manufacturing costs and in reduced installation and operating costs. Moreover, the surrounding habitat of residents, birds and animals is not affected.
- ✓ The double effect wind turbine installations can be the solution for the small and medium entrepreneurs (production units, hostels, irrigation facilities etc.) who wish to contribute to the environmental protection and, at the same time, to reduce their production costs;
- ✓ This type of wind turbine can represent the saving solution for those who cannot connect to the national electricity network and need electrical power of about 10-15 kW.

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BIG DATA – A NEW TOOL SHAPING THE FUTURE OF THE TOURISM INDUSTRY

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Abstract

The Internet has fundamentally changed the world of business and, thus, the world of tourism, so that the search and information processes, the means of payment, the mode of tourism products/services consumption are completely different. All these changes induced the need to know as much as possible about the wishes, needs and consumption behavior of tourists. Currently, providers in the tourism industry can better understand their customers, but, at the same time, their competition due to the existing huge volume of data, but especially due to the multiple possibilities for analyzing such data. The Big Data phenomenon has taken more and more shape during recent years and continues to evolve, representing a real opportunity for companies in tourism and offering them the chance to use their creativity effectively to design not only new, unusual products and services, but products and services which directly meet tourists' expectations. Thus, through literature review and several case studies, this article aims at identifying how Big Data currently changes the tourism industry, helping it to perform better and, therefore, sustaining the overall economic development.

Keywords

Big Data, information and communication technology, innovation, tourism development, performance

JEL Classification

L83, L86, M15, O31, O33, Z32

Introduction

The tourism industry, currently recognized as the fastest growing sector, continues to contribute significantly to the development of the world economy. Thus, in 2015, its contribution to the Gross Domestic Product (GDP) formation was of 9.8% (7,170.3 billion USD), with an estimated growth of 3.5% for 2016 and a 4% annual increase by 2026 (up to 10,986.5 billion USD – 10.8% of the Gross Domestic Product). Currently, about 1 in 10 jobs belongs to tourism, 9.5% of the worldwide labor market standing for this industry

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(283.578 million jobs). In this respect, an increase of 2.2% (to 289.756 million jobs) is expected for 2016, and, for subsequent years, until 2026, a 2.5% annual increase (up to 370.204 million jobs – 11% of total worldwide employment). In terms of investment in tourism, in 2015, their value amounted 774.6 billion USD (4.3% of total investment globally), with an estimated growth of 4.7% for 2016 and 4.5% annually during the next decade (up to 1,254.2 billion USD in 2026 – 4.7% of total investment). (WTTC Travel & Tourism Economic Impact 2016 – World, p. 1)

As a proof of the continuous expansion of the tourism industry, 2015 was the sixth consecutive year with recorded above the average growth; the number of international tourist arrivals increased by 4.4% up to 1.184 billion. Thus, this positive development of the sector drives economic growth and the creation of jobs worldwide. (UNWTO World Tourism Barometer, 2016, p. 1)

In general, the demand for tourism products and services was great, even if there were differences according to the destination, differences resulting from currency fluctuations, the decline in oil prices and other commodities that have resulted in increased disposable income for importing countries and lower demand in exporting countries or an increased attention for security issues. The increase recorded in developed countries (5% growth) surpassed the one recorded on emerging markets (4% growth), mainly following the results recorded for Europe (5% growth). Regionally, in 2015, America and Asia-Pacific each recorded an increase of 5%, Middle East an increase of 3%, while the number of arrivals in Africa decreased by 3%, due to poor results recorded in the North of the continent, which represents more than one third of tourist arrivals in the region. (UNWTO World Tourism Barometer, 2016, p. 1)

Tourism involves flows of goods, services and people on a global scale, so that it becomes an expression of the globalization phenomenon, which currently marks the world. Globalization transforms specific processes, intensifying competition, the demand for information regarding the market, the need to protect cultural resources and turns into a strategic development option from the companies in the industry's point of view. All these changes represent a real challenge, especially since consumers, the center of the tourism industry's existence, have an increasing purchasing power, an increasing desire to travel, but, the most important, are increasingly informed. However, globalization offers tourism many opportunities, the most important aspects being the more accessible and faster transport, the multiple information possibilities regarding the organization of a trip or the stimulation of the desire for cultural exchange.

Along with the rapid evolution of the information and communication technology, but also with the increase of its applicability in tourism, the efficiency and quality of services increased considerably. New technologies, such as Big Data, represent real challenges, providing more and more evolution opportunities for actors in this sector.

Big Data – performance for the tourism industry

The evolution of the information and communication technology is becoming more and more pronounced, and this is felt every day, in all activities. Each web browser, each search engine, each smartphone, each tablet, each Internet provider, each sensor generates data so that now, according to an IBM study, 2.5 quintillion bytes of data are created daily, which means that approximately 90% of existing data has emerged during the past two years. Although any action has always generated significant amounts of data, only recently it was

found that their use could bring huge benefits. Thus, the Big Data phenomenon was born, which includes not only the impressive volume of data available worldwide, but especially the new methods of capturing, storing, searching, sharing and analyzing data. In 2012, the Big Data market was estimated at 11 billion USD and it is estimated that this will rise to about 50 billion USD by the end of 2017. (McNulty, Moreira, Magliaro and Reid, 2014)

Tourism companies are usually working with two data categories – structured data (25% of total data) and unstructured data (75% of total data). Structured data comes mainly from Property Management Systems (PMS), blogs, websites, while unstructured data includes everything that means postings on social networks (e.g. Facebook), microblogs (e.g. Twitter), specialized review sites (e.g. TripAdvisor, Yelp), forums, e-mail, videos, photos and any other content that may affect the company's online reputation. Currently, the real challenge lies in the integration of unstructured data and their analysis in order to obtain relevant information.

The online environment is increasingly important for the tourism industry – impressions are posted online on specialized sites, there are ratings, actions on social networks etc. Data is generated at a faster pace than traditional structured data, so that, in order to understand tourists' travel experiences, companies must adopt a different approach. Traditional databases still used by many of the companies in the tourism industry prove to be not efficient enough, and the strategies used before can not be maintained in the context of Big Data. Next-generation processing tools, storage devices, servers and intelligent software are required to manage the new situation. However, to reap the benefits of the Big Data phenomenon, the simple implementation of technology is not enough, but organizations need to make changes regarding the business and operational processes, the decision-making system, the organizational culture and the relationship with employees. (Akerkar, 2012, p. 8)

The continuous trend of reducing storage costs, along with the evolution of technical platforms fundamentally transform storage, collection and use of data processes, which enable the delivery of more personalized and timely tourism experiences. Those companies that are able to see these opportunities and develop new products/services accordingly will benefit from an important competitive advantage.

Tourism is an extremely complex sector, involving, for proper functioning, the interaction between many actors and systems. Thus, Big Data can help streamline the activity in several directions: forecasting demand and sales, optimizing promotion campaigns, increasing trust and customer loyalty, revenue management, travel management, distribution. (Henry, 2015)

In the tourism industry, each search, online booking, payment or electronic transaction creates data that arrives in a database. Companies in this sector are already receiving information through online reservation systems, payment systems, providers systems or travel management companies, but Big Data provides new opportunities, allowing data collection from Social Media, review websites or data generated from various online interactions with the consumer and, especially, their correlation with external sources and a proper analysis. (McNulty, Moreira, Magliaro and Reid, 2014)

Data analysis turns into a real competitive advantage for companies, the amount of information currently flowing in the online environment providing important clues about customers' expectations. Data regarding tourists' preferences and their consumption behavior provides companies in the tourism industry with valuable information about their expectations, making it possible to increasingly personalize the tourism experience and

encouraging innovation. Moreover, it is well known that products and services centered on individual preferences increase satisfaction, which means, implicitly, improving the relationship with consumers. Simple data analysis is not, however, enough, the speed at which information is obtained and actions taken afterwards being extremely important. More and more companies in the tourism industry realize the importance of taking into account data provided by the online environment, this representing the basis for deep analyses, designed to streamline the operations of any company and, moreover, of the entire sector.

Optimizing marketing and sales actions, a key element in the development of any business, requires consolidation of data from multiple sources and their analysis using different parameters. Although most of the data is produced internally, the external environment is extremely important, the combination with data from travel agencies, travel portals, suppliers, Social Media contributing to increasing their value and providing new insights regarding the study of tourists' consumption behavior. All this information helps organizations analyze market trends and consumer preferences and this can turn into a real strategic tool for identifying opportunities, but also risks that exist on different market segments. Currently, Social Media is one of the most valuable sources of information for companies in the travel industry and beyond, being extremely helpful in predictive analytics. Tourism companies can improve their offer according to customers' expectations, following the analysis of historical data regarding their options, their location, the preferred destinations and means of transport or any other important factors that could provide clues on the consumption behavior. It should be borne in mind that the huge amount of generated data also contains irrelevant information, but taking advantage of the technological progress, these can be analyzed through specific Big Data methods and turned into meaningful information.

For hotel chains, Big Data is a way of improving revenue management operations and forecasts regarding the supply and demand trends on the market. An example in this regard is the Intercontinental Hotels Group (IHG), which uses information from over 90 million loyalty program members. 12 customer segments were defined based on more than 4,000 attributes in order to create relevant and effective marketing campaigns, which greatly improve the conversion rate and the relationship between offered products and consumers. (McNulty, Moreira, Magliaro and Reid, 2014)

Kayak, the well-known travel search site, is another example regarding the use of Big Data in tourism, relying largely on data analysis both in terms of internal decisions and in terms of offers for consumers. Every year, huge amounts of data are generated as a result of billions of users' searches, which allow the establishment of hierarchies. In the case of hotels, for example, further analyses are needed; unlike flight search results, which are normally listed by price, hotel rankings consider variables such as the price, existing facilities or the distance from the tourist's preferred place. Regarding flight searches, Kayak uses analytical models aimed at ensuring that prices displayed on the site are the same as those displayed on airlines' websites; sometimes there are synchronization problems among data sources. Kayak recently introduced the option of flight prediction, which shows the evolution of a particular flight's price for the next seven days. For all this, in order to effectively manage large volumes of data and to use information obtained by analyzing them, Kayak successfully uses Big Data tools. (Davenport, 2013)

Optimizing prices for perishable products offered by the tourism industry, such as in airplane seats and hotel rooms, is one of the processes that mostly rely on analysis.

Currently, the tendency is to consider a growing volume of data in order to obtain a more coherent framework for revenue management systems. In the future, revenue management specific algorithms will incorporate more and more data sources, data on the basis of which decisions can be made in real time. Such data could include external factors influencing tourism demand, including weather, consumer confidence or other goods'/services' prices. Setting tariffs will more and more frequently take into account the individual behavior of consumers, their loyalty, lifestyle, values, activity in online shopping etc.

About 25 years ago, Marriott was one of the first hotel chains to have used data analysis as revenue management. In order to streamline the process of identifying the best accommodation rates, Marriott has combined two separate systems, allowed revenue management software to be accessible on the Internet, improved its algorithms and increased the system's speed so that revenues would be optimized more frequently. In addition, they adopted an analytical approach in terms of offers to understand why tourists choose Marriott and not their competition. For several consecutive years, Marriott has experienced numerous customization options for their website's visitors, which was the main foray into the Big Data phenomenon. Big Data analysis resulting from the website was then used to design a robust marketing model, the ultimate goal being that of understanding which are the marketing and sales activities that really sell.

Distribution has always been that part of the tourism field which lists the most advanced computers, data and analyses, so that this could become the area on which Big Data has the greatest impact. A clear direction regarding the tourism products/services distribution processes is customization. A successful distribution strategy will take into account the information received directly from tourists, but especially those obtained externally.

Another area in which Big Data may be used in the tourism industry is that of streamlining internal operations. Airlines have been true pioneers in using analyses for routing, crew planning and logistics and maintenance decisions. Thus, even if the use of data and analyses in this regard is not something new, the fact that the rapid and sharp evolution of Big Data outlines new directions is undeniable.

At the management level, Big Data can help increase the financial performance of companies in the tourism industry and capital investment appraisal. The tourism industry (particularly hotels and resorts) was among the first industries to have adopted an analytical approach for evaluating elements that enhance financial performance. Even if data used for this purpose was relatively little and structured, it is obvious that Big Data sources could be successfully incorporated into existing analytical models.

Conclusions

Although the Big Data phenomenon already has a significant impact on key processes in the tourism industry, its influence is clearly still in its early stages. There are sectors and companies that are already testing or deploying Big Data on a regular basis and no one ever denied the fact that it could radically change the tourism industry, offering new development prospects.

For organizations in this sector to truly benefit from the advantages of Big Data, they should, first of all, investigate and understand the way it works, and then to devise a strategy for using data analysis. Big Data offers a wide range of information about the market and consumers, information which, if used correctly, can provide important competitive advantages. Moreover, it is known that tourists' requirements and expectations

are increasing and that, in the context of an increasingly fierce competition, simply meeting them is no longer enough. Innovation thus becomes an essential element in the design process of tourism products/services, and for this to give real results, information about tourists is needed. They want unique, unusual, but custom tailored experiences, but without necessarily expressing their preferences directly. The online environment has become more and more important, everything is different, starting from the way a trip is planned or bought, to the feedback provided after the end of the trip. Big Data is the tool that allows analysis of data thus generated, allowing the definition of a consumption behavior of tourists and providing tourism companies the opportunity to exclusively deliver products/services which please them and, thus, bring more revenue, helping to increase the performance of the entire sector.

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INNOVATIVE AND SUSTAINABLE BUSINESS MODELS IN DIGITAL HIGHER EDUCATION: A COMPARATIVE ANALYSIS OF GLOBAL REACH MOOCs PLATFORMS

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Abstract

By offering worldwide access to high quality content, MOOCs (Massive Open Online Courses) are becoming notable alternatives to the traditional on-campus higher education. As large and complex online and offline systems, requiring sophisticated architecture, these platforms, like Coursera, edX, Udemy, Udacity, FutureLearn etc. are combining advanced hardware and software tools with human-centered practices and processes. They also have the capacity to gather and analyze huge amounts of information, providing a holistic view of all and each of their enrolled learners, of their learning behaviors etc. By using reliable data, by coordinating multidisciplinary high skilled teams, the business models behind the MOOCs platforms are continuously adapting to the changing digital education environment and their stake-holders expectations.

This paper is an exploratory desk research aiming at investigating and emphasizing the innovative characteristics of the main business models behind the transformative power of MOOCs global phenomenon. By using comparative analysis of relevant secondary data and synthesis, the authors are revealing meaningful and valuable insights, in order to provide a comprehensive view of these business models, that are becoming more and more self-sustained and are setting a new major trend in education. Along with other researches, the paper's content can serve as a benchmark in the complex process of reshaping the way education will take place in the future.

Keywords: business models, innovation, MOOCs, sustainability, education services.

JEL Classification: I23; M10; M13

Introduction

Higher education, along with many other industries, is in the mist of important transformations. New trends are set in the way these education services are delivered, and the emerging entities are providing innovative solutions in that sense, strongly supported by

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the advanced technologies. Among them, the Massive Open Online Courses (MOOCs) are becoming major players on the education market. MOOCs are proposing a more democratized, world wide access to quality education, by offering for free, or at low costs, courses produced by top higher education institutions (HEIs).

MOOC platforms are backed by complex, modern and adaptable business models (BM). They are rapidly evolving towards sustainable ones, including financially, and are generating large scale social and economic benefits for all their stakeholders.

Anchored in depth theoretical and empirical research, this paper's aim is to examine the novelty, similarities and complementarities of the BMs behind the emerging global reach MOOCs, in order to generate a better, more integrative understanding of the mechanisms supporting them. Identifying this new trend's characteristics can be helpful for specialists in the field and for HEIs in reshaping their long term strategies, according to the hyper-changing environment.

1. Business Model Innovation - a must in a dynamic environment

The Business Model (BM) concept became a major topic for researchers and a notable presence in discourses in recent years. If in 2000 (Chesbrough and Rosenbloom, May, 2002), a BM keyword search on Google yielded 107 thousand results, in 2016 their number increased more than 400 times, reaching 41,9 mil. hits.

There is no general agreement on a single definition for the relatively new concept of BM. However, among the most popular ones is that of Teece's stating that a "BM describes the design or architecture of the value creation, delivery and capture mechanisms employed (Teece, 2010, p.179). Using similar terms, in Kaplan's view "a BM describes the rationale of how an organization creates, deliver, and capture value (economic, social and other forms of value)" (Kaplan, 2012). Most attempts to define a BM are gravitating around the same processes and descriptors. West and Bogers (2014), for example consider creating and capturing value as the key goals of a BM. A simpler and more general description is that a BM reflects the logic behind an organization and its business strategy (Johansson et al., 2012). For modern BM design new, faster, more effective instruments, fresh mindsets and new skills are required. There are two major sets of parameters recommended for consideration in the complex process of BM design (Zott & Amit, 2010): design elements (content, structure and governance), describing the system's architecture; and design themes (novelty, lock-in, complementarity and efficiency) relating to sources of value creation. Specialists' proposals, over time, regarding BM design include many different methodologies like CSOFT (Heikkila et al., 2010), STOF (Bowman et al., 2008), VISOR (El Sawy & Pereira, 2012), or CANVAS (Osterwalder & Pigneur, 2010). As one of the most widely used methodologies for BM design, both in theory and practice, the Canvas approach provides high coherence in the field, being a valuable analysis tool too. His strong visual 9 interdependent blocks concept encompasses as well known components: the infrastructure (Key Activities; Key Resources, Partner/s), the offering (Value proposition), the Customers (Segments, Relationships and Channel/s) and finances (Costs and Revenues). This strategic tool is further used for our comparative analysis.

There is also a strong need for BM innovation in order for them to meet the challenges of a constantly shifting environment and to achieve success. There are typically 4 widely accepted levels of business model innovation: *transfer*, consisting of moving an existing BM to a new geographical market, is considered as having the lowest level of innovation; through *translation*, an already successful BM in one market is moved into a different market or vertical; a *reformed* BM is the answer to an existing question in a brand new way; a *radical* BM, incorporates the highest level of innovation, leading to entirely new BM, answering to an entirely new question. On each of the four levels, BM innovation can generate multiple layered transformations, in markets, customer relationships, entire sectors, communities, even society and government. BM innovation's importance is also underlined by an increasing number of peer reviewed scientific articles aiming to identify patterns, characteristics etc. and to provide reliable methodologies in that sense. In the context of fast emerging online businesses, a recent article for example (Zhanga, Lichtensteina, Ganderb, 2015, p.241) proposes three mechanisms to be used in developing digital BM: "engaging both non-paying users and paying customers; organizing customer engagement to allow self-customization; and orchestrating networked value chains, such as platforms or multi-sided business models." Experimentation should be also promoted as part of an innovative BM design process (Wrigley, Straker, 2016). The organizational culture has been shown to have an impact on the organization propensity to innovate its BM (Hock, Clauss, Schulz, 2015): while novelty-oriented culture values and support BM innovation, efficiency-oriented ones do not show positive effects in this direction.

By incorporating the latest innovative technologies the business's architecture is changing dramatically, leading to emerging digital BMs, more sophisticated and effective. Among them, the BMs behind the relatively newly founded MOOCs (Massive Open Online Courses) are setting a major trend in higher education. MOOCs are becoming a sustainable and reliable alternative to the traditional on campus learning.

2. Emerging MOOCs': favorable market conditions

Beside state-of-the-art technology progress, there are other strong factors favoring MOOCs' development on the higher education market, from both the offer's and demand's perspectives. Although higher education institutions (HEIs) are implementing new programs and are internalizing technological advances, their dominant characteristics remain: traditional format ("one-size-fits-all" industrial model), low time flexibility, high costs, mismatched outcomes relative to the work force expectations. The online education component added to their offer, was in general a duplication of on campus courses' content, and priced similarly. On the other hand, there is an increased demand for quality education able to provide on-the-go up-to-date knowledge and support appropriate abilities' and skills' development, according to a hyper dynamic work market's expectations. Learners worldwide are also looking for higher flexibility, modern multi-channeled course format and content, while aware that lifelong learning becomes the norm and shifting careers the new path. They are also interested in lower cost education services. This economic criteria among potential learners is becoming stronger, in the context of constant increasing of higher education costs, for on campus under-graduate and post-graduate programs. In U.S. alone, the cumulated graduates' loan debts became the second highest form of consumer debt after mortgages, exceeding 1 trillion \$. The average loan debt per graduate amounted to 26.6 thousands \$ (2012), with over 7 mil. borrowers in default (Woo, 2013).

The market's characteristics paved the way towards new movements in education. Among them, MOOCs' model of development is as a long lasting solution to the old problems of scale and access to education. They are challenging traditional value chains and are transforming the education industry through a new way of delivering higher education services. Innovation and technological advances are consistent and are mutually reinforcing each other on these online platforms, that have opened a new virtual space for learners all over the world. A MOOC's design enables thousands of participants to take it in the same time. Coursera, edX, Udacity FutureLearn, Udemy are the most prominent competitors on this dynamic market, each using the multi-sided platform as their basic online BM. Praised and contested in the same time, they are evolving towards viable innovative and sustainable formats. Founded by 2 former Stanford professors, Coursera was launched in May 2012 and grew its offer ever since, from 1 to 1826 MOOCs (as of March 2st, 2016), along with its number of partners (>140) and that of enrollments (>18 mil.), 2/3 form outside U.S. As one of the leading MOOCs provider, EdX platform's launch followed shortly after Coursera, as the result of an MIT & Harvard partnership. Beginning of 2016, more than 90 global top partners are involved in offering over 900 MOOCs, to an increasing online community, that has surpassed 7 mil. learners, from all over the world. Launched in September, 2013, the privately owned FuturLearn MOOC platform is the European replica to the U.S. origin ones, offering 24 course categories, developed in a 85 members partnership, including best UK HEIs. Over 3 mill. people joined up to date.

3. Evolving business models behind MOOCs' platforms

The complexity of BMs' design is continuously increasing. MOOCs platforms are grounded and engaged in a new disruptive way of doing education. The BMs backing them, enabled by the latest IT advances, can be included into the group of multi-sided platforms, flexible, adaptable, having mechanisms and solutions that can turn them into sustainable and innovative ones. They are environmentally sustainable because they use mainly intangible assets, with small impact on environment, like most other online businesses. They are also socially sustainable by giving access to education and by changing many people's life and tend to become economically sustainable due to their global market reach and adaptive monetizing strategies. MOOCs BMs are shaped to embody their sustainable dimension into their purpose and processes. They are continuously reengineered to achieve higher efficiency and effectiveness. Our in depth comparative analysis, using the Canvas Model (offer, customers, infrastructure and Finance) as main instrument, led us spotting their defining patterns and attributes.

The BMs backing MOOCs platforms are creating unprecedented unique values and are opening new markets. Phrased in relatively similar terms - worldwide access to high quality education - their *value propositions* are reflecting major qualitative and quantitative aspects, with some differentiations.

In *qualitative terms* these BMs' value propositions are providing high utility for the costumers by offering free and/ or at low cost, global access to a wide range of quality online courses, provided by high ranked HEIs from all over the world, that ca support their professional and personal lives' improvement. Coursera's offer of courses (each spanning 4-12 weeks), for example, grew continuously not only in terms of number, but also in that of number of domains covered (over 40% in Business), variety of traditional and growing

topics and types of approaches, including cross-disciplinary ones. Also, the number of languages the courses are delivered into have raised from one (English, as dominant), to 44, either as course's language (depending on the provider's nationality), or as subtitles. EdX platform, as Coursera's main challenger, has the largest share of its 900 courses portfolio, held by Computer Science subject of study (177). Other major competitors like Udacity, FutureLearn etc. are following a similar pattern. However, fine tuned adjustments are continuously made, with offer diversification as major component. Stated as "Specializations" (16/on Coursera), or "XSeries Programs" (116/ on edX platform), or Collections of courses (on FutureLearn), bundled 3-10 courses, scheduled for up to 8 months (finalized with a capstone project) are offered for those willing to acquire specific abilities in a certain field. EdX even extended its offer with High School courses (64) and Professional Education courses (33). Even though statistics shows an important share of foreign enrollments (2/3) and of adult learners, the interest in credit eligible courses is very high for both young people and those willing to complete their unfinished studies. Therefore, intense efforts are made by the actors on the MOOCs market, in order to increase the courses' value through assessment, certification and recommendation by recognized entities. ACE (American Council on Education), for example, developed the Alternative Credit Project (ACP) since that allow online graduates to transfer credits earned in selected courses, to colleges/ universities to complete a degree or credential. Part of this newly created ecosystem are edX (with 11 credit eligible courses) and smaller competitor platforms like: Ed4Online (13), Pearson, Saylor Academy, Sophia, Straighter Line, along with partnering HEIs, accepting credit transfers, in online, on campus or hybrid programs. EdX has also designed, in partnership with Arizona State University, the credit bearing first-year courses, in the Global Freshman Academy Program. The MITx MicroMaster's Credential is the latest edX's tempting offer, for learners worldwide, to successfully complete a set of first semester's worth required online courses (followed by a proctor exam) and then qualify for the MIT's top ranked, one-year Supply Chain Management master's program, with its second semester on-campus.

Even if fee bearing, the personalised certificates, issued for each MOOC graduate, reflecting the name of the course providing university and instructor, are adding value, that can positively translate into enhanced applications for university admission, a new job or a promotion. From completely free online certificates, raising identity doubts (like Statement of Accomplishment, on Coursera, or Honor Code Certificates, on edX), the offer turned towards verified ones (usually using a webcam and the learner's government-issued photo ID and/or a final in-person proctor exam), available for a fee. Verified Certificate, XSeries Certificate of Achievement on edX, for example, are printable automatically generated documents, after successfully passing each course's, or serie of courses's requirements.

Auditing online courses for free is a component available on each platform mainly for those interested only in enriching their knowledge, without certification. Although contested by many (Online Report Card, 2015), in comparison with the on-campus learning, MOOCs proved to be a highly effective learning channel, able to provide valuable, sometimes unique multi-cultural experiences, especially for those in developing countries. As complex adaptive systems, MOOCs are offering, for thousands of learners, real opportunities for interaction, connectivity and virtual, even physical communities' creation. Their connectivism and constructivism can lead to facilitated value networks (Craig, 2015). One of the positive effects of such large cohorts of online learners is the fact that the average time to answer a student's question is, surprisingly, significantly lower than on the on-

campus version. Interestingly, there is a high probability for a question posted online, even if laid in the night, to get at least an answer from one or more course colleagues, within the same or different time-zone. Even if incorrect at the beginning, the answer will gradually be adjusted by other course participants, until it reaches an adequate form (Koller, 2012). Learning is also enhanced through innovative, free of costs instruments like online peer-grading for example, used on several platforms, as an effective assessment tool with results nearing expert evaluation, within high numbers of participants (Koller, 2012).

From the *quantitative perspective*, MOOCs' BMs provide its consumers, risk free education services and extremely high availability at global level, no matter the time zone of the learner, his/her religion, profession, age, previous education etc. Practically, anyone with an electronic device (computer, smart-phone, or tablet) and an internet connection can easily enroll in a MOOC, and pursue it in his/her own pace. Time flexibility in auditing/ re-auditing courses (including rewinding video-lectures), in any environment, is another important MOOCs' feature. They encompass free and/or relatively affordable prices/ fees for which consumers can access the proposed value. Compared with off-line education services, priced at thousands of dollars, prices per an online course, usually range from 29 \$ to less than 300\$ and within 200 - 600\$ span, for a whole package of courses included in a specialization, or Xseries. Payments for verified certificates (if not course included), are usually under 100\$ and official transcripts for credit bearing certificates are done for 15 to 35 \$ each. Some platforms, like FutureLearn, are charging for invigilated exams (£ 119-149/ Statement of Attainment included), or only for issuing simple certificates (£ 34/Statement of Participation + shipping costs).

The *global mass market is these BMs' target*. Huge numbers of persons, with diverse backgrounds are gathering together around a MOOC, interacting and discussing despite time and geographical differences. This includes people of all ages, interested in prestigious education for diverse reasons, many times very busy and/ or with lower incomes. Cross countries connections and communication are supported through the platforms, offering cultural and social diversity that can't be reached in an on-campus program. Along with physical persons some BMs are aiming legal persons too. Coursera, for example, is targeting companies interested in offering their employees tailored online courses, thus capturing new segments of costumers.

Multi-channels are used on the MOOCs platforms, like social media, blogs, forums, collaborative programs etc., in order to cultivate *long-term relationships* with the their customer segments. Through complex online tools, developed in a proactive approach, virtual community creation is stimulated, and communication in all directions is supported, through dedicated forums, newsletters, course recommendations (once enrolled) etc. Shareable Certificate Links on social media, like the direct upload on personal LinkedIn profile, are used by most platforms to strenghten the relationships with graduates. A recently created such instrument is "Community Mentors" on Coursera, supporting volunteers, willing to assist staff in discussion forums monitoring processes. Also, the Global Translator Community (GTC), formed of volunteers and partner organizations, are working to make course content accessible across linguistic boundaries.

The value proposition delivery, initially done only through the online platforms, is including now mobile free applications, as viable channels to access course content.

The analyzed BMs are based on complex infrastructure. Important resources (online platforms; soft-wares, IT specialists and engineers etc.) are used to build and to support a network of carefully selected partners and to accomplish key activities (IT infrastructure's creation and maintenance, managing current partners & attracting new ones; managing the learning communities, etc.). It is important to note that some platforms are open-source (like edX's, for example), leaving both IT and education specialists to build-in new features, or develop more effective learning tools. Most MOOCs platforms strategies are aiming to attract as partners, high ranked HEIs, world renowned professors/ instructors; developers; translators; distribution partners etc., in order to straghten their image.

BM are creating important economies of scale. Teaching in a traditional on-campus way a whole online course's cohort (of thousands of learners), would normally take decades, (Koller, 2012). Even though, aiming the global education market, monetizing is a real challenge for MOOCs' BMs. Their monetary outcomes are mainly value-driven, focused on creating high added-value for their customers. Incomes to cover costs (mainly related to business operations, partnership management and the creation and maintenance of the IT infrastructure) rely mainly on human and intangible (knowledge and expertise) resources. Therefore, economic sustainability is supported through a specific mix of sources for each platform, that include: certifications, recruitment services, licensing, customer tailored training programs for companies, sponsorships. The main revenue stream is that of paid services: tuition fees for credit bearing courses, fees for proctor exams, issue of online/ hard copy certificates, transcripts for credits transfer etc. All platforms are charging amounts that are much lower than for on-campus similar courses (that can go up to several thousands of dollars). By switching its course offer strategy from free to paid, Coursera has solved the high drop-out rates issue (usually, under 10% of the total number of enrollments). According to its own gathered data, motivation is higher and the completion rate increases to over 50% among paying participants. Another positive consequences is the major increases of its revenues. The inclusion of the Specialization option also added to the platform's income. Licensing contracts are another revenue stream. Antioch University is the first to license the use of Coursera's content, lowering this way some of its on-campus programs' costs. In such a hybrid/ blended format, its own professors are only tutoring students, that are learning on online licensed courses.

Each of the competing platforms are searching continuously for new innovative ways to increase their incomes an, as a result their financial sustainability.

Conclusions

MOOCs multi-sided platform BMs are transforming the education industry by setting new trends. They generate low environmental impact and a high social impact.

By innovating processes and services these BMs are engaging new stakeholders and are bringing more socially conscious education. Their high flexibility allow people around the world to shape their learning according to the constraints of their life.

Focusing on the main BM components (offer, costumers, infrastructure and finance) the paper is revealing valuable insights regarding innovative and sustainable solutions to articulate and develop complex networked value chains in higher education.

In our opinion, MOOCs dynamic phenomenon can constitute a valuable resource in understanding future education needs and in providing adequate responses. Further research is required to decipher the DNA of such complex BMs in correlation with the market's evolution.

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SOCIAL MEDIA – KEY ISSUE OF QUALITY SERVICES IN GLOBAL ECONOMY

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Abstract

The higher than ever information accessibility, as well as the increasing number of innovations and the rising level of global competition, pushed companies to adapt and evolve using a wide range of creative marketing strategies in order to attract and gain new customers, as well as winning their trust. Social media is regarded as one of the most powerful marketing tools of the 21st century, playing a significant role in creating value for organizations, as well as having a huge impact on the customer-seller interaction, creating quality services and products. Social media became a key issue of quality services in global economy.

The objective of this paper is to try and reveal the importance of integrating social media into a company's marketing strategy, taking into consideration factors such as customer satisfaction, perceived quality, loyalty, trust and other aspects. Furthermore, we will try to observe the effects a social-media marketing policy may have on the above-mentioned factors.

There is an increasing number of companies that are adopting a customer-centric point of view, trying to create and obtain value by actively integrating customers in their product or service development process. Nowadays, customers are well-informed, they have access to more alternatives and also have a clear idea of which products or services they are searching for. Therefore, they can take a more active, influential role in the process of value creation of firms through social media, which can result in building awareness, strengthening perceived quality, increasing brand loyalty and trust by actively contributing with ideas, thoughts and knowledge in a co-creation process.

Keywords

Social media, marketing, customer relationship, customer behavior, quality services.

JEL Classification

M15; M31; O3; Z00.

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Introduction

Today, customers can establish contact more quickly via new forms of interactivity facilitated by Web 2.0. Web 2.0 has changed the communication model from one-to-many, whereby only the company played an active role, to many-to-many, whereby the collaboration and participation of consumers becomes imperative (Kotler, Kartajaya and Setiwan, 2010). The use of social media among different industries has developed a technological mediated perspective and a “people-driven” economy (Qualman, 2009). Furthermore, social media platforms are important for customers and companies because products, services and information are known and evaluated by different users (Bagozzi and Dhorkia, 2006; Muniz and Schau, 2005). The existing literature offers different ways of describing social media characteristics. Jang et al. (2008) identify a number of social media characteristics: information quality, system quality, interaction and transparency.

Getting closer to customers is a top priority for CEOs, according to the IBM 2010 CEO Study. Globally, the use of social media is growing fast and businesses are have to adapt to customers' behaviour. But simply having a presence is not sufficient. Organizations need to know how to use Web 2.0 and social media because these new technologies give consumers more power and influence over the brand (customer relationship management). Clients are expecting to obtain quality services, customized, according to their demands. This is a strong reason why companies should accept to emerging social CRM as part of their present and future strategy. Social media platforms such as Facebook, Instagram, Twitter, LinkedIn have offered the opportunity for clients to discuss their online reviews, recommendations, agrees or disagree or dissatisfaction regarding different aspects such as product quality or customer service.

Marketing directors should know their audience and identify the benefits of social media to the organizations at all levels. Several of the benefits of social media usage include: customer relationship management, customer engagement, branding opportunities, and market intelligence. Another strong benefit of using social media is receiving feedback from customers – this helps the company to make strategic adjustments.

1. Literature review

Spreading the word of mouth still remains an important marketing tool for customers to learn about new products and services. New marketing strategies developed through the Internet, a revolutionary tool that took the businesses to a whole new level: the online customer experience became extremely accessible and globally utilized. Most of all brands today participate in Web 2.0 through a website, a blog, a Facebook page, Twitter, LinkedIn, or some other online space. Research suggests that blogging grew in popularity in the early 21st century—particularly among teenagers and young adults – but declined as social networking sites flourished (Lenhart et al., 2010).

Social media or technically called ‘Web 2.0’ are “online means of communication, conveyance, collaboration, and cultivation among interconnected and interdependent networks of people, communities, and organizations enhanced by technological capabilities and mobility” (Solomon, 2013). Ellison et al. (2007) believes that social networking sites usage created relationships without having users connect face-to-face.

The new technology of Web 2.0 is a set of open source applications that facilitates the development of knowledge, experiences and the power of users in an interactive way that the users control (Constantinides and Fountain, 2008).

Web 2.0 represents a powerful environment. The statistics of Internet World Stats, 2012 reveal that: 70.2% of the population in developed countries uses the Internet, representing 32.5% of the world's population. The Internet has the highest penetration rate in North America (78.6%), Oceania (Australia and proximate islands, 67.6%), and Europe (63.2%), but Asia has the highest total number of users: over a billion.

Finally, the main types of social media presented above are depicted in figure 1.

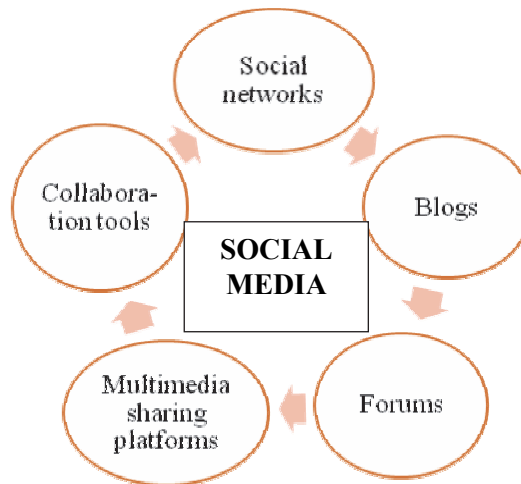


Figure no. 1 The main types of social media

Source: Authors

In this context, Clara Shih (2011) believe that those social networks are changing companies' interactions with their customers in four ways:

1. **Consistent experience** - for companies, this means better coordination across departments, message alignment and integrated systems.
2. **Ongoing feedback** – companies need to put in place new processes to listen carefully their customers' opinions.
3. **Action and response** – the nature of social web pressures companies to respond quickly to customers' demands.
4. **Measurement and accountability** – companies are realizing the importance of KPI's for measuring customer feedback.

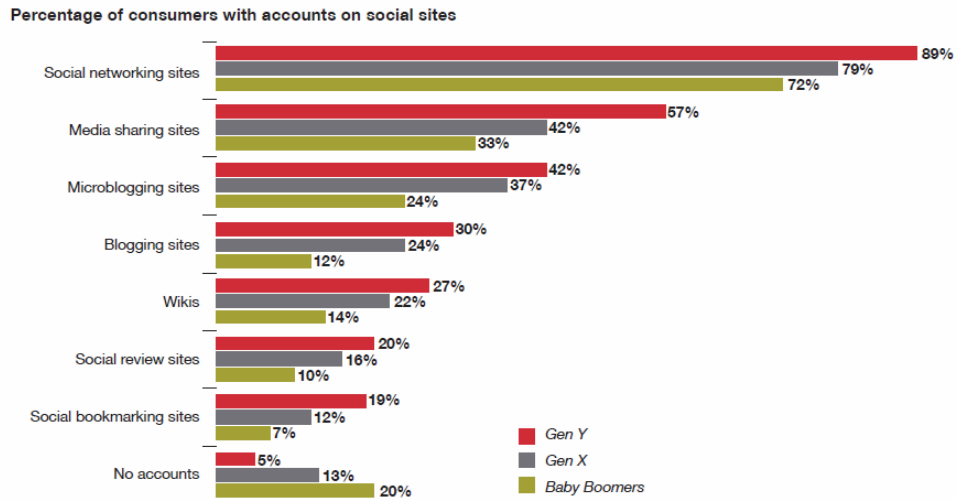


Figure no.2 Percentage of consumers with accounts on social sites
 Source: IBM Institute for Business Value, *From social media to Social CRM: what customers want, 2011*

2. Communication and building relationships

For the past decade, marketers have been on a new era of deep customer engagement. New functions such as social media management allow for relationships with customers to be built faster and in a way that is more durable. The past years have known an accelerated evolution of the social media phenomenon, customers referring to social networks, blogs or online review forums growing constantly. Customers are looking for objective opinions or advice for their decisions to buy. Social media provide a facile, simple, and relatively inexpensive tool for organizations to communicate customers all around the world (Kodish, 2015)

Companies, on the other hand, are looking forward in building "touch points". Some of them have built publish departments in order to feed the increasing demand for the content required by social media, web sites, multimedia sites, blogs and forums. For example, many brands, especially luxury ones, have built editorial departments to "socialize" their brands: building customer relationships and gaining trust and loyalty by producing blogs, digital magazines, and posting constantly on social networks – all effort to intensify both the depth and the frequency of interactions. (French et al., 2011).

Social media is not a junk email, social media has a high impact on consumer behavior and allows high quality interactions customer-customer and customer-company. Consumers love a bargain and companies should take advantage of social networks and use it as a powerful notification tool. On social media platforms, on forums, web-blogs customers can find useful reviews that are much more powerful as marketing tools than expert product reviews (Gillin, 2007). The influence of social media is increasing because of the fast expansion of the users.

Researchers believe that social media management creates value for the company, locating it where customers prefer to communicate. Moreover, engaging social customers who can share information to their extended networks: word to mouth. The idea of word to mouth generated on social networks as a distinct form of media is actually a form of marketing that must be earned, believes Michael Zeisser (2010). Through social media, customers are exchanging ideas over social networks and the information revealed should be used by the organizations to create products/services that satisfy clients' needs and generate profit for the company. Two way Communication and building relationships are one of the most important aspects of doing business and companies must take into consideration these important factors in order to remain competitive on the market (Kodish, 2015).

3. Quality Services through social media

Social media platforms such as Facebook, Twitter, Instagram, LinkedIn, offered the opportunity for customers to discuss their online reviews, recommendations, likes and dislikes regarding different aspects such as product quality or customer service. We can say that social media became a key factor in the customers' buying decision: clients are more and more informed, making researches of products and services through social media, before spending their money. In order to create quality products and services, gain trust and loyal customers, companies should listen to their customers, show interest in their customers' recommendations and show interest in their opinions and ideas. The easiest and less expensive way to this : integrating social media as part of the business or management. Social customer relationship management can build better relationships with customers, gaining trust and confidence for the organization.

Trust and loyalty

Social media represents a powerful tool in building successful customer-supplier relationships by establishing a direct and more personal communication with customers. We believe that companies should invest in social media in order to create their own digital brand and build strong relationships based on transparency and trust.

Trust can be defined as „the belief that the trustee will behave according to our expectation”(Hung et al. , 2004). According to Buttner et al. trust is a key issue in the commerce.

Organizations should know the reasons their clients are leaving them and should try to find solutions to keep them. Loyal customers represent the most important factor and the efforts should concentrate on them.

CRM and social media – combining a new technologies

Social CRM refers to companies that use social medias as a marketing tool in order to create a platform where clients participate interactively in collaborative discussions. CRM and social media serve better clients' need and interests, build them a suport, increase clients experience and help them choosing the right channels for a better collaboration. (Morgan, 2010).

Customer relationship management is about getting closer to clients and developing a better communication channel. Social CRM sustains the customer service, putting the customers first and using the social media account in a way to connect one to one, not just to push marketing materials to them.

Social media can be used as a customer service (CSR) tool for improving the quality of delivered services and/or products. CSR processes presume increasing personal contact avoidance with the customer by knowledge transfer to communities, capitalizing on customer experiences to enhance timely responses to crisis situations and complaints. Using Social-CRM, the services for clients are better managed; their requests are faster solved accessing blogs, social networks, blogs and forums.

Feedback

Customer feedback influences an organization's emotional climate and organizational health. (Kipfelsberer et al., 2016). Companies add value and gain health for their entire organization through both positive and negative feedback. Getting closer to customers became a priority for the organizations that have to adapt to this rise of social media.

Conclusions

In this era of new technology, social media is a must for companies that want to survive in a changing environment and marketplaces. Technological advancements and the development of social media help establishing a two-way communication.

Used as a marketing tool, a CRM system, a building relationship platform or even as a CSR, social media became a mass phenomenon. As studies reveal, is growing fast and expanding globally.

In this article, we tried to emphasize the importance of social media and its influence on consumer behavior. Traditional communication theory helps companies utilize social media in building strong, lasting and beneficial relationships with customers. Through social media, companies listen carefully to customers' opinions, providing on going feedback, acting and responding quickly to customers' demands. In order to obtain quality and customized services, organizations should connect with customers according to their mainstreams, taking into account habits and hobbies. As studies reveal, the numbers are growing and more and more users access daily social media tools.

Nevertheless, SCRM is a powerful new trend, combining social medias with customer relationship management in an intergrated system, generating a competitive advantage through its relational characteristic feature. Putting the customer first, social customer relationship manangement, is a hybrid tool, combining social media with CRM, in order to satisfy customers' needs.

The shift from a traditional transactional approach to one that focuses on relationships and online communication improving users' experiences and increasing profit and adding value for the company, will cultivate and upgrade connections and relations. This revolution called social media transforms companies and the entire management structure of the company that must be reconsidered. Organziatons should connect with customers according to their customs and habbits – through social networks - in order to obtain quality and customized services, satisfying their demands and requests.

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QUALITY AND PERFORMANCE BY RESOURCE CONTROL STRENGTHENING

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Abstract

The issue of how resources are used is in the contemporary context of rapidly shrinking reserves more actual than ever. Not only from an environmental point of view, but also from the perspective of securing the necessary framework for sustainable development, reducing the use of resources while maintaining output levels has become a key component in the elaboration of strategies. Focus on innovation and quality is meant to support the value creation chain by either optimizing resource usage, or replacing old resource types with new ones all together.

The purpose of the paper is the identification of the relationship between innovation and quality assuring processes and usage levels of resources.

The methodology uses a qualitative and deductive approach on the processes of resource usage, with focus on sustainability and durability aspects of organization activities. Resources, not only financial and material but also intangible resources such as information are studied from this point of view. The conclusions of the paper will also try to underline some synergy effects of improved resource usage by quality and innovation processes.

Keywords

Resource usage, innovation, quality, performance, synergy effects.

JEL Classification

D81; M12; M21; M5; O15.

Introduction

The term “resource” has a very broad spectrum of meanings and significations. From the point of view of the economic theory, resources are of three kinds: land, capital and human capital (Stiglitz and Walsh, 2005). Companies, especially those acting in industry, will consider resources to be raw materials, equipment, and energy and so on. In short, each sector will have its own acknowledgement of the term resource, which can however be summarized by the following definition: Resources are the totality of tangible and

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nontangible input elements that help an organization fulfill its purpose by generating output. Newer assertions on the issue count information as one of the main resources of a company, thus putting great strain on the processes designed to manage information from both the inside and the outside of the organization.

The issue of efficient resource usage is neither a new one, nor one that lacks debate in the academic world. Many studies (Bowman and Hurry, 1993; Tong and Reuer, 2007; Trigeorgis, 1996) approach this issue aiming to discover mechanisms in which strategic decision making processes are influenced by increased innovation performance (Dissanayake, Zhang and Gu, 2015). Basically, since the dawn of economic activities, both entrepreneurs (in every form – merchants, guilds, craftsmen, bankers and many more) and state organizations, such as armies, were concerned with maximizing results with a limited amount of resources at their disposal (Dumitrescu and Dumitrescu Peculea, 2014). However, in the context of growing concerns about dwindling natural resources such as fossil fuel sources, wood, ore, and water and so on (setting aside environmental issues, which are at least equally concerning), the issue of efficient resource use, is gaining new and unparalleled importance.

An efficient use of resources does not only imply rationality and quality in the management of internal processes, but increasingly, a process of innovation of processes and technologies (Klingebiel and Adner, 2015). Thus synergies (Dissanayake, Zhang and Gu, 2015; Woolley et al., 2010) are sought, by accenting responsibility and sustainability of economic and/or administrative activities.

1. Mechanisms of resource usage

Resources are not simply used; they never were. There have always existed mechanisms which governed resource allocation and usage processes. As business processes became more and more complex, so did these mechanisms. As the focus of organization slowly shifted from just making profits to ensuring a sustainable future for these organizations, these mechanisms were fine-tuned, to meet expectations of both share and stakeholders.

In the modern context of organizations, the importance of resources has shifted from mere inputs into value creation processes to an essential element in development strategies (Burke and Litwin, 2001). Mintzberg defines strategy as an action plan, action pattern or tactical movement (Mintzberg, 1989, 2007) or, in other words, a set of coordinated actions which are meant to help an organization reach its objectives and goals which are focused on range, resource allocation, unique selling proposition and synergy. Thus, strategic approaches to resource include (see also Hitt et al., 1997):

- Identification of key resources to the organization;
- Determination of the organization's capacity of processing these resources;
- Ascertainment of the resource's capability to ensure the comparative advantage or unique selling proposition.

The strategic approach to resource allocation and is conducted on three levels, which converge into the need of organizations to act innovative also in this regard:

- **Efficiency** – increasing resource productivity;

- **Resource access** – ensuring long-term resource availability;
- **Reliability** – ensuring proper quality levels of available resources.

These three dimensions are represented graphically in figure no. 1

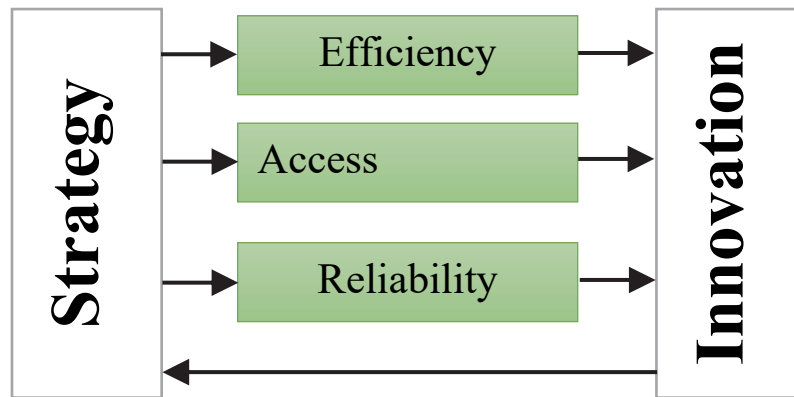


Fig. no. 1. The dimensions of strategy regarding resource allocation and innovation
Source: Authors

In the current economic context, characterized by a growing scarcity of resources yet growing demand for products and services, innovation is vital for the long term development of the organization. For the three strategic dimensions of resource allocation, innovation acts as follows:

- **Efficiency** – new technologies help companies to either have better outputs for existing resources (a very good example in this case is the growing efficiency of internal combustion engines), or finding new resources to fulfill existing tasks (just like the emergence of electric cars as an alternative to classic propelled cars);
- **Access** – finding new solutions to old problems does not only solve an efficiency issue, but also an accessibility issue. By replacing old resources with new, sustainable ones, the accessibility issue is addressed;
- **Reliability** – innovative processes are essential for the assurance of proper quality levels of both resources and output.

Innovative organizations must implement an innovation oriented culture throughout the entity, based on:

- Acceptance and embracement of new technologies;

- Staff motivation for innovative thinking throughout the organization;
- Social and environmental responsibility;
- Efficient change management processes;
- Innovation oriented development strategies;
- Support for the personal and professional development of human resources;
- Proper identification and understanding of market needs;
- Efficient control mechanisms like internal and external audit and financial control (Dumitrescu Peculea, 2015), and ;
- Sustainable and organic growth processes.

Organizational innovation is based on creating opportunities by exploiting technological, human, material, financial and information resources. Through the potential of innovative processes, organizations are able to reduce the amount of resources used in their value creating chain and increase their efficiency and overall performance by also acting responsibly from both a social and environmental point of view.

2. The quality of resource usage mechanisms

Quality is no longer a term that can be confused with reliability (in its narrow, statistical sense of number of product failures per lot). Over the past decades it has evolved to a whole philosophy, which affects every aspect of an organization's activity. While it is still oriented towards the reduction and/or elimination of failures, its focus has shifted from the actual failures, and the procedures associated with repairing and containing their effects, to prevention against failure by identification and elimination of the internal causes of failure. Policies and philosophies regarding quality have been implemented in organization in order to increase profits by binding the customer to an organization, not only through price reduction but through overall increase of the quality of client-organization interaction. Thus Total Quality Management and later Six-sigma processes have proven their effectiveness in ensuring durable client relationships. Nevertheless, these philosophies all start from the basic idea that good quality resources lead to good quality outputs and stable client relationships.

Just like in the case of innovation, it takes an organization wide commitment to quality. Thus staff members must be motivated in order to comply with the organization's quality mission and framework, motivation in its narrow sense consisting of correlations between the needs, aspirations and interests of staff members to the achievement of objectives and the fulfillment of duties, competencies and responsibilities expected by the organization. (Nicolescu, 2000; Nicolescu and Nicolescu, 2008). Without taking into account content elements, motivation plays several roles within the organization:

- **Managerial role** – the most direct role, consisting of determining through both leadership and authority in order to convey organizational values, strategies and missions and to ensure the exertion to an adequate level of its functions: forecast, organizing, coordination and control;
- **Organizational role** – meaning the motivational impact of motivation on the organization’s performance as a whole;
- **Individual role** – targeting the satisfaction of every employee, his evolution within the organization, and his personal performance;
- **Economic role** – meaning the direct conditioning of remuneration of each staff member to his working performance. This also includes incentives to employees for innovative thinking and acting within the organization;
- **Social role** – it is a known fact, that the reputation of organizations on the labor market is a key element of its success in attracting high quality work force. On the other hand, working for such an organization is also a symbol for social status.

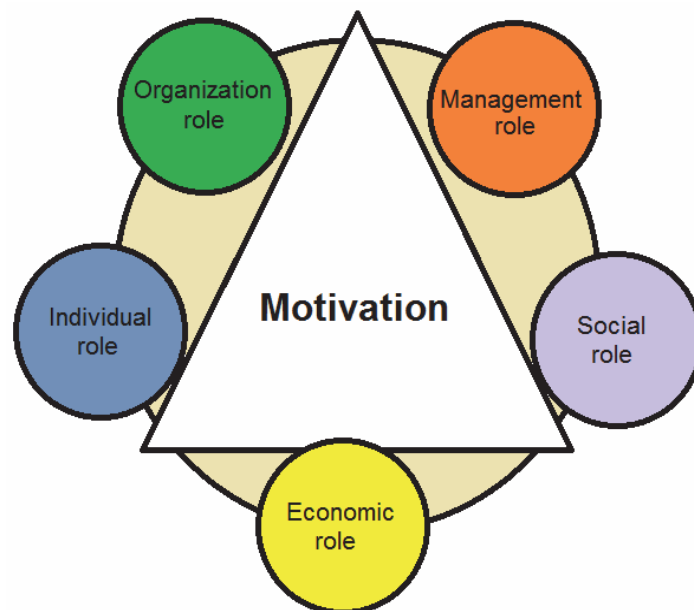


Fig. no. 2. The different roles of motivation

Source: Authors

Any organization can achieve through a efficient quality philosophy the desired output quality level (Broome, 2013). However, it is essential for the quality preoccupations of any organization to cover all activities which are taking place within, starting with resources used and ending with the management processes.

Conclusions

Innovation and commitment to quality go hand in hand when it comes to resource usage performance (Christensen and Raynor, 2010). Both concepts are meant to increase the durability of organizations by reducing the amount of resources needed in the value creation process. By channeling resources towards innovation and quality assuring processes, organizations aim to achieve better overall performance.

Also, through synergy effects, innovative processes and organization cultures oriented towards innovation and quality are helping entities act responsibly from social and environmental points of view. The reduced amounts of used resources, the increased efficiency and performance are key factors to the durable growth and sustainable development of organizations from both the private and the public sector (Brighton and Gigerenzer, 2012).

The exploitation degree of new technologies, are becoming in the contemporary development context of an information society a calling card for every organization, community or even country (Drăgănescu, 2003). By gaining the most of the possibilities offered by the information technology organizations can secure the necessary infrastructure for cost effective innovative processes.

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CONSUMER BEHAVIOUR RESEARCH ON AIR TRANSPORT SERVICES PRICE IN ORDER TO MAINTAIN THE SUSTAINABILITY

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Abstract

In the current period, as a member of the European Union within Romania is included, the economic and social dynamism Romania has been growing stronger and stronger, registering multiple mutations in various fields. In all European Union countries worldwide but especially in Romania, the service sector has been experiencing an unprecedented development.

When designing this research, several stages have been covered, as presented in the specialty literature (Cătoiu, 2009): decision problem definition, scoping research, identification of research objectives, defining the studied community, selecting the method of data collection, collection analysis and interpreting information.

The method of collecting information was the direct research of survey type, using the structured interview technique. It was applied in the period April-May 2014, at the respondents' home, the researched statistical community was made up of people aged over 18 who have traveled at least once by plane. All relevant research results can lead to better business marketing and business management in the airline..

Keywords: Sustainability, air transport, services, marketing research, strategy, purchasing behavior, fidelity.

JEL Classification: M31

Introduction

Taken as a whole, transports have an important contribution to economic development in most countries, their share varying between 3% -7% of GDP. In our country transports play an important role in the economy, accounting for a share of about 4% - 5% of total employment and participating in the creation of GDP.

Applying a sustainable marketing is the process of creating, communicating and providing value to consumers to satisfy their needs and meet the requirements of conservation without

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jeopardizing the possibilities of meeting the needs of future generations (Praude and Borman, 2013).

Many studies on the marketing of a service underline the importance of customer orientation. The high cost of air transport is currently leading the airlines wishing to remain competitive on the market considering what brings value to customers to meet their needs at the highest level (Fu, 2013).

The market price reflects the supply-demand ratio, this one being formed from permanent confrontation between the two sides correlative. Confrontation is achieved in practice from individual transactions, market price is a resultant periodically adjusted so that the two sides correlative to equilibrate. Supply-demand ratio appears to be caused by a number of formative factors of supply and demand. Identify them and how they influence the price of special importance for marketing the transport company.

Determining the most suitable price for a product or service requires every entrepreneur to consider a number of factors and how they interact with one another (Scarborough and Zimmerer, 2006).

1. Price in air transport services as a key element of business sustainability

In the current company operating on this market has countered a number of external factors and the possibility of creating a complex and integrated its internal factors requiring a sustainable path. The rules of this market, the European Union's intention to include aviation in the ETS (Emission Trading Scheme), quantification of carbon emissions (Steven and Merklein, 2013), but also some green marketing initiatives that push companies to find a fine balance between communication of environmental aspects of the marketing mix green while adapting to the standards of communication and implementation (Mayer, Ryley and Gillingwater, 2015) leading to the pursuit of sustainable activities, ensuring long-term success.

Innovation in marketing business on this market is very important and could include: improving facilities and services, promoting an airport known by companies targeting new routes, getting data from market research to delimit a market potential for removing obstacles lobby future developments, end-specific strategic marketing partnerships, flexible tariff policy, focusing on advertising and promotional campaigns, provision of necessary planning trips for passengers, improve the management system (Halpern, 2010). Airlines must constantly invest some financial resources to develop and maintain IT platforms and the operational mechanism geared towards efficiency. Fierce competition and high costs of oil, lead airlines to a website building and a perfect information system (Tsai, Chou and Leu, 2011).

Diversity tariff rates is accompanied by very large differences. For example, for the business class (the main source of revenue for airlines as traditional economic model of the sector - brought about three quarters of total revenue representing only half of the total number of passengers) - the charge for a ticket purchased very close to the trip moment is 5 times higher as an average than the lowest rate charged (Hoffman and Bateson, 2006).

In terms of pricing a company has on hand more possibilities, taking into account the scope, the consumer profile, company image, etc.

Taking into consideration the strategic alternatives, the company can achieve combinations thereof defining an accurate, complete, consistent price strategy. The company must decide how to position the offer, with the essential elements of price and quality. Particularly valuable are the options based on price-value ratio (Kotler, 2005).

The based pricing strategy is more competitive than the decision on the price reaction involving the choice of the way of adapting the competitive strategy of the firm to the new situation (Nagle and Hogan, 2008).

On the basis of price benchmarks and the factors of influence can be an option to align with the market price, or higher prices - prices of "skimming" the market, aimed at rapid recovery of costs of development and marketing of the offer, or lower prices - of penetrating the market, aimed at the rapid growth in sales volume (Lee and Carter, 2005).

Magical prices widely used as an alternative tactics involve the use of prices whose final figures are at a lower level of round numbers. For example, it was reported that 60% of the prices of all advertisements published in American newspapers keep ending in figure 9 and 64% of all prices in the UK, and this practice has been steadily growing (Harris and Bray, 2007) . A research carried out in different cultural environments, however, shows that people in high contextual backgrounds are less prone to the illusion of decreasing prices , earnings or values created by the odd terminations and rather offended by such a manipulation attempt (Nguyen Heeler and Taran, 2007).

Regarding the influence of the Internet on prices, there are a variety of studies on the comparison of prices at online level and at traditional prices, especially in terms of their level. Although studies show that online prices are generally lower compared to traditional prices, it can be asserted that these prices are similar to those that would form under conditions of perfect competition. Moreover, there are a number of studies showing that in some areas, the traditional price level is higher than the level set by the internet. But consumer expectations aim usually at the online prices as being lower than the traditional ones (Karlsson, Kuttainen, Pitt and Spyropoulou, 2005). It can be said that the literature provides conflicting results on the comparison of prices at online level and at that one of traditional prices. This may be due to multiple causes, such as the selection of products and markets, differences in research methodologies differences of calculating delivery costs, etc. However, it is generally accepted that the Internet hasn't had dramatic effects as expected and the companies might have many opportunities that can be exploited in the online environment (Sotgiu, Ancarani, 2004). The online environment provides so many opportunities specific to the online retailers impacting substantiation and pricing (Monroe, 2003).

2. The behavior of the consumer of air transport services

The research on the consumer behaviour, with its implications for pricing, is a clear objective in terms of marketing. Increased consumption increases sales and profits, costs essentially causing variation in consumption and price perception resulting costs (Harvard Business Review, 2008).

Hidden preferences play an important role in consumer purchasing decision air transport services sector. In assessing hidden preferences, one can see that the price is actually placed before direct connections and is by far the most important factor that determines the purchase of a ticket (Bieger and Wittmer, 2006). Regarding knowledge of consumer price noteworthy phenomena of memory and reconstruction distortion (Xia, 2005). The research on price awareness focused on price remembering and have proved that most consumers do not remember the paid price .

Number of passengers per capita will continue to grow in all regions, as shown by estimates. (Oxford Economics, 2009).Accordingly has been registered and there will be further an increase in air transport routes. Within these, the demand for business travel is

higher on domestic routes, the air transport being almost addicted to this type of request. Thanks to the improving of global communication and information systems, the demand for business travel on international routes has declined and probably will continue to diminish and, in the case being involved mostly the journeys for visiting subsidiaries, branches and implantations abroad, as an expression of the business globalization of the big companies. Holiday trips tend to grow faster than business, for which the market might reach the saturation threshold. The proportion of holiday travels to business travel is currently about 80/20, that is the opposite of the immediate prewar period, when business travel predominated (Airbus, 2009).

3. The applied research methodology

The research aims at studying the implications of the consumer behavior on the price of air transportation of people who have traveled at least once by plane. The price as a researched problem, presents a number of features, rather providing marketing research a complex character. One such character is determined by the price place in consumer behavior, particularly this one's perception either directly or indirectly, through the own links with the quality and value of services.

Such a situation has imposed first a grouping on general objectives of research then their structuring on derived objectives. At the same time some research objectives have been pursued by bond price - as expressed by a number of specific characteristics of air transport services: airline type (a traditional - low cost one), flight class, etc.

In this sense the research objectives are as follows:

The overall objective I - to establish the price held in choosing an airline (direct questions) and a number of its specific objectives derived: identifying the main criteria for selecting an airline (traditional or low-cost) to purchase a ticket, identify the most important criterion for the choice of airline (traditional or low-cost) to purchase a ticket, determining the overall goal of the journey of a passenger;

General Objective II - determining preferences, buying motives and attitudes towards companies with different price strategies (direct questions) and a number of specific objectives derived thereof: determining the type airline preference to different price strategies (traditional or low -cost) to determine preferences flight classes with different prices, determining preference to a particular airline various pricing strategies (traditional or low-cost), determining attitudes towards passengers on aircraft services offered by companies low -cost, determining the period of time before purchasing the ticket, the correlation between income variables and the purpose of travel, between the variables income and type of company preferred, the variables income and travel class, frequency of travel during a year, between the income variables and criteria for choosing an airline.

Defining the studied community, the unit of observation and survey unit - the studied statistical community was made up of people aged over 18 who have traveled at least once by plane. Therefore both the observation unit and survey unit were the air transport service consumer.

The method of collecting the information was to direct research survey type. Information collection instrument was a questionnaire. It was applied in the period April-May 2014, at the residence of the questioned people, the answers being recorded by interviewers (students who applied the questionnaire in the course of practice).

The sample size was determined using the following formula punctual statistics (Cătoi, 2009)

$$n = \frac{t^2 * p * (1 - p)}{\Delta\omega^2}$$

where:

- n - is the sample size or the total number of the questioned people;
- t - is the coefficient associated to the probability of guaranteeing the research results;
- p - refers to the non-percentage share of the characteristics investigated sample components;
- $\Delta\omega$ - is the margin of error;

For this study it has been established a probability of guaranteeing the research results of 95%, resulting a value of the associated coefficient t of 1.96. The value considered for p was 0.5, and the margin of error of $\pm 3.54\%$.

Therefore,

$$n = \frac{1,96^2 * 0,5 * 0,5}{0,0354^2} = 766$$

questioned people.

Sampling method consisted in the random stratified sampling; layers were formed according to demographic variables, the most important being considered gender, age and income level.

Harvesting information was made up approximately 55% among female sex individuals and 45% among those male. Sample distribution by age was not proportional in nature, because the number of people who are interested in travel and travel is not similar to that existing in statistical yearbooks. The age range with the highest frequency was that one of 18-25 years (494 questioned people), category of people who have the greatest desire to travel and so great importance for airlines, followed by segments 26-35 years (109 questioned people), 46-55 years (77 respondents) and 36-45 years (61 questioned people). The lowest frequencies were observed in the age groups 56-65 years (20 questioned people) and 65 years (5 questioned people). Income is a very important variable in terms that directly affects access to air transport services. The largest share in the sample hold people with a per capita income of the family member between 1000-2000 lei (267 questioned people), below 1,000 lei (196 questioned people) and between 2001-3000 lei (168 people) followed at a significant distance for those with a monthly income per family member of between 3001-4000 lei (69 questioned people) and 4,000 lei (66 people). As shown most people interviewed average monthly income individuals.

Although not taken into account in defining layers research, structuring sample was taken into account other variables such as the level of study, marital status, number of dependents under 18 and area of residence.

The majority of the sample was made up of people with secondary education (high school or college graduate), (424 questioned people), followed by: people with higher education (263 questioned people), people with post-graduate studies (66 questioned people), people with elementary education (13 people). The highest frequency of responses was recorded among unmarried people (539 questioned people), followed by the married segment (144 questioned people). A special category defined in this research is that of unmarried individuals, but living with a partner (57 respondents).

The lowest percentage in the sample is held by the category of persons divorced or widowed (26 questioned people). Approximately 85% of questioned people do not have

dependents, other 9% have a dependent person, followed by questioned people having 2 dependents (38 questioned people in absolute frequency) and questioned people with three or more than three dependents over 1%. Regarding the variable of residence, the urban environment constitutes the residence for approximately 93% of questioned people (712 people), the remaining 7% stating that live in rural areas (including areas on the outskirts of Bucharest and other urban areas).

4. The results of the research

Research has revealed that price is the most important criterion for the choice of the company 83.03% of respondents, followed by 62.27% flight safety, quality services on aircraft with 38.51%, with 34 destination airport 33%, with 31.59% flight schedule, company reputation by 31.2%, 28.07% and punctuality of flights with loyalty programs with 5.74%.

The most important criterion in choosing a traditional airline or one with a low-cost price was 44.52% of the total questioned people. The second major criterion was considered the safety - 34.6%. This shows that most people want to *călătorească* the lowest price maximum or safe as possible. The importance of other factors was: quality services for on board with 4.57%, 4.18% reputation airline, destination airport with 3.92%, 3.39% flight schedule, flight punctuality 3, 13% and 0.91% loyalty programs.

Like how to buy the ticket people may opt for more options. The main way to buy a ticket online is the respective company's website for convenience and safety with 59.14%.

Other ways to buy a ticket were in order according to the study: 20.5% travel agencies, agencies that airline 20.37%, 14.49% telephone, 9.53% online on another site.

The research pursued also the quality - price ratio. In this regard it has been asked a question for answering whether the price paid for a ticket to a traditional company is fair compared to services that are as a benefit in general. Responses were collected on a Likert-type scale with five stages (from -2 to +2 disagree strongly agree). The score obtained was 0.82, which demonstrates that the majority of passengers are satisfied with the services they receive from a traditional airline compared to the amount of money paid for the ticket.

Also on a Likert-type scale with five levels, there were collected answers regarding the traditional air services if they seem as being expensive. The score obtained was 0.62, indicating that questioned people consider these relatively expensive services. This is demonstrated by the comparison between the prices of flights to a traditional company in Western Europe and our country.

Another objective of the research was to determine the general purpose of a passenger journey. The question of the questionnaire allowed the formulation of more choice, these percentages being calculated on the total sample counted 766 people.

Tourism and visits to relatives together 93.61%, an obvious through the development of tourism in Romania and more people leaving abroad on holidays and beyond. Another motivation is given for visits abroad of course, a very large proportion of people in Romania working abroad. The other reasons related to business, labor, education occupies a small percentage 34.08% of the total respondents.

In the sample studied, people prefer low-cost airlines with 48% of total respondents, due to low prices. Traditional companies are the second most popular with consumers at a rate of 31%. Such companies have the advantage of a very high reputation and a long history in this industry. The remaining individuals in the sample did not respond (2%), or are

indifferent type of company (19%), it is important for other factors in the selection of an airline.

In the studied sample, people who have no preference to a particular airline represent the largest share of 79.9% of total questioned people. This shows that air transport market in Romania is made up of passengers 'migrate' from company to company, depending on different variables pricing, offers, benefits, recommendations, etc. The remaining 20.1% prefer a particular airline, the results showing that the airlines' frequent flyer programs and traditional low-cost can be improved.

In the case of a low-cost score, it has been obtained was 0.81, which indicates that most passengers are satisfied with the services they receive an airline low-cost compared to the ticket price, which is usually lower. Also on a Likert-type scale with five stages were collected answers concerning air services if they are low-cost seem expensive. The score obtained was -0.33, indicating that respondents consider these relatively inexpensive services. This can be demonstrated by a comparison between the prices of flights to a low-cost company with a traditional company.

Conclusions

This paper aims in terms of market research, at creating action guidelines for the frameworks of the decision-staff at the level of any airline companies for a sustainable development by providing primary information obtained among demand carriers.

The aimed research enabled conclusions to be drawn regarding the quality of air transport services and also of the traditional low-cost ones and other aspects of price expressed by the questioned people. The phase of analysis and interpretation of the collected information allowed the liability to the central purpose of research and hence the objectives set out in the preliminary stage of research. The price itself as a tool and quality - price ratio, is a central element to each company's efforts and their foundation, especially for customers who have major implications in the concerned business. In addition to the concept of price there were also followed other aspects of traditional and low cost air services as for maintaining a long-term sustainability.

As the limit of this research it can be said that it is the truth of the information obtained from the questioned public. For a future research, there is required a data collection from individuals who travel often by plane not only for tourism purposes but also for business. In the management of each air transport companies and low-cost one embodied by the paper must stand a sustainable business marketing policy, the concerned research providing the relevant information necessary to substantiate it.

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DIGITAL MUSIC CONSUMPTION BEHAVIOUR OF YOUNG ROMANIAN CONSUMERS

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Abstract

During the last centuries, due to emergence of new technologies there has been an increase of consumption at the global level, which was also the case of digital music.

As a consequence, two types of consumers emerged: legal and illegal ones. On the one hand there are digital music platforms, such as streaming services, offering licensed digital music and on the other hand there are individuals who prefer pirating digital music. Thus, the current research tries to establish whether the paid models of digital music are lacking users or not, on the market of Romania, more precisely, undergraduate and graduate students of The Bucharest University of Economic Studies. The study reveals the sources from which digital music is obtained and the reasons for digital music purchasing and unlicensed downloading. This study was designed to investigate digital music consumption behavior of young Romanian consumers. The method employed can be categorized as quantitative, exploratory and descriptive. This study showed that the students use both legal and illegal channels to download music files from the Internet. However, the digital music piracy rate is very high in Romania and reduces the profits and income of artists, music companies and online music stores.

Keywords: digital music; piracy; streaming; subscription-based; illegal.

JEL Classification: L82, O34

Introduction

Currently, global music business appears to be facing difficult periods as far as physical music sales as well as consumption are concerned. Nowadays the digital market hold a key position in individuals' preferences, most of them acquiring their music digitally through legal or illegal downloading of tracks. In this context, music piracy or illegal consuming should be prevented. In order for this to happen, consumers should be made aware of the necessity of licensed music.

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1. Literature Review

1.1. Digital music industry

Digital music market has been growing rapidly over the past few years and it is also a “fast-expanding business model” (IFPI Digital Music Report 2012, 11). According to the IFPI, International Federation of Phonographic Industry and their Digital Music Report 2011 (2011, 6), consumers can be seen as the driving force towards the new business models, e.g. subscription services. Therefore, the recording industry is also more open for these new business models than ever before (IFPI Digital Music Report 2011, 7). Based on the IFPI Digital Music Report (2010, 4) a few years ago consumers were able to buy albums only in few different formats. According to the same report, this specific reason made music companies create collaboration networks with advertising-supported streaming services such as Spotify and Deezer. People now can access albums and tracks in hundreds of formats. It also affected the partnerships with mobile operators and Internet service providers (ISPs). In fact, subscription services are reliant on these collaborations. Mobile operators and ISPs have a solid consumer base and it makes it easier for subscription services to introduce their services for a broad audience. The current revenue division in music business is going rapidly towards a digital music environment (see Figure 1).

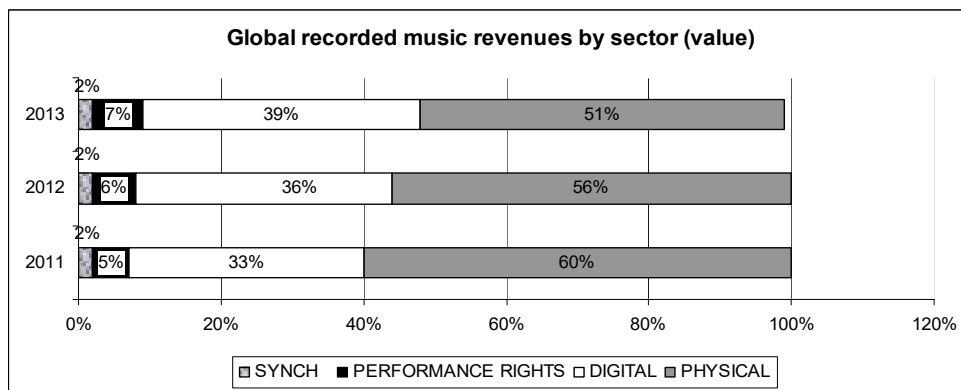


Figure 1. Global recorded music revenues by sector (value)
 Source: IFPI Recording Industry Numbers 2013

The digital world for music is seen as a positive environment. The diversity of business models and revenue streams is part of the digital era (IFPI Digital Music Report 2010, 4). Digital music industry offers a wide range of different music services for consumers. However, as this research focuses on streaming services, the following chapter aims to introduce the variations of streaming service models in general with the trending examples in the market. Streaming as a concept means delivering audio file (music) to an end-user with no need to download the file on a specific device or location. This means that the data is transmitted in a continuous flow. (Gallagher 2008). Music streaming can be done in various ways. Some of the streaming services offer ad-supported music listening for free and subscription-based services provide ad-free listening with a paid subscription. (Music Matters: Learn About Digital Music). Subscription services are also considered a trend phenomenon in today’s world, and the revenue of these services increased by 51.3% in

2013 (IFPI Digital Music Report 2014). Based on the Figure 2 and the revenue shares that it describes between different services, currently the main digital music consumption is focused on downloading and subscription services. However, it can be said that the vast majority of consumers actually prefer subscription services, and the market share of these services is highly increasing. According to Max Hole, the CEO of Universal Music Group International, this wide range of subscription services, along with the developing mobile technology, is a new way to reach out to millions of consumers (IFPI Digital Music Report 2014, 10). The following statistics (Figure 2) also support this statement by showing how rapidly subscription services have increased within a few years.

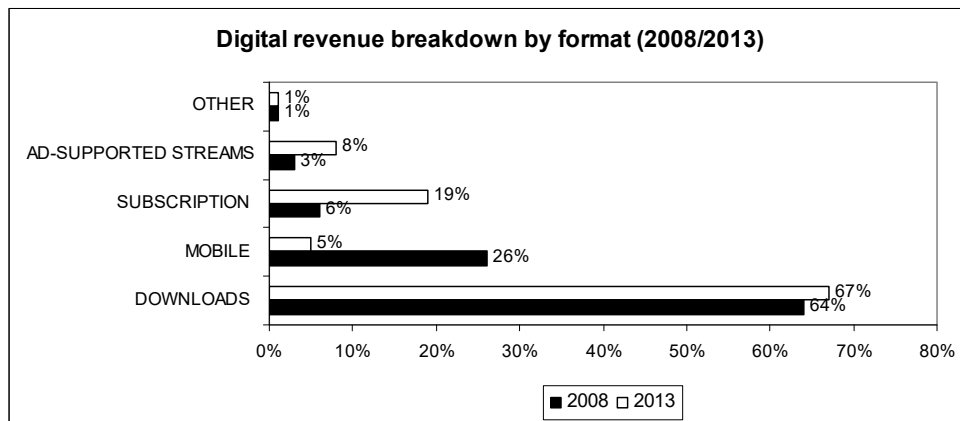


Figure 2. Digital revenue breakdown by format, 2008 – 2013

Source: IFPI, Digital Music Report, 2014

When reaching consumers with advanced mobile technology, it is also important to focus on engagement with licensed services. Record companies are in the position of licensing various services that are successful in meeting consumer preferences. People become more aware of different licensed services and they also choose specific services based on what qualities they value the most. (IFPI Consumer Research). Innovations of the digital retail sector have shown tremendous growth and these services offer different qualities to music listeners. According to IFPI’s publication of Recording Industry in Numbers, many music services are expanding in social networks, integrating in the cloud and as stated before, offering the possibility to use the service with multiple devices (for example mobile phones). The development within the mobile industry adds value and simplifies the user experience. For example, many digital retailers in today’s world launch mobile applications. (IFPI Recording Industry in Numbers 2013, 16-17). Max Hole, Chairman and CEO of Universal Music International, says in IFPI Digital Music Report (2014, 10) that since the use of mobile devices has grown within the past few years, it has actually increased the usage of subscription or streaming services at the same time.

1.1.1. Digital music piracy

“The music industry is a business whose success depends on certainty in the legal environment and on copyright law”. (IFPI Digital Music Report 2014, 40) Expanding digital music market has a clear effect on music piracy. Streaming services are offering

great solutions for music fans with decent prices. However, music piracy is still an issue. One of the main problems in the digital music age is illegal file sharing in computer networks. It affects the revenue flow of culture industry and therefore decreases the possibilities to invest in new productions, for instance. The definition for digital music piracy is part of an act in which one is copying, distributing, and using someone else's intellectual property without permission. Peer-to-peer (P2P) networking, which is based on sharing and communication in the computer network, has played a major part in the downturn of recorded music industry. Illegal file sharing has reduced legitimate purchases of recorded music and changed the ways to acquire free music via illegal mediums. (Wikström 2013, 121- 123). It has also been noted that due to technology development, there are threats on tablet and smartphone-based mobile piracy. Unlicensed services are currently used approximately by 26 percent of the Internet users worldwide. Intellectual property, such as music, is usually licensed and protected by law. The International Federation of Phonographic Industry (IFPI) has an important role in every nation in preventing piracy and making sure that music creators and IFPI members have the most favorable work environment (What we do?). Based on IFPI's Recording Industry in Numbers (2013, 43), on a global scale the digital music piracy continues to remain vast. The recording industry's opinion stays consistent by believing that the responsibility to tackle piracy belongs to every party in the digital economy. According to the IFPI's report (2013, 43), for example following actions are executed against piracy: blocking websites, reduction of advertising revenue, and legal actions against certain online piracy services. As the law protects piracy, how to prevent it in the most effective way is a different matter.

1.1.2. Future prospects of streaming services

The future of streaming services in general remains open. The more people would activate on mobile streaming, the more it would mean subscription-based usage as mainly the paid services offer the option to use the service on multiple devices. Most of the over 30 year-old people do not know what are streaming services and how they work. According to Steve Knopper (2015) on Rolling Stones, the current state of free and ad-supported services is changing. Recently there has been a great deal of discussion on limiting free streaming. Some parties even consider running all free streaming services down. However, an easier way to attract more subscribers to use paid services is to make these subscription-based models even more attractive than what they are now. Jonathan Prince from Spotify states in the same article (Knopper 2015) that free streaming services is a must, in order to grow subscribers. Opinions on free streaming services vary and different solutions are available. Some people would prefer more restrictions on free streaming that could eventually drive consumers to use subscription-based services. Others believe that the current free model is a success. For example Spotify has managed to make fans to use monetized platforms rather than piracy to access music. (Ingham 2015).

1.2 Digital marketing

In general, marketing is seen as managing relationships with customers and to create value for them (Kotler and Armstrong 2012, 26). According to Chaffey and Chadwick (2012, 10), digital marketing is "the application of the Internet and digital technologies in conjunction with traditional communications to achieve marketing objectives". Kotler and Armstrong (2012, 50) state that digital technology has changed the possibilities for companies to interact with customers, while affording new tools for communication and relationship

building for marketers. Digital environment has pushed for example executives to learn something new rather than to forget what they already know about marketing (Weber 2009, 3 - 4). Chaffey and Ellis-Chadwick (2012, 6 - 10) support the phenomenon of learning new things when digital changes have pushed through. It is about learning how to use new channels in marketing: the web, e-mail, mobile, and Internet TV, and where these channels are appropriate to be used. Marketing process In order to create value for the consumer, marketing process has to be on point. If it is traditional or digital marketing, the same rules apply. Kotler and Armstrong (2012, 29) compress the whole idea of a marketing process into the following figure (Figure 3).

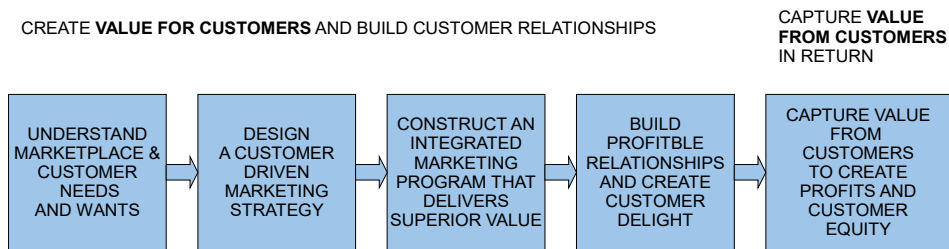


Figure 3. A simple model of the marketing process.
Source: Kotler & Armstrong 2012, 29.

As the figure above shows, marketing is all about the exchange and creation of value between individuals and organizations. This is achieved by first studying the needs of the customers and understanding the marketplace. The second step is to focus on marketing strategy, which has to be customer-driven. In a marketing process, marketing strategy aims to define the target market and to segment the customers, and to differentiate and position the company so that it delivers the best service for consumers. This can be also seen as a phase in which the company defines which values it wants to show for the customers. (Kotler & Armstrong 2012, 53-54). As digital marketing is delivered by using Internet channels to support traditional marketing, Chaffey and Ellis-Chadwick (2012) emphasize the importance of targeting while focusing on digital marketing strategy. Digital marketing strategy does not only apply the same principles of targeting and segmentation but it also underlines the significance of value proposition. In a digital environment, it is even harder to differentiate from the competitors, which therefore increases the focus point in values that consumers get out of a certain product or service. In order to succeed in value creation and in an efficient marketing process, a set of marketing tools is utilized. These work towards customer satisfaction, building relationships with customers, and are combined in a phenomenon of a marketing mix. (Kotler & Armstrong 2012, 29).

2. Exploratory Research Regarding Digital Music Usage in Romania

This study was designed to investigate digital music consumption behavior of young Romanian consumers. The method employed can be categorized as quantitative, exploratory and descriptive. In order collect quantitative data, the present study used an online survey that consisted of two parts. The first section of the questionnaire identified demographic information of the participants such as gender and age. The second section comprised questions about the usage of digital music, the sources from which digital music

was obtained and the reasons for digital music purchasing and unlicensed downloading. The questionnaire was uploaded at <http://isondaje.ro/sondaj/419721576/> and a total of 394 undergraduate and graduate students of The Bucharest University of Economic Studies accessed the link in February 2016. Due to the limited sample size and the category of respondents, this online questionnaire-based study can be classified as an exploratory research study. Data collected from the sample was analyzed using IBM SPSS Statistics 22, in order to obtain descriptive statistics and discover or verify the relationships between variables.

The sample consisted of almost three quarter female (74.1%) and one quarter male (25.9%) young students (90.6% with age between 18-23 years). Regarding to the employment status, 67% of the participants was unemployed, 18.8% working full time and 14.2 working part time (Table no. 1).

Table no 1. Characteristics of the respondents (total = 394)

		Frequency	Percent %
Gender	Male	102	25.9
	Female	292	74.1
Age	18-19	134	34.0
	20-21	152	38.6
	22-23	71	18.0
	24-25	31	7.9
	26 and older	6	1.5
Employment status	Working full time	74	18.8
	Working part time	56	14.2
	Unemployed	264	67

In the surveyed sample, the students have several devices capable to play digital music (see Table no. 2). Almost all respondents have a smartphone (95.2% of cases) or a laptop (88.6%) and they also have a computer (43.7%) and a tablet (41.6%). Fewer students have an mp3 player (21.8%) or Hi-Fi system and only 0.3% not have such device.

Table no. 2. Ownership of devices capable to play digital music

	Responses		Percent of Cases
	N	Percent	
Computer	172	14.5%	43.7%
Laptop	349	29.5%	88.6%
Smartphone	375	31.6%	95.2%
Tablet	164	13.8%	41.6%
Mp3 player	86	7.3%	21.8%
Hi-Fi system	38	3.2%	9.6%
None of these	1	0.1%	0.3%
Total	1185	100.0%	300.8%

Based on the survey, 58.9% of respondents listen to digital music on their smartphones, 25.6% on laptops, 8.6% on computers, 3.8% on mp3 players, 1.5% on Hi-Fi system and 1% on tablets. Only 0.5% of the students don't listen to digital music on these devices.

The results also revealed that almost half of the students (49.2%) listen to digital music daily, 30.5% several times a day, 12.7% several times a week, 4.8% about once a week, 2% less frequently and 0.8% don't listen to digital music.

Research results show that the legal channels are the most important sources for obtaining digital music (see Table no. 3). From 391 of students who listen digital music, 57% buy their digital music from online stores like iTunes or Google Play Music and 15.9% download music file from free and legal sites like Free Music Archive. However, unlicensed downloading is widespread among the students. 47.6% of the respondents use the file-sharing networks to download digital music and 25.1% listen to digital music shared by their friends or family members. Only 7.2% of the students use their own CDs as a source to obtain digital music. Responses to 'other' were: YouTube and MP3 video conversion tool (28), PlayTube (2), SoundCloud (2), iTube (1).

Table no.3. Sources for digital music

	Responses		Percent of Cases
	N	Percent	
CDs as a source for copying or ripping them	28	4.5%	7.2%
Online store	223	35.5%	57.0%
Free and legal music download sites	62	9.9%	15.9%
Shared by friends	98	15.6%	25.1%
Downloaded from file sharing-network	185	29.4%	47.3%
Others	33	5.2%	8.4%
Total	629	100.0%	160.9%

In terms of music purchasing, 43% of the survey participants never buy digital music, 37.1% buy rarely and 16.4% buy sometimes this type of music (Chart no. 1). Only 2% of the respondents often buy and 1.5% always buy digital music.

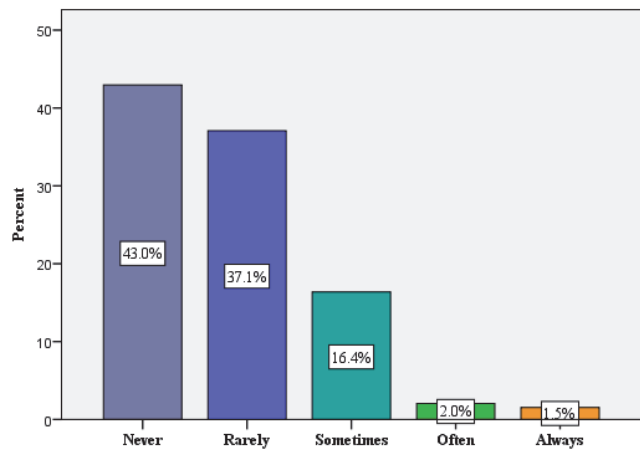


Chart no. 1. Frequency of buying digital music

The 223 respondents who buy digital music mentioned the following main reasons: guaranteed high quality file in 38.6% of cases, option to choose individual tracks from an album 35% and digital music is cheaper than buying CD singles and albums 20.5% (see Table no. 4). Responses to ‘other’ were: to support the artists (6) and to reward artists work (2).

Table no.4. Reasons to buy digital music

	Responses		Percent of Cases
	N	Percent	
Because it's legal	38	13.7%	17.1%
I can afford to do so	21	7.6%	9.5%
Guaranteed high quality file	86	31%	38.6%
It is cheaper than buying CD singles and albums	46	16.7%	20.5%
I can choose individual tracks from an album	78	28.2%	35%
Others	8	2.9%	3.6%
Total	277	100.0%	124.2%

Regarding to the unlicensed downloading music from a file-sharing networks, only 7.4% of respondents never use this way to obtain music files (Chart no. 2)

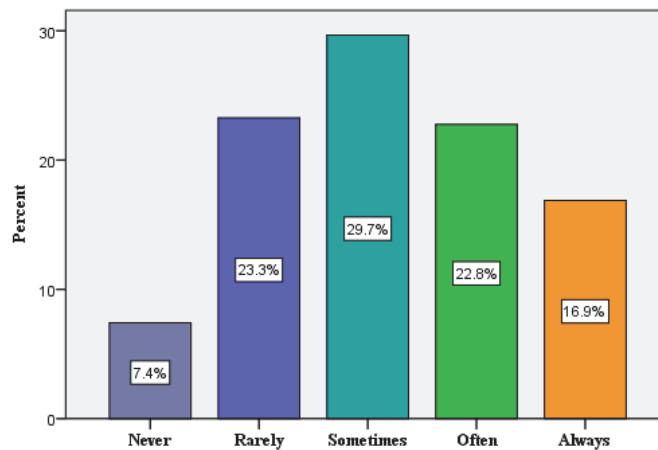


Chart no. 2. Frequency of unlicensed downloading digital music

The 362 respondents who download digital music from file-sharing networks mentioned the following main reasons: they don't like to pay for music if it is available “for free” in 49.4% of cases; the songs they were looking for were unavailable for buying 26% and they can't afford to buy it 19.9%. (Table no. 5). Responses to ‘other’ were: usually it's easier to download it from a file-sharing network than to buy (4) and to store music files and use it on different devices (2).

Table no.5. Reasons to unlicensed downloading digital music

	Responses		Percent of Cases
	N	Percent	
To sample an artist I am not familiar with	69	15.3%	19.1%
Songs I was looking for were unavailable for buying	94	20.9%	26.0%
The legal service was not accessible/ files could not be downloaded	30	6.7%	8.3%
I don't like to pay for music when I don't have to	179	39.8%	49.4%
I can't afford to buy it	72	16.0%	19.9%
Others	6	1.3%	1.7%
Total	450	100.0%	124.3%

Conclusions

This paper has presented findings of an exploratory study of digital music usage among Romanian students from The Bucharest University of Economic Studies, being based on the Romanian music market and especially on how consumers value or not subscription-based services. As the technologic and digital evolution goes on so is the digital music market, constantly evolving in Romania. Consumers should be made aware of the difference between legal or illegal. The basis for this research was the lack of users in subscription-based models within Romanian music consumers.

The results of this research indicating that students who participated in this study have their own devices capable to play digital music files and use them frequently.

This study also showed that the students use both legal and illegal channels to download music files from the Internet. However, the digital music piracy rate is very high in Romania and reduces the profits and income of artists, music companies and online music stores.

Finally, the findings of this study should be interpreted with caution because the number of participants was small (394) and students thinking may not be equally applicable to all digital music users. Future research developed among large survey sample including a wide range of social category from the entire country, could provide a better understanding of digital music users behaviour.

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REQUIREMENTS TOWARDS SUSTAINABLE FUTURE URBAN MOBILITY IN GERMANY

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Abstract

Given both socio-economic changes as well as innovative approaches to react to these trends, the current urban mobility in Germany is subject to adapt to these changes in the near future.

It is expected that the demand for mobility will further rise in the future, while flexibility, comfort, price and complexity reduction becomes more important in the field of mobility. As both existing public transport as well as motorized private mobility can only satisfy the above requirements to a certain extent and with limited flexibility, new modes of transportation are becoming more and more important. Self-driving cars that are currently in the testing phase offer a never before existing combination of all advantages of different transport modes if used in a carsharing model.

This paper examines different mobility studies and statistics on the preference of transport modes in order to identify requirements towards a sustainable future urban mobility. The aim of this paper is to compare the results with the possibility of self-driving cars in a carsharing model.

As a result it can be stated that self-driving cars in a carsharing model are not only an alternative to private motorized mobility and public transport, but could possibly replace existing transport modes in the future.

Keywords: mobility trends, transport mode, innovation, sustainability, self-driving cars, carsharing.

JEL Classification: R4, Y3, J6.

Introduction

The demand for mobility is characterized and influenced by demography, politics, economy, technology and social trends (cf. Institut für Mobilitätsforschung 2015). In order to meet future requirements in regard to the design of sustainable urban mobility, future scenarios and their impact are of high importance. Having analyzed various future scenarios for Germany, the following specific trends can be identified:

- Urbanization

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- Aging population
- Reduction of people numbers per household
- Reduction in consumption of resources (including crude oil)
- Limited financial resources for infrastructure
- Increase in demand for multimodality
- Higher demand for flexibility in regard to mobility

These expected changes highly impact the current characteristics of mobility. Based on these trends, requirements can be identified for sustainable future urban mobility to respond to these changes in the most effective manner.

In order to determine these requirements, the modal split in Germany shall set the basis for further discussion in this paper. Looking at the different shares, it becomes obvious, that individual traffic is the preferable option to satisfy the need for mobility.

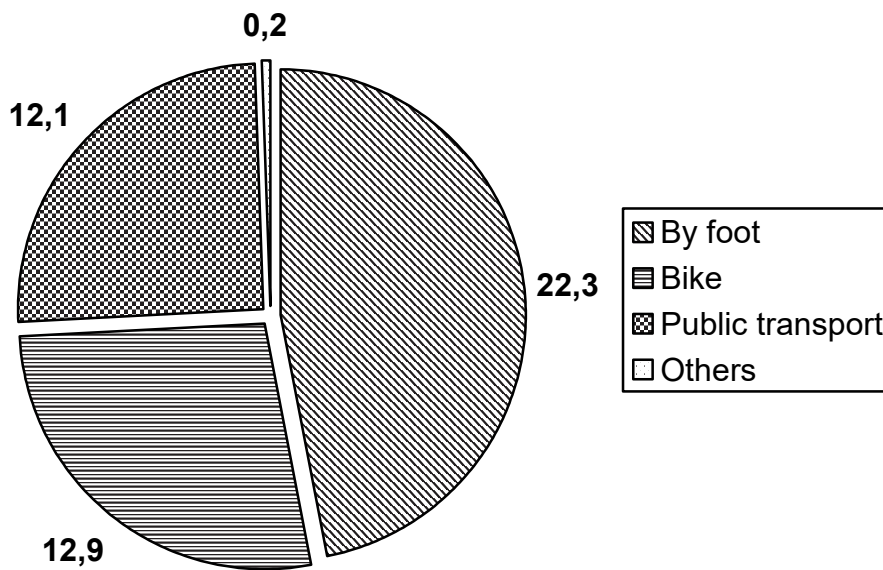


Figure no. 1: Modal Split in Germany
 Source: based on: KIT 2015, p.108,

Based on this split, reasons for the choice of each transport mode (private individual transport: car/motorbike; bike; public transport: rail/tram/bus, carsharing, footpath) shall be interpreted, based on quantitative secondary sources. The paper will further outline the motivation and set the requirements towards the future design of an innovative and sustainable mobility system in Germany.

1. Classifying Characteristics of Different Transport Modes

It must be clarified that mobility itself does not describe a motive, but is used to physically reach another goal: movement.

Nevertheless, the choice of transport modes is based on different criteria and due to individual circumstances. These criteria can be derived from the marketing mix, as each transport mode can be analyzed to that effect. Later, the gaps of each transport mode become obvious and lead to the conclusion of innovating different transport modes to fit the public needs in regard to:

- *Product*
- *Price*
- *Place*
- *Promotion*

The marketing mix connects the strategic general conditions with the operative implementation of a possible product. The marketing mix is usually characterized by the four “4 Ps”, but can be reduced to three (product & price are combined under one “P”) or extended to up to seven “P”s in the area of services (cf. Pepels 2012). The following interpretations of the marketing mix with the identification of motives for different transport modes shall not be viewed as exclusive motives, but display the main arguments. The marketing mix is there for applied in its original format with 4 Ps.

Product: The product describes the characteristics of each transport mode. The characteristics include the comfort, time saving, ecological awareness, availability, accessibility and reliability.

Price: The price of the transport mode depends on the owner. Speaking about public transport mode, prices are either paid by single trips or by season tickets. This same pricing scheme applies to carsharing. Individual transport modes, such as the car, motorbike and bicycle require asset and maintenance costs.

Place: The place shall be defined as the place of the provision of the mode of transport. As for individual mobility (car/motorbike, bicycle, by foot), the transport mode is directly provided at the location of the individual. As for public transport, the individual is required to cover a certain distance to the place of pick-up and after drop-off to the final destination.

Promotion: This dimension of the marketing mix can be considered as the least important one in regard to comparing transport modes. As both public and private mobility is advertised, the reasons for choosing one or the other are rather dependent on the above mentioned factors. This dimension shall therefore not further be considered.

2. Evaluating Different Transport Modes

According to the preference of the population, the car is the primary choice of preference in everyday life, followed by public transport, the bicycle and by foot.

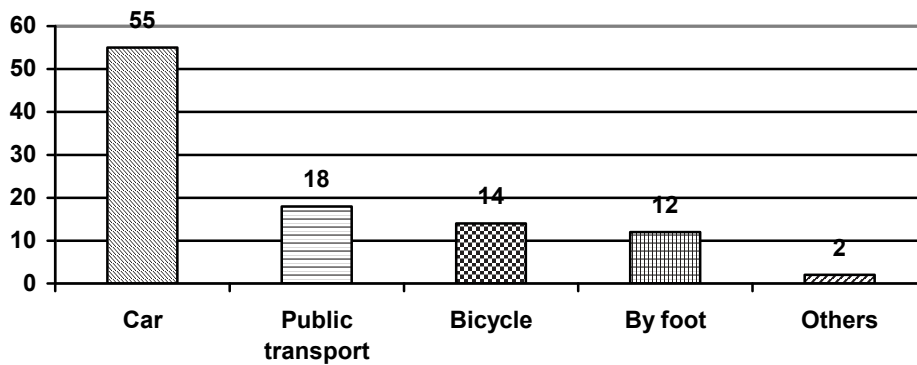


Figure no. 2: Primary Choice of Transport Mode

Source: Statista, 2016

Comparing this figure with the modal split, these statistics reveal a difference in desired transport mode and actual transport mode. The preference of using a car is higher than it is actually in use. The bigger difference can be seen in the preference for public transport and the actual use: 18% of the interviewed prefer this transport mode, while only 12% actually use it.

Having clarified the question what transport mode people desire, it shall be further outlined why this transport mode is preferred (motives). Mobility by bike and foot are excluded in the further outline, as they are used for shorter distances of up to 3,4 km and therefore out of scope when compared to travelling by private motorized vehicles or public transport (cf. Statistisches Bundesamt 2013).

According to a study made by Ernst & Young, the quality, safety and price of a car is of extensive importance to the people, followed by fuel usage and ecological friendliness (cf. Ernst & Young 2012). However, an average car is used for only 1 hour per day, making this transport mode a relatively expensive one, compared to public transport or carsharing (cf. Verkehrsclub Deutschland). Although private cars are considered as very flexible and comfortable in terms of availability and reliability, they require regular inspections, insurance, fueling and space for parking.

Carsharing, as part of individual motorized travel currently deals with the problem with a certain distance from door to carsharing station or car location. If this distance could be minimized, more people would use this transport mode (cf. Puls 2013). Berylls Strategy Advisors identified further reasons against carsharing in one of their studies and found out that the biggest reasons are uncertainty about availability (28%), the discomfort of driving someone else's car (26%), the effort and complexity of renting (25%) and the lack of carsharing offers close-by (cf. Berylls Strategy Advisors 2014). Comparing the carsharing offer with a private car, it requires less effort in terms of maintenance as this is usually done through the carsharing provider.

Another study of the "Verkehrsclub Deutschland" (VDV) revealed the motives of users of public transport. The first motive for using public transport is flexibility (75%), followed by gain of time (52%) and punctuality (51%). The motives are followed by comfort, availability, low costs (42%) etc. (cf. VCD 2009). In addition, public transport is accessible

to anyone living in an area with availability, while the private car requires a driver's license. While the amount of driver licenses slightly increases each year, it shall be notified that with the aging population in Germany and for safety reasons, a big proportion of the people won't be able to use their private cars in the future (cf. KBA 2016).

Decisions on the mode of transport are taken on an individual level in the end, while preferences can have different values. Derived from these requirements, it is possible to allocate the possibility of self-driving cars in a carsharing model through the instrument of positioning. This marketing method that connects to the above mentioned marketing mix is used to position this idea in the mind of the potential customers (cf. Ries, Trout 2001).

Positioning is characterized by the product (self-driving cars in a carsharing model), the distinct features of this product in comparison to existing transport modes and the characteristics of the customer. The following figure summarizes these attributes:

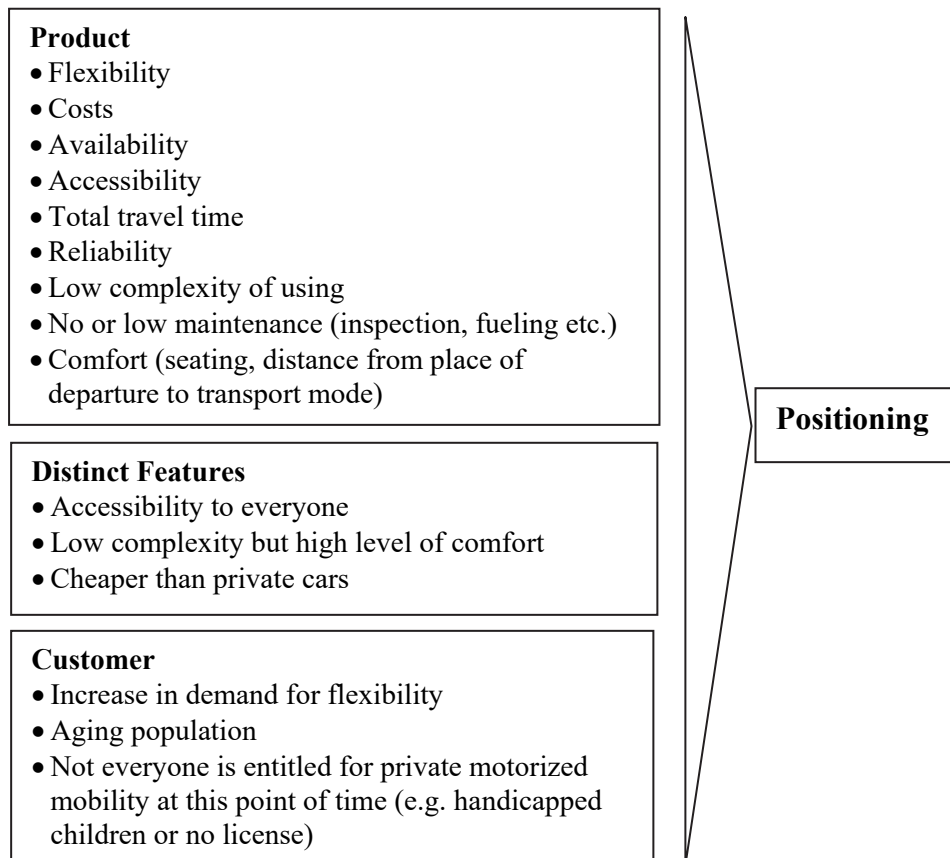


Figure no. 3: Positioning of self-driving cars in a carsharing model

Source: authors

3. Future Urban Mobility in Germany

Having analyzed the criteria towards future sustainable mobility, it becomes obvious that none of the current transport modes can combine the identified requirements.

The above outlined requirements are therefore further matched with the possibility of self-driving cars in a carsharing model.

Such a self-driving carsharing model could be provided by the state (public transport) or by private mobility providers, e.g. automotive manufacturers or software providers such as Google. If a country-wide roll-out of this model can be realized, it becomes obvious, that this model reacts not only to the socio-demographic change, but also to many of the current issues in the mobility sector.

Coming back to the marketing mix, the product of self-driving cars in a carsharing model could be set up in the following way:

Table no. 1: Possible marketing mix of self-driving cars in a carsharing model

<p>Product Cars are provided by a third part → no need for registration, maintenance etc. Reduction in accidents in comparison to normal cars Ecological friendliness Full availability when called via e.g. app Full accessibility (broader group can be reached than for private car or public transport: e.g. elderly people who don't want to drive anymore or children, blind people etc.) Full reliability: car arrives when called at any time of day (no long waiting time as for e.g. public transport) Time saving: no waiting for e.g. public transport, no search for parking space Comfort: high level of comfort as seating is guaranteed and no need of interference allows time for other activities e.g. reading</p>	<p>Place Self-driving cars can be provided from place of departure to final destination (door-to-door mobility) An app can support the booking of a car to provide the car at the desired place</p>
<p>Price Making full usage of a car (no parking) Highly efficient in fuel consumption Sharing the ride, shares the fuel expenses Different price schemes (flat rate, minute packages, price/minute) can address different customer groups: a) High-use customers (e.g. commuter) b) Medium use customers (e.g. housewife) c) Low-use customers (e.g. students)</p>	<p>Promotion The provision of self-driving carsharing model would require a certain amount of promotion to attract new customers, especially in the starting phase. Self-driving cars in the city automatically raise and attract new customers</p>

Source: authors

Conclusions

Socio-demographic changes and an increase in the demand for mobility require a paradigm shift in the provision of mobility services. Having analyzed the most common modes of transport, it becomes obvious that many of the current transport modes cannot fulfil the desires of the German society. It is therefore recommended to use innovative technology in order to react to these changes, opening new business opportunities to existing companies in the field of mobility as well as to new start-ups. Implementing a self-driving carsharing model in Germany would shift the existing mobility to being sustainable and future-oriented.

This paper can be considered as the prerequisite for further research on this topic that include the analysis of acceptance of self-driving cars in a carsharing model from a customer perspective, as well as the analysis of possible stakeholders (mobility providers).

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ECONOMETRIC ANALYSIS OF SEASONALITY IN TOURISM ACTIVITY: ROMANIA VS BULGARIA

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Abstract

Economic agents in tourism businesses are interested in countering the effects of seasonality by encouraging tourists' arrivals outside the peak periods, reducing the major differences between seasons and extra-seasons. This paper compares the tourism situation in two neighbor countries with similar natural and economic conditions: Romania and Bulgaria, which are in a certain competition on the tourism market.

It is performed an econometric analysis of the quarterly net occupancy rate of bed-places in hotels and similar establishments in Romania and Bulgaria in the period 2012-2015, based on data provided by EUROSTAT. Seasonal component is identified for the two series based on the multiplicative model, then used in forecasting the indicator level for the next four quarters of 2016. The results indicate a greater influence of seasonal factors in tourism activity in Bulgaria, in the third and fourth quarters, than in Romania, but in opposite directions: a positive influence in the third quarter and a negative one in the fourth quarter. The difference in these quarters between seasonal indices in Bulgaria compared to Romania was of about 23-25%.

Keywords

Tourism, Seasonality, Travel and tourism competitiveness index, Net occupancy rate of bed-places, Seasonal index, Multiplicative model.

JEL Classification

C10, C21, L83, Z32.

Introduction

Tourism is one of the areas in which the influence of seasonal factors - in various manifestations - leaves its marks on activities conducted. As such, the level and changes of the main indicators that measure the activity in the tourism sector are strongly influenced by seasonal factors, whether they appear as succession of weather conditions, or in the form of social customs and traditions (cultural, ethnic or religious holidays or customs, school vacations, holidays) (Secareanu, C., Firoiu, D., 2012). Tourism data series have a seasonal

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component that needs to be identified, in order to obtain accurate and consistent with reality forecasts.

Economic agents in tourism businesses are interested in countering the effects of seasonality by encouraging tourists' arrivals outside the peak periods, reducing the major differences between seasons and extra-seasons.

Creating attractive tourist destinations throughout the year, advantageous tourism offers every time of year, addressing the different groups of tourists which can travel at different times of the year, informing, promoting and communicating these opportunities through various channels - come to support the attenuation of the seasonal effect in tourism domain.

Butler and Mao (1997) identified two sides of seasonality in tourism: natural side (related to climatic conditions) and institutional side (socio-cultural) and showed how these factors influence the generating regions and the destination ones.

Lee, et al. (2008) - after reviewing the significance of the seasonality concept - identified a series of strategies through which both generating and recipient countries with respect to the tourism activity, may improve the effect of seasonality. The study is primarily useful by the fact that it includes an assessment of the utility and efficiency of the strategies identified, with examples on Australian regions. They concluded that strategies aimed at countering the effects of seasonality should not rely solely on economic grounds, but also on social and environmental factors, and that their implementation must involve all stakeholders. Claveria, et al. (2015) investigated the effectiveness of various seasonal time series models applied in tourism, in developing accurate forecasts. Cisneros-Martínez, J.D. used a methodology based on the decomposition of Gini concentration index, in order to measure the concentration of seasonal tourism, applicable mainly in coastal tourist destinations.

This paper confronts the tourism situation in two neighbor countries with similar natural and economic conditions: Romania and Bulgaria. However, they are in a certain competition on the tourism market, but each has something to learn from each other. Competitiveness in tourism is a lesson that Bulgaria has learned it better than Romania, as indicated by analysis of the Travel & Tourism Competitiveness Index, proposed by the World Economic Forum. In the paper it is performed an econometric analysis of the quarterly net occupancy rate of bed-places in hotels and similar establishments in Romania and Bulgaria in the period 2012-2015, based on data provided by Eurostat. Seasonal component is identified for the two series based on the multiplicative model, then used in forecasting the indicator level for the next four quarters of 2016. The results indicated a greater influence in Bulgaria of seasonal factors in tourism activity in the third and fourth quarters than in Romania, but in opposite directions: a positive influence in the third quarter and a negative one in the fourth quarter. The difference in these quarters between seasonal indices in Bulgaria compared to Romania was of about 23-25%.

Romania and Bulgaria: towards a competitive tourism - strengths and weaknesses

Romania is an offering country in terms of geographical position, natural resources, cultural potential and human capital. However, Romania did not know how to capitalize these advantages, so it ranks behind Bulgaria in the analysis in tourism domain. Even more as general economic indicators have higher values for Romania (population, GDP, GDP per capita). One way that Romania could increase the efficiency of tourist activity is to create a competitive tourism (Croitoru, M., 2011). A competitiveness analysis in tourism domain was performed by the World Economic Forum, who proposed, in 2007, the "Travel and

Tourism Competitiveness Index”, as a quantitative measure of the effects of policies and factors that „enable the sustainable development of the Travel & Tourism sector, which in turn, contributes to the development and competitiveness of a country” (...) (World Economic Forum, 2015). The methodology addresses four main aspects of competitiveness in tourism, highlighted by four subindices, detailed through 14 pillars. The four subindexes refer to: Enabling Environment, Travel and Tourism Policy, Infrastructure and the Natural and Cultural Resources. In 2015 Bulgaria was ranked 49th out of 141 countries (with a score of 4.0 out of 7), while Romania was ranked 66th (with a score of 3.8 out of 7). In both countries the index level has evolved on a downward trend since 2011. Bulgaria has registered higher scores on all four subindices. Of these, both Romania and Bulgaria have recorded better scores for *Enabling Environment Subindex* (5.1 – Bulgaria, 4.9 – Romania), while lower scores were recorded for *Natural and cultural conditions Subindex* (2.7 – Bulgaria, 2.4 – Romania). The weakest position in the ranking was recorded by Romania in terms of *infrastructure* (rank 71 out of 141 countries), while Bulgaria was ranked 52th (fig. no. 1).

Figure no. 1 The four subindices of Travel&Tourism Competitiveness Index in 2015, Romania and Bulgaria

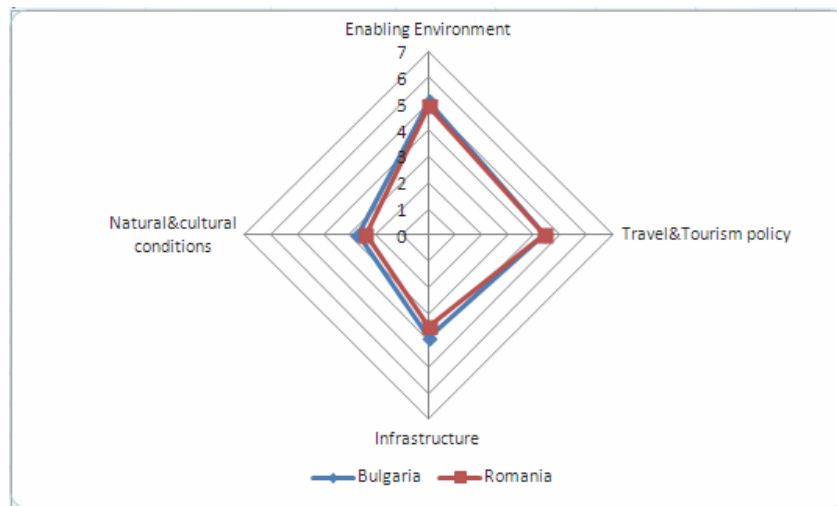


Figure no. 1 The four subindices of Travel&Tourism Competitiveness Index in 2015, Romania and Bulgaria

Source: authors' processing, based on data provided by *The Travel & Tourism Competitiveness Report 2015, World Economic Forum, 2015, p. 5, p. 10-13.*

The largest score-difference between the two countries was registered in the area of infrastructure (0.4 points in favor of Bulgaria), while in terms of policies in tourism both countries were approximately at the same level (4.4 out of 7).

Seasonal Analysis of Net Occupancy Rate of Bed-Places in Romania and Bulgaria

The analysis aims at determining the seasonal component of the time series referring to the “Net occupancy rate of bed places in hotels and similar accommodation”, at identifying the way the seasonal factors have influenced the evolution of this indicator in Romania and Bulgaria and at achieving a more accurate prediction of net occupancy rate for the next four quarters of 2016. Based on monthly data provided by EUROSTAT, there were calculated quarterly values of the indicator, corresponding to the period 2012-2015. The processing was performed with SPSS program.

Under the influence of seasonal factors, in 2015 net occupancy rate in hotels and similar accommodation recorded the highest values in the 3rd quarter, of 51.43% in Bulgaria and 41.13% in Romania. With respect to the minimum values of the indicator, these were recorded in different quarters. Thus, in Romania the minimum net occupancy rate was recorded in the first quarter (23.33%), while in Bulgaria it was recorded in the fourth quarter (21.2%).

Despite the seasonal fluctuations, in period 2012-2015 net occupancy rate had a slightly upward trend in Romania and a slightly downward trend in Bulgaria. In the first, second and third quarters the indicator had higher values in Bulgaria compared to Romania, while in the fourth quarter the situation was reversed. The difference between the net occupancy rates in the two countries was the highest in the third quarter, but one can observe a weakening of the differences over the period considered (so, if the net occupancy rate in the third quarter of 2012 in Bulgaria was by 19.23% higher than in Romania, in the third quarter of 2015 the difference was down to 7.3%). Accordingly, in the fourth quarter the net difference in favor of Romania increases over the period analyzed. Thus, in the fourth quarter 2012 the net occupancy rate was by 3.3% higher in Romania than in Bulgaria, the difference reaching at the end of the period the value of 10.86% (fig. no. 2).

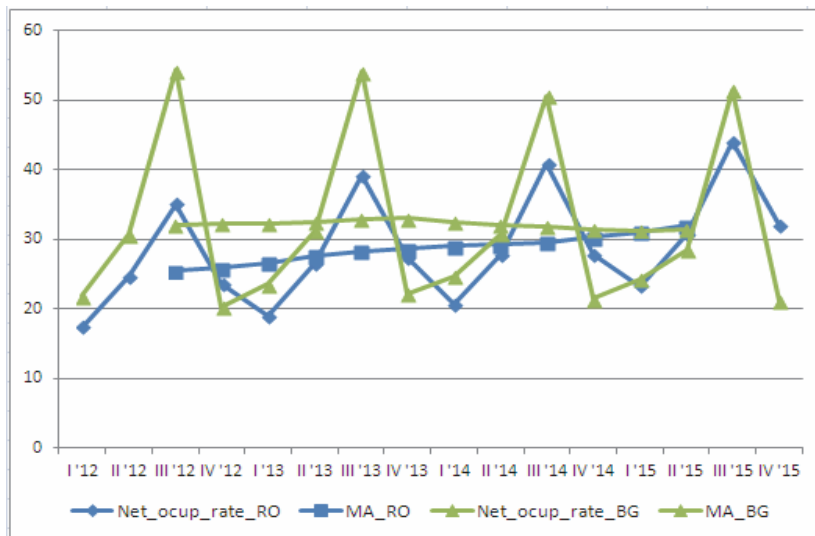


Figure no. 2 Quarterly Net Occupancy Rate of Bed Places (%), 2012-2015, Romania and Bulgaria. Observed values and moving-averages
 Source: Authors' processing, based on EUROSTAT data

In order to identify the components of the time series, it has been applied the seasonal decomposition method – multiplicative model. For Romania, in the first quarter, the lowest value of seasonal indices was recorded (72.1%), revealing that the seasonal factors determined a decrease in the net occupancy rate by 27.9% from the trend value. In the 2nd and the 4th quarter, the seasonal indices value were close to 1, showing that the seasonal factors influence was rather small (96.8% and 92.2%). The highest seasonal index corresponds to the third quarter (139%), pointing out that the seasonal factors determined an increase in the net occupancy rate by 39% above the trend (fig. no. 3)

Model Description		Seasonal Factors	
Model Name	MOD_1	Series Name: Net_occup_rate_RO	
Model Type	Multiplicative		
Series Name	1		
Length of Seasonal Period	4		
Computing Method of Moving Averages	Span equal to the periodicity plus one and endpoints weighted by 0.5		
		Period	Seasonal Factor (%)
		1	72,1
		2	96,8
		3	139,0
		4	92,2

Applying the model specifications from MOD_1

Figure no. 3 The application of multiplicative model and the seasonal indices – Romania

Source: performed by the authors, based on EUROSTAT data

Compared to these results, in Bulgaria the seasonal index was higher in the 1st and the 3rd quarter than in Romania. Thus, in the 3rd quarter the seasonal factors implied a significant increase in the net occupancy rate level – of 62.8% above the trend. It may be remarked a significant negative seasonal influence in the 4th quarter, when the indicator value recorded a major decrease – of 33.3% below the trend line. These results can be explained by the massive flow of non-resident tourists arriving in the third quarter in Bulgaria, attracted by a wider variety of tourism offers, by more attractive prices, by a higher service quality and by a better quality/price ratio. In the fourth quarter, this flow is smaller and it is not compensated by the participation of domestic tourists in tourism activity. Unlike the above mentioned situation, in Romania the higher value of the seasonal index in the fourth quarter is explained by the fact that - although Romania does not enjoy a share of foreign tourists as important as Bulgaria, this is compensated through a higher participation rate of resident tourists in tourism activity (fig. no. 4).

Figure no. 4 The application of multiplicative model and the seasonal indices – Bulgaria

Model Description		Seasonal Factors	
Model Name	MOD_2	Series Name:	Net_ocup_rate_Bulg
Model Type	Multiplicative	Period	Seasonal Factor (%)
Series Name	1	1	75,3
Length of Seasonal Period	4	2	95,2
Computing Method of Moving Averages	Span equal to the periodicity plus one and endpoints weighted by 0.5	3	162,8
Applying the model specifications from MOD_2		4	66,7

Figure no. 4 The application of multiplicative model and the seasonal indices – Bulgaria

Source: authors' processing, based on EUROSTAT data

The values of seasonal adjusted series were determined, in order to provide a forecast of the net occupancy rate for the next four quarters in 2016. The prediction shows a slight increase of quarterly net occupancy rate in Romania, in hotels and similar accommodation establishments, especially in the 2nd and the 3rd quarters (by 4.64% in the third quarter 2016, compared to the third quarter 2015)(fig.no. 5 and table no. 1).

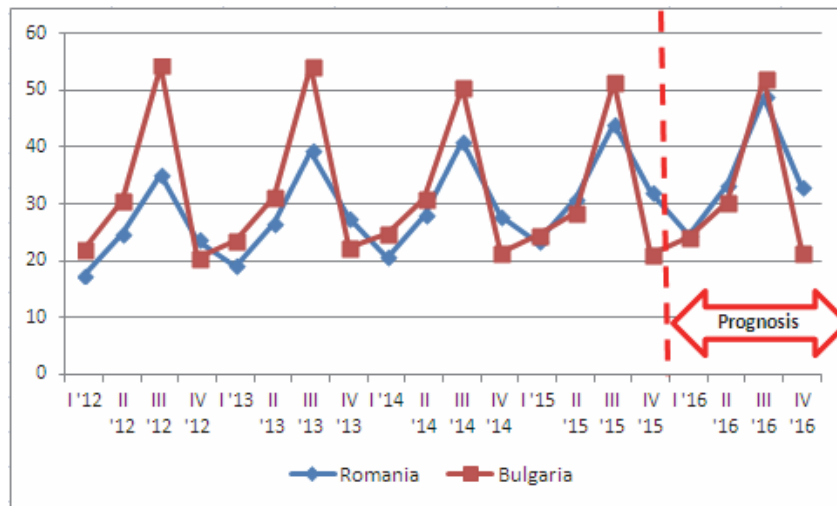


Figure no. 5 Prognosis of the quarterly net occupancy rate in hotels and similar accommodation, 2012-2016, in Romania and Bulgaria

Source: authors' processing, based on EUROSTAT data.

For Bulgaria smaller increases of the quarterly net occupancy rates are expected, according to our prediction in the second, third and fourth quarters (slightly higher increases in the second quarter, of almost 2 percentage points), but also a slight decrease for the first quarter 2016 (fig.no. 5 and table no. 1).

Table no. 1 Prognosis of Quarterly Net Occupancy Rate (%) in Romania and Bulgaria

Prognosis Period	Prognosis of Net Occupancy Rate (%)	
	Romania	Bulgaria
Q I 2016	24.42	24.02
Q II 2016	33.37	30.39
Q III 2016	48.75	51.99
Q IV 2016	32.89	21.31

Source: authors' processing, based on EUROSTAT data.

Scenario applies if the net occupancy rate of bed-places in hotels and similar accommodation establishments evolves in economic and social conditions similar to those in the period analyzed, who influences the tourists' behavior and the tourism activity in a country. Romanian tourism can improve its position against Bulgarian tourism by increasing competitiveness, highlighting its generous natural resources. To do so, Romania must join the long run worldwide tendency of sustainability in tourism activity, by adopting legislative measures to protect the environment, by promoting and revealing the natural and cultural environment, by improving infrastructure and quality of services in tourism, but also by setting more attractive tourism offers, with a better quality to price ratio.

Conclusions and future work

The seasonality problem in tourism has a major importance for both the origin and the destination regions, being dedicated to it numerous studies and analyzes in the specialized literature. Identifying the seasonal component of a time series might be useful in providing accurate predictions. Comparative situation of Romanian and Bulgarian tourism has pluses and minuses that place them in permanent competition with one another. Tourism in Bulgaria enjoy a more favorable situation than in Romania, managing to attract more non-resident tourists, especially in the third quarter, by promoting better travel offers, higher quality services, more flexible and diverse offers, with a better quality/price ratio, assigned for groups of tourists with varied needs. Analyzing the Travel and Tourism Competitiveness Index, it was revealed that Bulgaria was ranked better than Romania in 2015, with respect to the tourism competitiveness level (49th rank, compared to 66th, out of 141 countries). Of the four main aspects surprised by this index, both countries had a higher score in 2015 regarding general conditions that facilitate the development of economic activities (business environment, safety and security, health and hygiene, human resources and labour market, information and communication channels). The lowest score was recorded by both Bulgaria and Romania with respect to the natural and cultural resources, which shows that both countries still need investments for preservation and maintenance of natural and cultural resources, and new strategies for promoting tourist attractions.

Analyzing the quarterly values of the net occupancy rates in hotels and similar establishments in the two countries, one can remark that - despite the seasonal fluctuations - in period 2012-2015 the indicator level had a slightly upward trend in Romania and a slightly downward trend in Bulgaria. In the first, second and third quarters the net occupancy rate had higher values in Bulgaria compared to Romania, while in the 4th quarter the situation was reversed.

In order to identify the components of the time series, it has been applied the seasonal decomposition method – multiplicative model. Romania recorded the lowest value of seasonal indices in the first quarter (72.1%), revealing that the seasonal factors determined a decrease in the net occupancy rate by 27.9% from the trend value. In the 2nd and the 4th quarter, the seasonal indices value were close to 1, showing that the seasonal factors influence was rather small (96.8% and 92.2%). The highest seasonal index corresponds to the third quarter (139%), pointing out that the seasonal factors determined an increase in the net occupancy rate by 39% above the trend. Compared to these results, in Bulgaria the seasonal index was higher in the 1st and the 3rd quarter than in Romania. It may be remarked a significant negative seasonal influence in the 4th quarter, when the indicator value recorded a major decrease – of 33.3% below the trend line.

The values of seasonal adjusted series were determined, in order to provide a forecast of the net occupancy rate for the next four quarters in 2016. Compared to the situation in 2015, the prediction shows a slight increase of quarterly net occupancy rate in Romania, in hotels and similar accommodation establishments, especially in the 2nd and the 3rd quarters. For Bulgaria – compared to 2015 - smaller increases of the quarterly net occupancy rates are expected, according to our prediction in the second, third and fourth quarters, but also a slight decrease for the first quarter 2016.

The seasonal analysis will be extended to other tourism indicators, and other econometric models will be taken into consideration, in order to provide more accurate predictions for the tourism environment in the two countries.

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ROLE OF HUMAN RESOURCES IN CREATING CUSTOMER CULTURE OF QUALITY

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Abstract

Romanian society marked by unpredictable and effervescent political and economic environment, demands the existence of pillars of social stability. In this respect, an objective requirement is the study, analysis and implementation of quality in the society, particularly so in its entirety, as a fundamental principle of social and economic development. Starting from the premise that modern society means existence and promotes a culture of quality of products and quality services; our study aims to highlight the role of management and human resources in the process. The main objective is the determination of the two categories role and the necessity of adopting effective quality policy. The study is based on a qualitative research method by applying a semi-structured questionnaire select groups of managers, employees and customers, supplemented by focus group discussions based on a matrix of interview. The results follow the perception of each category studied the role that they have all in implementing quality, positions which stands in relation to others and those who must assume. Seen as a whole its functions, human resource is the fundamental influence of corporate management systems. Quality products, services and human resources are emerging as a strategic, competitive success of an organization, with reverberations throughout society.

Keywords: quality culture, human resources, strategies, holistic management

JEL Classification: M12, M31, M38, L20, I26

Introduction

A strong organization is an organization which practices the quality management. It must be targeted both the rational aspects used in the quality management application, and the cultural aspects, as resulting of this managerial style's application. The involved human resources in this organization have a vision over the quality culture, are conducted by values, behavior rules and espouse quality roles for the growth of the organization's efficiency.

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The motivation of accomplishing this study resides in discovering the role that human resources from an organization have in the qualities' policies directed towards the client, the organization and the growth of life's quality through the viability and performance of the offered services/ products.

By this study we proposed to bring in human resources' management attention and also of the top management, the role of the human resource in developing a new client's quality culture, with the purpose of growing the satisfaction grade both at the organization's level and of the beneficiary, with consequences in growing the organization's efficiency and profit. The results of this study provide us the possibility of sketching an optimal route of the organization by inserting a quality culture in all hierarchical levels.

1. The organization and the concept of quality culture

The pillars of the quality management are the principles from the quality culture's base. The foundation of any organizational culture is formed of values, beliefs, capacities, visions, objectives, all together forming organizational principles (Ulf, 2009). Applying these principles to the involved human resources, the management can shape behavior rules for employees, and can influence future behaviors or relations of the human resources with the competitive or customary environment. The main and immediate objective is the growth of the organization's performance, in the same trend of the quality growth, but with particular aspects inserted according to the human resource, management, competitive environment, markets, client's quality culture, considering the quality culture a part of the quality consolidation process (Harvey and Stensaker, 2008). These desiderates are added and implicit integrated in human resource mature, flexible, qualified management which has a clear vision over all the involved factors. Promoting the aspects regarding the quality in all its components, as well as on all the hierarchical levels creates a culture of the quality that passes beyond the internal norms of the organizations and which reflects itself in the making of a client's quality culture and of the other involved factors in the relations with the organization (Paraschivescu, 2007).

In literature are presented different definitions of the quality control. The most of the approaches converge over the idea that the quality control represents a sum or an ensemble of actions taken in an organization, the final purpose being represented by the appreciation of the obtained quality grade (Ionescu Luca, 2007).

The quality encyclopedia (2005) defines the quality management system like this: "A quality management system (QMS) is an ensemble of the managerial processes between which are the interferences of the associated documents and of the organization's structural elements, ensemble whose purpose is the organization's orientation and control in the matter of quality". The dictionary *Business Dictionary.com* includes the next definition: "Collective policy, plans, practices and support infrastructure through which an organization follows to reduce and eventually eliminate the nonconformity with the specifications, standards and with the expectations of the clients in the most effective way and with even more efficient costs". The development and insertion of the management system of the quality includes the establishment of the *policy regarding the quality, quality objectives, planning, control, assurance and of the quality improvement*, says the same source.

Defining the quality as an appreciation of the obtained satisfaction (Becket and Brookes, 2008), its control might be defined as the sum of the undertaken actions with the final purpose to determine the obtained satisfaction. Thus, the quality control gives a real note

to the measure in which an organization in its ensemble can be considered a quality one, offering satisfaction to all the involved actors.

Depending on the position the quality represents: for managers – setting roles and achieving objectives; for employees – possibilities of extra benefits; for customer – the manner that the products responds to his needs. It is necessary that the managers develop their own point of view on quality and the organizational behavior that sometimes has no connection with the detained opinions by the employees (Sinclair and Collins, 1994). As a particularity, a quality public system is the one in which all the activities are according to the legal laws (Grigorescu, 2008).

The existence and grow of an organization is based and on the monitoring and measuring of the obtained quality grade, also on the quality control appliance. Therefore, is needed a reference system for appreciating the satisfaction level, an ensemble of performance indicators. These must be defined starting from analyzing the factors that determinate the existence and development of the organization. They can analyze on three levels – the respect level and appliance of the legal rules and of the internal dispositions, the offered satisfaction to the client and all other parts' satisfaction.

2. The organization and the human resource

The information can be easily accessed and the consumer's mobility is very high. Therefore, the diversity of the offers, the high power of buying, the growth of the educational grade, associated with the unitary legislative regulations to community level are solid premises of the quality culture grow, with accent on the human resource.

The governance principles of the improving efforts of the capability to obtain quality and performance in an organization (Hoyle, 2009): (1) a strategic approach, on long term and not short term projects; (2) promotion a professionalism of a mature, flexible, performing management, with continuous developing/ learning components; (3) orientation toward the client, innovation of the offered services and development of its quality culture; (4) creation of a strong, competitive, respected brand image

These principles are assumed by the management, inserted at the organization's level, developed by the human resource involved at all the levels and it must consider the evolution trends in the quality domain. From these, a significant impact in assuring the quality is the integration of the client in the obtaining quality process, as a determined factor in creating the value that is destined, as well as the promotion of a holistic vision, which is integrating over the quality concept as a defining dimension, of essence of the value concept (Grigorescu and Bob, 2010).

3. The research methodology

Our study wants to highlight the role of the human resource in creating the quality culture of the client, as strategic element of the business in the context of affairs globalization. In this context, the study supports on a semi structured questionnaire to some groups of managers, employees and clients. As it is a pilot research and wanting to have group discussions with the subjects, there have been used and the focus technique to the groups where participated all the three categories that we studied. The interviews and the focus groups were organized in Bucharest, Târgoviște and Constanța, three county capitals from the south east of the country, therefore the results can represent a generalization base, at least at this area's level or even for the entire country, with reserves regarding the cultural

particularities of each area. It was taken into account a number of 10 managers from every location, two employees and 4 consumers (30 managers, 60 employees and 120 consumers). The sample that answered the solicitation was formed from a number of 27 human resources managers and top managers, 53 employees and 98 consumers. It has been chosen the research method for a fast dissemination and to collect the data with more security and ease.

The hypothesis of the research had been established as follows:

- H1 – There is a pragmatic vision over the client’s integration in the quality obtaining process, by creating a value that it is meant for him;
- H2 – The human resource from all the organization’s levels is directed towards the grow of the services/ products’ quality and the creation of a client’s quality culture;
- H3 – The organization has an efficient development as a result of the quality policy’s implementation;
- H4 – An improvement of the citizen’s life quality is obvious through promoting the quality cult and of some quality products on the market.

The structured interview’s matrix had three piling – the three perspectives – management, employee and buyer – for each category were thought 5 questions/ affirmations. All the subjects had been consulted regarding all the 15 elements of the study matrix, presented in table no 1.

Table no.1: The study matrix’s piling

The managers	The employees	The clients
M1. Do you realize the quality importance as a strategic element of your business?	E1. Do you instructed in the quality spirit (the quality cult and the use of the methods and instruments needed in the quality management)?	C1. Do you consider the Romanian consumer an educated one in the quality spirit?
M2. Which are the main ways through which is realized this desideratum?	E2. Do you know the standards in the quality domain that are specific to the area?	C2. Which are the established criteria of a product’s/ service’s quality?
M3. The promotion of the standards in the quality domain and the support for their implementation	E3. Does your organization facilitates the access to information in quality domain for the employees	C3. What should an organization do to promote the quality of its services/ products?
M4. Supporting the certification efforts (of the product or system) of your organization according with the national or international standards	E4. Which is the role you attribute to the quality and how do you consider as managerial vision over this issue?	C4. Do you consider the mass media role as being decisive in labeling a product as being a quality one?
M5. The collaboration with national and international organisms in the quality domain	E5. Do you know ability institutions regarding the services’/ products’ quality?	C5. Do you consider as benefic the national information, promotion and education campaigns regarding the quality concept?

Source: Authors creation

The matrix's elements viewed more aspects, as the management's awareness of importance for the quality and quality control in the organization's strategic development, the continuous qualification of the employees on all hierarchical levels in the spirit of international standards' education, the promotion and implementation of the standards in this domain, the harmonization of the Romanian legislation and of the internal rules with the community standards.

The responses analysis lead to creating an overall image over the way in which the human resource from an organization influences the quality culture of the client and, also, leads to development of the organization and society.

The group focus research executed with managers, employees and buyers from the three county capitals has been chosen as the main research method thanks to the good interaction between the subjects and the moderator, and to the direct way in which the message is sent and therewith thanks to the possibility of being discussed by the whole group particular aspects of the organization from which they came. The number of the participants is the one recommended for a focus group research and it took place in a familiar place for the moderator. The average age was of 47 years, as groups were relatively homogeneous from this point of view. From the total of 178 participants, 52.80% were men and 47.20% women, all with superior studies.

The data collection had two components: the individual interview and the group discussions. The interviews were administrated by the interview operator from the research team. The groups contained all the categories from a location and the discussions were coordinated by a moderator. The group meetings' duration was schedule to last 90 minutes. Everybody's participation was extremely active, and the proposed subjects got the general interest fact that extended the group discussions up to 180 minutes. We want to remark that there were many particular cases for each institution/ organization, brought in by the involved manager and which generated opened and constructed discussions for all the participants. We notice the involved subjects' satisfaction in this study, thanks to the enlargement of the concepts over quality, of the integrated vision, sharing the experience to the ones that implemented with success the quality control and discovery of some strong or weak points in this process.

The interviews with the employees and consumers finished previous the interviews with the managers and meeting in the focus group, the moderators being able to discuss with the managers and aspects brought by the other two categories.

4. The research results and the detached opinions

Following the management process inside the institutions/ organizations, all the hypothesis of the research confirm, at least at principles levels or desiderata. The practice, however, knows a delay and sometimes wished deviations determined by the firms' will to response the costumers' solicitation oriented towards the price.

H1 – There are strategies that have as purpose the knowing of the offered services and products' quality growing, the grow of the human resource, the involvement of this in growing the satisfaction at clients' level and life's improvement, in general. As complementary aspects, a few needs showed at general level. These don't connect with the managerial act itself, but with the concurrent zone, the quality culture of the organizations and with the interaction with this, sometimes inevitable – interaction private environment – public institution, with the public politics that are directed by the client, and also with the

stability and involvement of the public, social, politic, economic environment in these organizations' life (Chițescu and Lixandru, 2015).

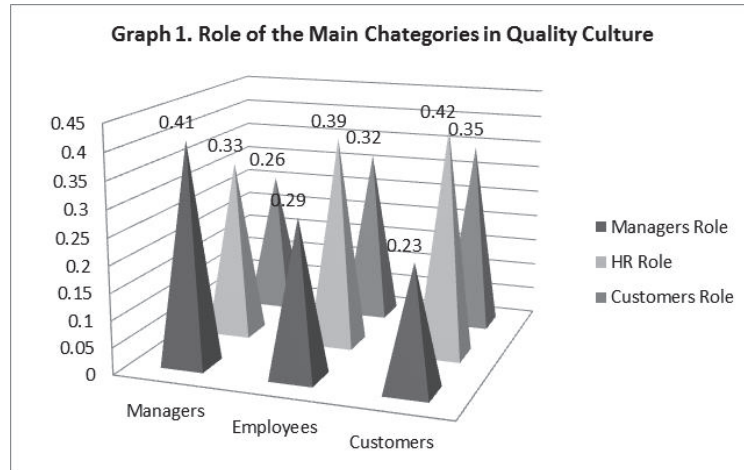
H2 – A medium term objective, revealed by all the interviewed categories, was the collaboration between the business environment and the private one in quality projects, as well as the adapting/ instruction of the working force starting from the high school/ university preparation in the quality culture, culture that should be felt in the individual's behavior as an employee or as a beneficiary of some services/ products. It was circulated the idea of inserting in the curriculum aria of the secondary education of some materials specific to the quality culture, as a measure of educating the future clients in the quality spirit.

H1+H2 – The analyze of the answers received through the two research methods allowed us to hierarchical the analyzed factors' opinions to the managers' role, to the human resource from the organization, as well as to the clients' and social area's role. The vision over this role is different according to the role that each has in this process. So, making a ranking of the opinions, it can be observed that the managers consider that the most important role in growing the quality of an organization and creating a culture associated to the clients is held by the managers, by integrating some policy, strategies and having in the center the human resource from the organization, situated on the second position, with a percent closed to the managers'. The clients are considered as being the least important in this trinomial, the motivation consisting in the efforts' awareness, that are made at managerial level and at human resource growth level, in relation to the registered results in the relation with the clients.

The employees consider that the most important role is held by them, being a bidirectional filter from manager to beneficiary and opposite. They consider that their role exceeds the management's role, as they are the interface with the beneficiary, and the results of the quality culture grow among the clients is an objective effort from their part, as complementary of some managerial policy. After all, they consider that the human resource can mark a quality organization, no matter of the managerial decision quality. They are the ones that "put in practice" the decisions, but also send the feedback to these decisions.

H4 – Some conclusions of the focus group discussions that lead to an improvement of the life's quality with the help of quality growth of all the involved factors at the organization level are directed to facilitating the information an early, continuous and sustained education access of all the involved actors – management, employees and beneficiary.

The clients are the ones that have direct contact with the employees, considering that the employees' role is primary for growing the quality of the offered products. They appreciate, in majority, the employees' efforts to grow the quality and they see in them the main actor in the organization's development.

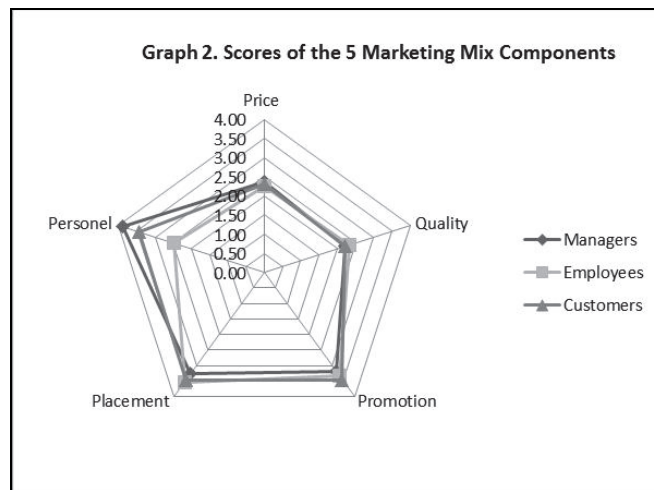


Source: present research results

This is the reason for which the management occupied the secondary position in the chart offered by the clients, considering its role as significant, but not decisive. The client's role is not clearly shown from the clients' point of view.

Easily, it was checked in the group meetings which of the three categories are considered as main factor in promoting the quality culture. A quantitative synthesis of the opinions is presented in graph 1.

Bringing in discussion alongside the two studied elements quality and human resource (staff) the subjects made multiple references regarding the price and advertise. Fact which determined us to collect quantitative information about the 5 components of the marketing mix, the ones that with which the firms build their market approach: product/ quality, price, promotion, placement and stuff. In graph 2 are presented the average scores obtained by each element from each category.



Source: present research results

It can be observed that the price (2.37; 2.25; 2.31), quality (2.22; 2.32; 2.21), promotion (3.19; 3.34; 3.46) and placement (3.26; 3.53; 3.47) scores are very alike and the scores for the staff are different. Therefore, the employees are placed on a more important position, they role being in opposition with the managers, while the consumers are placed between them.

Another suggestive image of the quality and staff position can be obtained and by checking the place each of these components is placed in the three categories' option.

It is notable that the price and quality are on the first and second place, the managers and consumers sharing the same opinion, while the employees think different. The Promotion and Placement are on the third-fourth, respectively fourth-fifth places, the priority position being given by the managers in both cases. Regarding the staff, the employees and clients are on the same position, while the managers place the staff on the last place.

Awareness, instruction, motivation, information, education, evaluation, monitoring – are a few of the aspects which a strong organization must take in consideration in sketching, creating and inserting the quality principles.

Conclusions

A quality management needs a cultural change inside the organization, a rethinking of the organizational structure, a repositioning of the fundamental values, of the interaction way between the human resource from the organization or with the beneficiary. So, the human resource is the fundamental element of influencing the corporative management systems. A quality organization is the one that has success to heart, mind and energy.

There are a lot of factors that influence the way to success of an organization that consolidates the image and position on market. It is difficult to rank these factors, but the human resource, as our study reveals, is the center of the quality philosophy. The involvement of the employees on all the hierarchic levels is the key point in inserting the projects, strategies, programs, technic and practices regarding the quality, to target both the human resource from the organization, its clients, and the relations with the economic, business environment. That is why it must be placed in the center of the management preoccupation, and it must be amplified the maintaining and development efforts of the human resource quality, as main pillion of the organization's and society's development.

At the study level's limits it was observed that sharing the country (the analyzed counties) in different cultural and economic areas highly influence the creation of the quality culture – the difference between Bucharest and the other areas.

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RE-MODELLING THE HEALTHCARE SYSTEM USING TWO POLES – QUALITY OF HEALTHCARE SERVICES AND PATIENT SATISFACTION

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Abstract

One of the most important issues of any public administration is public health, as the primordial obligation of the state to watch over the population health and to provide the medical services. Science and technology evolution create the opportunity to improve the health care services, but at the same time we should be concerned of other ways to improve the quality of the services. Systematically the public opinion shows non-conforming aspects that are driving to dissatisfaction. Talking about a public 'service' we have to be awarded about the satisfaction of the patients and to design reforms to improve the quality of healthcare services and the their affordably in accordance with the collected opinions. Accessibility of quality healthcare is an integral component in determining the foundation on which the healthcare system sits on, described by the WHO and OECD, that is why it was proposed EHCI to have unitary perspective, to can easily compare the systems and to propose adjustments. Many patient satisfaction surveys are conducted at the national level and are based on that specific country's consideration of healthcare services; this is why we must be very careful when dealing with international surveys. Comparing the results of such studies can prove difficult due to socio-economic factors, cultural differences and the patients overall perception of the healthcare system, which is mostly limited to a certain fixed set of expectations. In spite of these mechanical restrictions, the comparing of surveys based on the satisfaction of patients towards healthcare services is a key aspect in improving healthcare systems nationwide. The paper aimed to propose a holistic model and to highlight the main elements that are influencing the services quality and the patient perception.

Keywords: healthcare services quality, patient satisfaction, standards, holistic management

JEL Classification: M12, M31, M54, L32, I18

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Introduction

Health care system is among the top priority of any government at least from two points of view: responsibility for public health and funding and the system management for better health care services. A constant preoccupation is to increase the healthcare services quality, because the patients are expecting to 'get in return' good services for the 'taxes' they have paid. Gittel and his co-authors, in their articles analyzed the link between performance in healthcare and the relationships (Gittel, 2009; Gittel and Center, 2011). The relationships, they are referring to, could be among the medical personell – doctors, nurses, managers, administrative staff, but they considered also the relationship between staff and patients. Talking is not all the time communicating and mutul trust is very important for a healthcare service.

An important issue related with the health care services quality is incidents report. There were researchers that studied the reason of not reporting as a feed-back that could contribute to the improvement. We are considering that the key message: "(1) Healthcare professionals appear reluctant to report adverse incidents to a senior member of staff; (2) Doctors are more unwilling than nurses or midwives to report adverse incidents to a senior staff member; (3) Reporting is most likely when the incident involves the deviation from a protocol and when the outcome for the patient is bad; (4) An unwillingness to report incidents must be addressed if organizational learning is to be achieved in the NHS"; sent by Lawton and Parker (2002) is synthesizing the core of the subject.

Very frequent the financial aspect is brought into attention even in terms of lack equipment, infrastructure etc. or personnel wages. "Most physicians and hospitals are paid the same regardless of the quality of the healthcare they provide, producing no financial incentives for quality and, in some cases, disincentives. Thus, there is increasing enthusiasm for the idea of linking payment to performance." (Petersen et al., 2006) The studies shows that the incentives programs have to be carefully monitored and there are no strong results that the quality improvement came from this.

Quality of healthcare system approaches

To parafrase Alexander Pope; „to err is human..” and taking into account that medicine isn't an exact science, there will be mistakes along the way, but what makes a great doctor as well as a great manager is learning from those mistakes and not only making sure you don't commit the same mistake twice, but challenging yourself to develop a better procedure which minimzes the risk of error. One opinion of improving the quality of healthcare system was to create a database with clinic data about the patients (Kraftson et al., 2000). „The disclosed system encompasses (i) designing and administering paper and pen and hand held computer survey instruments; (ii) administering and collecting completed surveys (iii) building and managing a database of information collected from the surveys; (iv) analyzing data collected from the surveys; (v) and providing clinical practices with summary information.” All these informations are willing to serv as best practice and experiences that could improve the quality of the services by the doctors knowledge increase. Other model is proposing a set of key elements to evaluate the Total Quality (TQ) (Al-Assaf et al., 1993): (1) executive level commitment; (2) transformation of culture; (3) planning quality; (4) organizing quality; (5) evaluating quality.

Dougherty and Conway (2008) are considering that „The 4 main activities of the 3T's model for transformation accross the multipl leavels of the healthcare system are

measurement and accountability, implementation and system redesign, scaling and spread and research. Measureing and accountability for quality and cost are the foundation for health care improvenet.” A similar conclusion “good conceptual framework is particularly essential when there are societal requirements for fairness, transparency, accountability, performance attribution, and rewarding of excellence.” (Arah et al., 2006) was founded in a project meant to create a freame work for OECD to evaluate the quality of healthcare services.

An interesting aproach of the quality of healthcare is given by Campbell et al. (2000) based on patients access and effectiveness. The patient access to the services can be determined taken into consideration the costs and easy to be related with the service quality. The effectiveness is considered by the authors using two components: one the effectiveness of clinical services that is related strictly to the quality of the service and the effectiveness of inter-personal care that is related with the interaction with the patient and his final perception.

Saha, Beachand Cooper (2008) studied cultural competence and patient centeredness and find out that the quality of healthcare services could be influenced, do not matter to much if it is considered the interpersonal or system levels. Of course lot of other evaluation systems could be considered the most important aspects we have to consider are the criteria, methods or instruments of evaluations and the impact of ‘believes’.

Quality of healthcare and patient perception data analysis

We’ve used the results of Special Euro barometer 327 “Patient Safety and Quality of Healthcare” Report, 2010, Families USA Measuring Health Care Quality: An Introduction (March 2014) and Guiding principles for consumer-friendly health system transformation (February 2016) and other reports on the patient opinion about the quality of healthcare services.

It could be seen that Romania is places among the last five pozitions having the smalest scors (3) about the quality of the healthcare services, together with Portugal, Grece, Hungary and Bulgaria, the average of EU being placed at 33. Even the highest score of „better” is less then the highes score of „worse” that drive us to the conclusion the bad experiences are more powerful than good one.

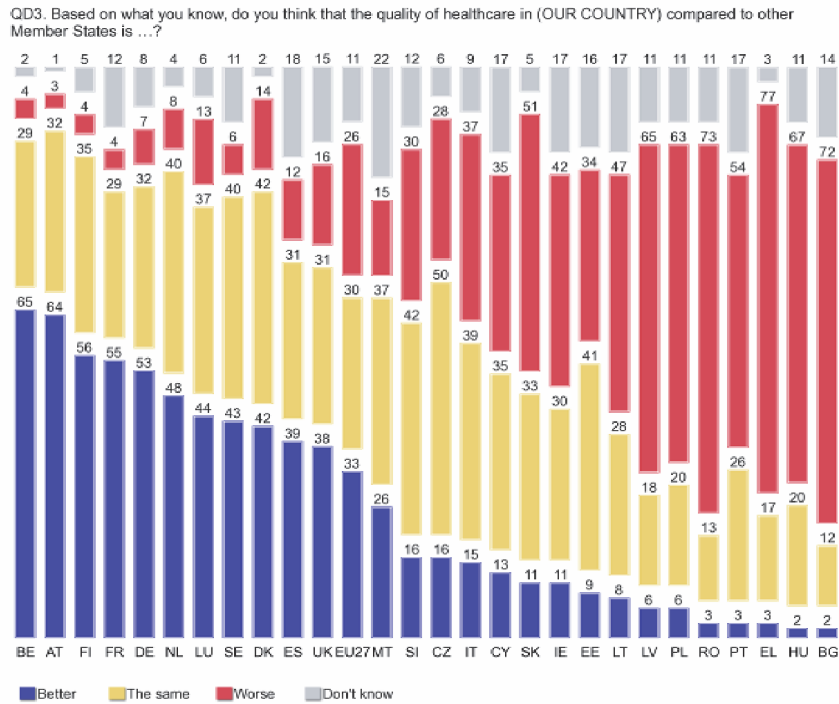


Fig. no. 1. Patients perception on the quality of healthcare services Eurobarometer 327

Source: takeover from Patient Safety and Quality of Healthcare” Report, 2010, p.62

At the same time we considered Euro Health Consumer Index (EHCI) is a comparison of [European health care systems](#) based on waiting times, results, and generosity calculated by Health Customer Powerhouse (EHCI 2015)

The five criteria proposed by Health Customer Powerhouse to create a comparative ranking of the quality of healthcare system are using clinic aspects, communication, costs, education and technology impact on the patients’ perception.

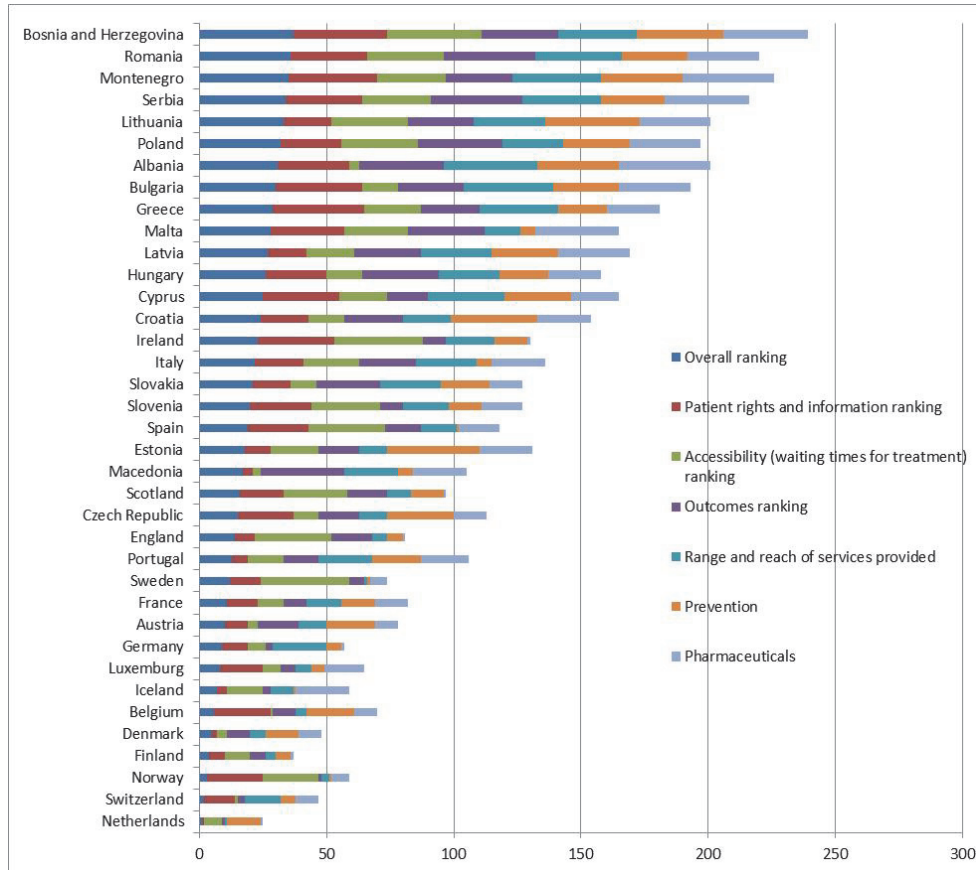


Fig. no. 2. Euro Health Consumer Index for 2014

Source: authors graph using the EHCI scores

The waiting period for recommended treatment

The estimated time to wait for treatment is an important indicator in measuring the accessibility of any healthcare establishment. The delay for receiving an operation, from the first consultation to the actual surgical procedure is affected by the following factors: The time it takes to receive a recommendation for a specialty consultation from your family doctor, whether it is on the same day, or there is a waiting list, the time it takes to get direct access to a qualified surgeon, the period between the pre-op consultation and the actual procedure. Usually the waiting period for surgical procedures which are not emergencies is less than three months, less than three weeks for chemo/radiotherapy in oncological cases and less than a week for diagnostic procedures (CT, MRI). In keeping with these factors, the highest rate of patient satisfaction was seen amongst German citizens. Although, in Germany getting an appointment with your GP is a relatively easy process, patients can also opt to skip this step and make an appointment directly with a specialist. The general waiting period for non-emergency surgeries is < 3 months, while chemotherapy can start

even earlier than 3 weeks, after receiving the results from an MRI or CT scan which can be performed in > 1 week.

In terms of funding and healthcare management, the Austrian healthcare system is extremely similar to that of the German model, which is also represented by the level of satisfaction conveyed by Austrian citizens. These indicators used to measure accessibility of healthcare services are somewhat disappointing, mainly in Eastern European countries, or countries which lack the sufficient funds. With the exception of Latvia and Lithuania, effective healthcare reforms have achieved positive results in relation to patient satisfaction and quality of healthcare services. Countries such as Latvia, Lithuania and Romania have not yet been able to regulate the flow of patients and as a consequence it is still possible to receive direct access to a specialist. In terms of minor surgery, patients in EU countries such as Denmark, Estonia and Sweden have a waiting period of < 3 months, while countries such as Great Britain, Latvia and Slovenia have registered waiting periods of > 3 months. When it comes to radio/chemotherapy, the waiting time in the majority of countries investigated was > 3 weeks, with the exception of Latvia and Slovenia where, in almost 90% of cases, therapy started earlier than three weeks. The situation becomes more problematic when dealing with medical imaging or diagnostic techniques, where all but 3 EU member states displayed waiting periods of > 3 weeks. The three countries who have waiting periods of < 3 weeks for CT/MRI, usually between 1-2 weeks are, Denmark, Estonia and Latvia.

To summarize, Austria and Germany lead the pack when it comes to the smallest delay between the first consultation and the surgical procedure, as well as the waiting period for GP and specialty consultations and access to diagnostic procedures. In the United Kingdom and Sweden, waiting periods are much longer and are viewed negatively by patients. Even with negative results, Slovenia managed to score positive results with patients in terms of receiving a consultation with your GP on the day, and waiting for less than three weeks for chemotherapy. The countries who scored the lowest in relation to waiting periods for treatment are: Lithuania and Romania.

Safeguarding the rights of patients

The rights patients have, which are enforced by the specific laws of that particular country can be used to measure the quality of healthcare services received. Comparing patient rights laws within other European countries, the EU member state of Denmark is by far the most efficient healthcare system when it comes to the rights of patients to receive quality healthcare. The patient rights law established in Denmark allow for members of an organizational committee to include patients in their decision making process, furthermore, patients are insured against medical malpractice, as well as having unlimited access to their individual medical records from their GP. Denmark, as well as most Western European countries, have records of all licensed medical practitioners, along with catalogs of healthcare clinics available to the public. Patients have the right to seek medical advice at any time of day due to their advancements in the e-health category. For example, patients have access to phone/online consultations 24/7, and benefit from e-health cards which are used by the GP in order to store the patient's individual data.

Another important aspect is that patients have the right to choose to be treated abroad, and these costs are covered by the national health insurance, whereas countries such as, Lithuania, who also scored a positive evaluation, do not have international coverage, unless

they are emergency situations, and even then patients come across endless bureaucratic red tape in order to receive approval. Eastern European or Balkan countries are lacking in their integration of electronic health, most EU countries with less funds do not use e-health cards, cannot benefit from constant medical support either online or by phone, and have no records of practicing physicians or medical care providers. By slowly integrating these concepts into a struggling healthcare system, accessibility and quality of healthcare services will drastically improve, thus ultimately resulting in an increase of patient satisfaction.

The re-modeling concept of healthcare system

The paper aimed to get some elements to support the idea of using this equilibrium relation as the discussion base. The ideal situation is when the patient perception/expectation fits with the quality of the healthcare services.

We are considering that the key factors in re-modeling the health sector are the perception of the patient and the quality of the healthcare services. The interaction of these two nucleuses, in our representation, is taken the ellipsoidal shape. That means that there are ‘attraction forces’ and ‘rejection forces’ that are establishing an equilibrium.

The scheme presents the two nucleuses which are holding together the entire structure of healthcare system. Each are dependent of one another, because every individual can perceive quality in a different way, some individuals have higher standards than others, due to their culture or socio-economic background. Thus, leaving the notion of quality to be relative.

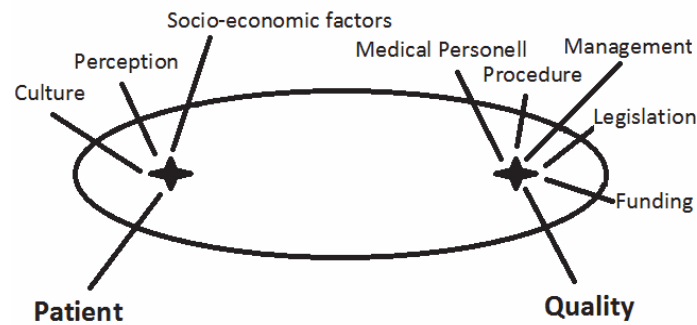


Fig. no. 3. Ellipsoidal structure of healthcare system interactions

In figure 3 it could be seen that each nucleus is depending of certain factors. Patient perception and expectations are generated by the age, gander, education, culture, social position, economic status, life stile, religion etc. On the other havd the quality of the healthcare services depends on infrastructure, medical personell, funding, legislation, management etc. The „domino effect” can be easily created when you lose one piece, eventually they all come tumbling down. The events leading to this destructurezation, although sometimes devastating, are not necessarily unrepairable.

Quality of healthcare services can depend on a variety of different aspects, each aspect as important as the next; for example: A hospital/clinic can posses an entire staff of capable and knowledgable physicians, but might lack in the funding of certain procedures, or they might have the necessary funds but require more experianced medical and managerial staff,

or they may have the appropriate funding, medical and managerial staff but certain laws and regulations that could impede some actions.

The most important aspect is that the equilibrium has to be maintained and if any disruption comes out all the efforts could be made to recreate it back.

If we are proposing a mathematic form of the model it could be:

$$\sum_{i=1}^n PPE = \sum_{j=1}^m QHS \quad (1)$$

Were:

PPE – is patients perception and expectations, testing n key elements

QHS – quality of healthcare services, using m criteria of evaluation

All the presented above factors of influence and evaluation criteria will be tested to set up the best combinations that could offer an integrated picture.

Conclusions

Due to substantial variances in the way EU patients identify the quality of medical services offered by their country's national healthcare system when compared to other EU Member States, it is apparent that the need for healthcare reforms is a prevalent issue, especially in Eastern European countries who lack resources and experienced healthcare managers. Some EU countries have already begun implementing reforms in their healthcare system based on patient satisfaction and needs and as a result are receiving more positive reviews, for example, Estonia. In countries such as Latvia, Lithuania and Romania it is clear substantial changes need to be applied, although most healthcare organizations are aware of this problem, there needs to be a reflection on the ways of reducing these disparities between EU member states in order to bridge the gap of quality between Eastern and Western EU countries and be able to hold a constant average amongst these countries in the perception of quality and accessibility of healthcare services.

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ARE ROMANIANS ATTRACTED TO TURKISH BAKERY PRODUCTS? A CONSUMER BASED APPROACH DEVELOPED ON ENTREPRENEURIAL PREMISES

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Abstract

In a context of a very pronounced mobility, individuals are exposed to the products, lifestyles, and behaviours specific to the cultures they interact with. Both immigrants and the citizens of the host country tend to embrace consumption features specific to the other culture.

In this paper we investigate if any changes occurred in the consumption habits of Romanian citizens, under the influence of Turkish immigrants, aiming to emphasize if they may represent a viable market for Turkish entrepreneurs active in the bakery industry.

Based on an interview-based research, we have identified that our sample was composed of Romanians that consume and Romanians that do not consume Turkish bakery products. The reasons that lead to the development of the first category may refer to the existence of persons of Turkish nationality in respondents' family or among their friends, the existence of a special attraction towards the Turkish culture, the existence of a previous contact with Turkey, implicitly with the Turkish cuisine, etc. On the other hand, a high degree of authenticity in consumption, reluctance towards tasting food products specific to other cultures, etc. represent important issues that made respondents not to eat Turkish bakery products.

Turkish entrepreneurs active in the Romanian bakery industry may easily target Romanians as consumers of both Romanian and Turkish bakery products; a good and quite profitable entrepreneurial approach may be to offer on the market an assortment composed of bakery products specific to the Romanian and Turkish cuisines.

Keywords: migration, entrepreneurship, immigrant entrepreneurship, consumer, consumption habits, supply

JEL Classification: F60, J00, M10

Introductory remarks. Focus on a brief theoretical background

Lately, migration has become a phenomenon of unprecedented dimensions, being one of the most important issues debated nowadays and addressed on main policymakers' agenda.

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Also, the scholars' interest in researching specific features of migration has been increasingly growing.

Considering the actual context, the tendency nowadays is to associate migration almost only with its negative consequences both for the sending and the receiving countries. In case of the receiving countries, different socioeconomic problems, especially related to increasing flows of immigrants - such as development of illegal activities, increase in unemployment, tensions on the housing market, ghetto development within cities, differences in behaviour and lifestyle, development of ethnic conflicts, etc. - are becoming quite difficult to manage for authorities and policymakers (van Delft, Gorter and Nijkamp, 2000; Baycan-Levent et al., 2006).

Approached as "any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business" (Bosma et al., 2012, p. 9), entrepreneurship may represent quite a good solution for solving part or even all the previously mentioned problems. Immigrant entrepreneurship, among other measures, may bring a contribution to alleviating or even eliminating the negative effects of migration and to enhance the positive ones - such as solving vacancy problems on the labour market, especially through new jobs generation, cultural diversity, increase in and diversification of commodities supply on the market, promoting various management and leadership styles specific to immigrants' culture, diminishing social exclusion, etc. (Grosu, 2015).

In what concerns the terminology aspect, immigrant entrepreneurship faces different approaches in the scientific literature. Commonly "the terms of immigrant entrepreneurship, ethnic entrepreneurship, and minority entrepreneurship are used interchangeably" (Basu, 2006, p 582). However, there are a series of differences between them, as highlighted by the previously mentioned author:

- Immigrant entrepreneurship refers to the entrepreneurial activities developed by immigrants in the country of destination.
- Minority entrepreneurship is specific to minority entrepreneurs. They are the ones that are part of a minority group, implicitly they do not belong to the majority. People that belong to a minority group are not necessary immigrants. Minority groups can be established based on different criteria.
- Ethnic entrepreneurship is the one developed by ethnic entrepreneurs. They belong to an ethnic group with a common culture, history, language, etc. and they usually tend to develop an ethnic economy based on their close interaction and also on their interaction with suppliers and consumers (Miera, 2008). "Thus, an ethnic entrepreneur may or may not be an immigrant but it is likely to belong to a minority community" (Basu, 2006, p. 582).

As over the last years entrepreneurship among immigrants, ethnic groups, and racial minority groups especially raised scholars' interest (Fairchild, 2009), the literature in the area of immigrant entrepreneurship is very complex; some of the main approached direction in the literature refer to policy implications and recommendations, business orientation, profile of the immigrant entrepreneur, differences between countries, immigrant entrepreneurs' needs, motivations and potential, comparisons with local entrepreneurs, evaluation of immigrant ventures, entrepreneurial and management styles

and strategies, factors with impact on the development of immigrant entrepreneurship, first and second generations of immigrant entrepreneurs, etc. (van Delft, Gorter and Nijkamp, 2000; Kloosterman, 2003; Arjona, 2004; Kitching, Smallbone and Athayde, 2009; Gonzalez-Gonzales et al., 2011; Ilhan-Nas, Sahin and Cilingir, 2011; Baycan, Sahin and Nijkamp, 2012; Neville et al., 2014 cited in Grosu, 2015).

In what concerns the business orientation, generally, immigrant entrepreneurs tend to aim ethnic markets for business start-up (Dinu, Grosu and Saseanu, 2015), being oriented towards the "sale of ethnic products, retail, construction, intensive agriculture, high intensity personal services, and hospitality and food" (Arjona, 2004 cited in Săseanu, Petrescu and Zgură, 2011). For example, according to Kitching, Smallbone and Athayde (2009, pp 692-693), "in the United Kingdom, the businesses are concentrated in competitive, low-value-added ethnic niche sectors, such as catering, food retailing, and textiles. However, in more recent times new trends in targeted niches arose such as business and professional services, music, the arts, and software".

On the other hand, in case of immigrant entrepreneurs belonging to not very well represented communities - from numerical perspective - addressing only to their community may not be a profitable aspect (Grosu and Saseanu, 2014). This is the case of Turkish immigrants in Romania.

In this context, through the research we have developed, implicitly through the present paper we aimed to investigate whether Romanian consumers are attracted to Turkish commodities - focus on bakery products - in order to identify if they represent a viable market for Turkish entrepreneurs. This way, Turkish entrepreneurs may better structure their supply of bakery products, focusing on consumers' demand.

Stating from the idea according to which in a context of a very pronounced mobility, individuals are exposed to "the products, lifestyles and behaviour patterns of consumers belonging to another culture" (Douglas and Craig, 1997, p. 380), to the fact that food consumption habits are one of the most exposed to change and to the fact that also the host culture changes under the influence of immigrant groups (Gentry, Jun and Tansuhaj, 1995; Jamal, 1996; Cleveland et al., 2009), in this paper we investigate if any changes occurred in the consumption habits of Romanian citizens, under the influence of Turkish immigrants, aiming to emphasize if they may represent a viable market for Turkish entrepreneurs active in the bakery industry. In this sense, the paper is structured into two main parts: the first one briefly outlines a series of methodological aspects and the second one, the main findings of the research. The paper ends up with a series of final considerations.

1. Brief methodological aspects

Based on the premises of a research carried out in 2012 (Petrescu, 2012), in 2015 we have developed an interview based qualitative research among Romanians living in Bucharest with the main aim to investigate whether they are attracted to Turkish bakery products in order to identify if they represent a viable market for Turkish entrepreneurs. The focus of the research was on identifying if there are any changes in their consumption habits of bakery products, as a result of the influence manifested by Turkish immigrants.

The researched community was composed of 42 Romanians, deliberately chosen based on contrast and variety criteria, in order to get as much as we can a complex and

comprehensive image of the investigated phenomenon. The main methods we have used for establishing the sample and selecting the interviewees were the snowball and the auto-selection techniques. Considering the qualitative character of the research, results generalization is not our aim; results are more specific to the interviewed community.

The method we have used for gathering the information was the semi-structured interview. This was formal and based on an interview guide. Generally, interviews lasted, in average, for 32 minutes and they were face to face and one-to-one type. They were carried out in different dining outlets with Turkish cuisine, our role being of interviewers.

Further on, in the following section of the paper, based on the notes we took during the interviews and using the inductive approach, the main research results are outlined.

2. Main research results and discussions

The interviewed community included males and females aged between 20 and 60 years, most of them graduates of higher education institutions, holders of a bachelor degree, or even master degree.

Generally, the respondents show a higher interest in the Romanian bakery products, hence they consume them more than the Turkish ones. Some of the main reasons that lead to this situation refer to the low number of places of distribution of Turkish bakery products, and to the low prices of the Romanian bakery products.

"I do not have from where to buy traditional Turkish bread. I am not living close to a factory that produces such products, or close to a store that sells such products. Therefore, I rarely consume them, about once a week or every two weeks, when I am going to a particular factory." (Male, 30 years old)

However, within the interviewed community there are also exceptions. Accordingly, there are people who do not consume Turkish bakery products and people who consume more Turkish bakery products than Romanian bakery products. The latter case is more specific to interviewees that have in their families Turkish people, or to interviewees that exhibit a special attraction to the Turkish culture. Within the first category are included interviewees showing a high degree of authenticity in the consumption of bakery products, in particular, and in the food area, in general. There are also situations when respondents do not consume Turkish bakery products because they dislike them or, in other cases, because they don't know about their existence, showing a certain openness towards the consumption of such products. At the same time, they expressed their desire for a better promotion of the Turkish bakery products and for a better information of the potential consumers about their existence.

"I am consuming only Romanian bakery products. Generally, I am not eating bread, but when I want to do this, I always choose the Romanian bread. My husband is trying all sorts of bread, but I don't prefer them. I'm pretty conservative. I am eating only dishes that I am familiar with, and I am not really open to new experiences." (Female, 60 years old)

"I tried once the Turkish bakery products. I don't like them ... not my taste." (Male, 40 years old)

"I am consuming Turkish bread on a daily basis. I don't remember the last time when I bought Romanian bread. I am married to a Turk and generally in my family are more Turkish people than Romanians. My sister is also married to a Turk. The first time I ate Turkish bakery products, especially bread, it seemed strange to me. It was a little salty for me. Then I got used to it. Anyway, we are living both in Romania and Turkey; more in Turkey. What I can tell you is that the Turkish bakery in Turkey is slightly different from the Turkish bakery in Romania. They have a true culture and tradition in terms of bread and bakery products in general." (Female, 45 years old)

"I'm attracted to the Turkish culture. I would have loved to be a Turk. In fact, I am feeling like a Turk. I am eating almost exclusively Turkish products, I am usually using Turkish products (creams, solutions for hair, etc.), I am even wearing clothes on their style. Not to mention about Turkish language ... I have learned it some years ago. Even my friends, in general, are Turks." (Female, 30 years old)

Overall, the consumption of Turkish bakery products is due to the relatively high degree of openness to other cultures and acceptance of other cultures shown by the interviewees. In general, they are open towards trying Turkish foods. One of the explanatory factors of this situation - especially in the case of older respondents - may be represented by the communist period in which the Romanians had no contact with other cultures or goods specific to other cultures. After the fall of the communist regime, the commodity supply on the Romanian market was in a constant change and diversification; generally, older consumers are willing to try everything that was not available during the communism period. However, the existence of Turks among their friends and the previous contact with Turkey and the Turkish culture - generally as tourists - has determined part of the interviewees to consume Turkish bakery products. On the other hand, their special quality is contributing to the increase in consumption, implicitly in demand.

"I have been travelling a lot around the world ... So I also came into contact with the Turkish civilization. Then I interacted with the Turkish civilization in Romania. I have friends that are Turks. Anyway, when I tasted my first Turkish bakery product I liked it very much. I remember it know ... it was 14 years ago when I eat my first simit[†]. It was hot and it melted into my mouth. The sesame gave it a special taste. [...] I am open to any type of cuisine, specific to every culture. Close to the Turkish bakery products, I am consuming many other Turkish type of foods. For example, ayran[‡]." (Male, 40 years old)

"When I was young I didn't really have anything (during the communist regime, our access to different food products was limited). Now I like to try everything that is new. So, I am trying any food product of any origin. I have also tried the Turkish bakery products. To see how they are. And I liked them very much. I am buying them whenever I have the opportunity. An I also love going to Turkish restaurants. I love lentil soup." (Male, 60 years old)

"I love to try different dishes specific to cuisines around the world. I am open towards trying almost any food, specific to almost any culture. Turkish products have a special story. Unlike other food products that I have tried as a tourist within their specific country, the Turkish products are also the ones that I buy in my country and that are somehow part

[†]Simit is a Turkish bakery product similar to pretzel.

[‡]Ayran is a traditional Turkish drink obtained from yogurt and water and different other added spices.

of my diet. Having a lot of Turkish friends I was very tempted to try the Turkish bakery products. And I liked them very much. Now, I eat them as often as I can along with other types of food specific to the Turkish cuisine." (Male, 27 years old)

Interviewees that consume Turkish bakery products, generally, perceived them as being tasty, of a high quality, attractive and safe; the general view on the Turkish bakery products is positive. In the same line, the Romanian bakery products are perceived as being very tasty, qualitative, attractive and safe, the general opinion of interviewees - both those who consume Turkish bakery products, and those who do not consume such products - being positive. Unlike the Turkish bakery products, Romanian ones are more affordable, making them easy to be identified because of their high degree of availability and because they are cheaper. Buying Romanian bakery products is much easier because of the price and availability, compared to the purchase of the Turkish bakery products; implicitly the consumption of the Romanian bakery products is higher compared to the Turkish bakery products. However, in general, the respondents associate the smell of fresh bread and the consumption of the Romanian bakery products with their childhood, generating a higher degree of satisfaction compared to the consumption of Turkish bakery products.

"Turkish bakery products have a special taste. They use sesame and sometimes, the dough is mixed with yogurt. The Turks have very good and qualitative bakery products." (Female, 38 years old)

*"The Turkish bakery products are extraordinary. There is nothing better. For example, I really like the pide[§], especially mixed with the kebab^{**}."* (Male, 37 years old)

"The Turkish bakery products have their special charm and I consider them very tasty. But nothing compares to the smell of fresh Romanian bread that wakes me up every morning (living next to a Romanian bakery). I get up every morning to buy my fresh bread. And I really love it ... and I am eating a piece of bread until I get home. I've been doing this since I was little and my mother used to send me to buy bread." (Male, 32 years old)

"I like both Romanian and Turkish bread. Both are qualitative and are very tasty. You can trust them." (Male, 28 years old)

Conclusions

Following the increased migratory flows, not only immigrants are subject to change, but also the citizens of the host country. Due to the cross-cultural interaction, many personal characteristics of both immigrants and citizens of the host country change; the consumption behaviour is one of them.

In case of the interviewed Romanian citizens there were both situations of Romanians that consume Turkish bakery products and of ones who do not consume them. The ones that consume Turkish bakery products have in their family or among their friends, persons of Turkish nationality, manifest a special attraction towards the Turkish culture and a high

[§]Pide is a Turkish bakery specialty. It is a type of bread that can be as a pita or may take the form of a flattened rugby ball. In the latter case, sometimes it can be served with various ingredients, such as kasharla (Turkish cheese), sujuklu (spicy Turkish sausages) etc.

^{**}Kebab is a traditional Turkish dish mainly made out of pieces of grilled or roasted lamb.

degree of openness towards and acceptance of other cultures, and had a previous contact with Turkey, implicitly with the Turkish cuisine. The interviewees that do not consume Turkish bakery products manifest a high degree of authenticity in consumption and quite a reluctance towards tasting other food products specific to other cultures, or they tried Turkish bakery products and did not like them, or simply do not know about their existence.

Both Turkish and Romanian bakery products are perceived by the interviewees as tasty, of good quality, attractive, and safe for consumption. However, different from the Turkish bakery products, the Romanian ones are more accessible and cheaper. Also, the degree of satisfaction is higher when Romanian bakery products are consumed; symbol of the Romanian culture, bread is associated by the interviewees with the special moments from childhood.

As a final conclusion, it can be assessed that Turkish entrepreneurs active in the Romanian bakery industry may easily target Romanian consumers as a viable market. They can be approached in their quality of consumers of both Romanian and Turkish bakery products. In this context, a good and quite profitable entrepreneurial approach from Turkish entrepreneurs' perspective is to address to Romanian consumers with a supply of bakery products composed of foods specific both to the Romanian and Turkish cuisines.

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ANALYSIS OF THE EFFECTS OF THE CORPORATE STRATEGY TO PERFORMANCE IN BUSINESS

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Abstract

The main task of this article represents different strategic approaches and illustrates the benefits of a clear strategy for tracking business. The benefits and the relationship will be illustrated by the example of a company operating in practice. The company in this case is a qualification service provider.

The fundament of this paper is the literature on the subject "Strategy". Furthermore, in the empirical part of this article, it will be analysed how successful and targeted the strategic implementation of the qualification service is.

The aim of this work is to make a statement on how successful a clearly defined strategy for a company is.

Keywords

Corporate strategy, business goal, performance in business, value chain

JEL Classification

L10

Introduction

The demand for a strategic orientation of the company is lately increasingly charged. Corporate strategy has always been important and developing a good strategy was always a difficult task. However, good corporate strategy has never been so important as now, just because so many things cannot be predicted, because the development is not transparent and because we are going through a fundamental changing phase (Malik 2007).

It is more and more recognized that the real problems of a company cannot be countered by an arbitrary direction of the company, but only with a clear corporate strategy of the proliferation of perceived problems and the increased difficulty of their solution (Heinemann, 2005).

Companies need strategies to compete on their markets. However, it will never be a strategy that could be applied as a panacea for all companies. Each provider has to find its best solution for the given situation, the given possibilities and its resources in order to

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fulfill its goals (Kotler, Armstrong, Wong, Saunders, 2011). Considering the currently successful companies, a common orientation can be easily identified: each company has a corporate strategy and a consistent orientation. With the right strategy, the successful company stands out from the less successful concurrence.

Strategic skills are nowadays so important, because there are not many competitors, who don't follow any strategy and don't work efficient. All companies strive for their strategy (Malik, 2007). Thus strategy means to take clear decisions based on which the companies plan is, in order to be competitive on their market (Welch, 2005).

Definition of the strategy

At a closer examination of the strategy concept it is important not to get around with the strategists of the past century. All so-called strategists of the past centuries were "war heroes" in the broadest sense. These included, inter alia General Sun Tzu, Hannibal, Alexander the Great, Carl von Clausewitz, to name just some of the most known. Based on the military history the concept of strategy has positive connotations. Strategists are winners (Bürkel, 2010).

If we let the myths of war heroes at side, we can find the core of the strategy, and we can relate it to the economy. In classic business (mostly on long term) under strategy it is understood a planned corporate behavior in order to achieve their goals (Seifert, 2016). In this sense, the company's strategy shows in corporate management, in which way a medium-term (2-4 years) or long term (4-8 years) corporate objective is to be achieved (eg. a new product development, increased market share or develop new markets). The most important instruments of the strategic objectives are portfolio analysis, potential analysis, ROI analysis or the product life cycle (Restuccia, Brentani, Legoux, 2015).

The corporate strategy sets the long-term development of the company as a unit. The vision and mission are the foundation for formulating a qualitative corporate strategy.

The vision is the origin and the guideline of entrepreneurial activity. The vision is an idea of how a company should develop in the future. Through the vision, the meaning of a company is described and the basic orientation of the proposed business development dictated (Hungenberg, 2004).

The vision is a landmark (lighthouse) for a company's employees. In this sense to the vision are usually assigned three functions:

- Identity function: the vision should describe a future image of the company that makes this unique and distinctive;
- Identification function: the vision is to show the employees in the company the deeper meaning and the value of their work and make it easier for them by identifying with the company;
- Mobilizing function: the vision should encourage the employees in the company to pursue the desired image of the future as a common goal.

A written implementation of the vision is the so-called mission. The mission includes the principles, the purpose of the company and the company's values. Each mission must then be converted into measurable strategic objectives. These should be available for each manager, so that he can take responsibility for the achievement of objectives (Kotler, Armstrong, Wong, Saunders, 2011).



Fig. no. 1: Overview Vision, Mission, Strategy

Source: authors

Research objectives and methodology

The aim of this study is to show the influence of different strategic approaches to enterprise development.

The authors find one approach for the study in the analysis of the value chain of Porter. Based on this examination, medium primary research, the business development training services are analyzed in connection. As measures of corporate development the key figures in sales and EBIT development are used.

Research results

Value Chain

The analysis of the strategy of the company is based on the analysis of the tool “Value Chain”. The author chose this tool because it matches best for the service companies and reflects best the company alignment and operating (Amara, Halilem, Traore, 2016).

If the Value Chain is applied on the strategy of the Company, it becomes obvious that the Company’s strategy is focused on profit improvement. Particularly the focus on the EBIT rate of return and the revenue target, which is supposed to ensure Companies continuous growth, is to be emphasized.

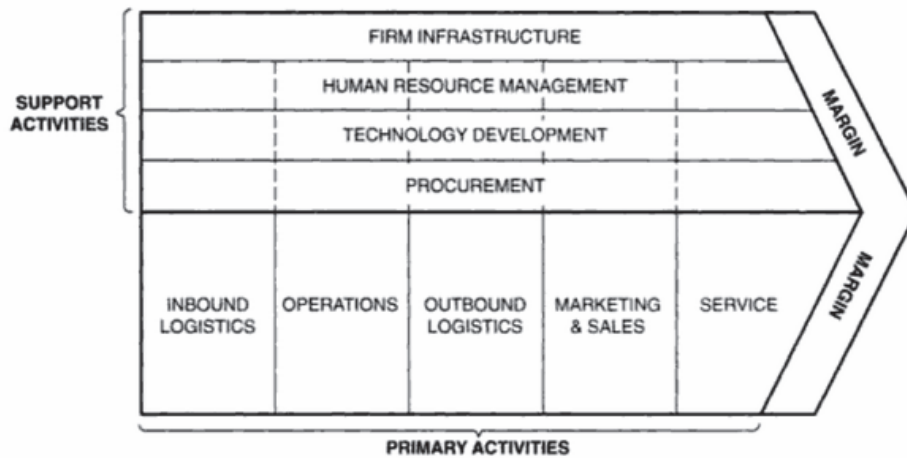


Fig. no. 2: The generic Porter Value Chain

Source: Barnes D., 2001 Understanding business: processes, London: Open University in assoc. with Routledge, pp. 52

In order to create a high value for the client, the US-author Michael Porter suggests the Value Chain as the suitable analysis. Any company consists of a set of activities that are carried out in order to design, produce, sell and deliver the products. The tool of the value chain divides the company into new value-added activities in order to analyze the individual areas and their costs more accurately and at the same time, to discover potential for differentiation over the competition (Porter, 1980).

These nine value-creating activities are divided into five primary and four cross-functional supporting activities.

Porter says that the primary activities are:

- the introduction of materials and parts (inbound logistics)
- the handling and processing of material and share (production)
- distribution of goods and shipping (outbound logistics)
- the marketing of manufactured goods (marketing and sales)
- customer services around the product (service)

Over a long period of time companies considered only the product itself as a means of generating value for customers. The customer satisfaction however is also based on the other stages of the value chain. The supporting activities are relevant in each of the five primary functional areas.

Under the concept of the value chain the company should examine costs and value-added performances in each functional area and seek for possible improvements. The success of a company however depends not only on how well individual departments do their jobs, but also on how the activities of the departments are aligned and coordinated. This requires a clear strategy, which is also clearly defined through each sector.

As described by the author, the various activities of the value chain reflect the commercial strategy.

Commercial strategy of the Company

If one takes a closer look on the commercial strategy of Company until 2015 (EBIT > 10 % and revenue > 60 million €) and compares the strategy with the revenue and EBIT development, it becomes obvious, that the Company 123 is very strong aligned on increasing the profits.

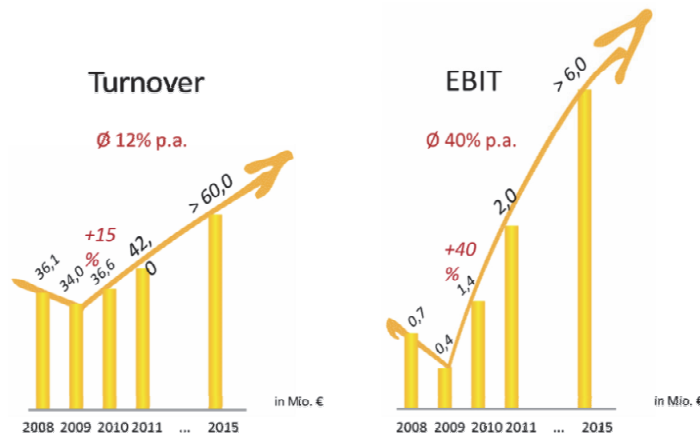


Fig. no. 3: Turnover and EBIT development of Company 123

Source: authors

To track this commercial strategy it is necessary that the strategy is prioritized and focused. This is possible, for instance, with the sub-objects:

- higher profit margins
- improved customer retention
- intensive investigation of the consumer

Based on this strategy it is clear to see, that as well as in the value chain of Porter, profit stands at the end of all activities and that this is what all activities are aligned to.

In the following Illustration two strategic alignments/ activities are highlighted, that underpin the representation of the value chain according to Porter.

Marketing- and sales strategy of the company

In the last five years the market for training has changed. The customers are choosing customized training solutions and send fewer employers in open seminars.

There are about 180.000 IT professionals in Germany, who need to invest at least 5 to 10 days a year in their further education in order to maintain their market value. Here, the market of certification is not excluded, since in Germany, the evidence of a successfully completed qualification is still very valuable. The personal market value increases. The customer pays higher hourly rates. The professionals usually want to carry out the training programs on weekends to minimize the loss fee. This would allow a more efficient use of resources at the company.

The company has been able to build new businesses but the structure is still mainly focused on standardized business seminars.

In order to identify the customer's individual requirements at an early stage, the establishment of an appropriate and highly qualified sales team in the offices is required. The new sales structure supports this sales activity and is focused on the key customers.

Due to these facts, the customer strategy consists of the following aspects:

- focus on the individual and profitable projects
- prioritization on the activities of distribution/ optimal use of resources

- structured market development on the size and needs of customers target training of sales staff
- multichannel distribution

Service strategy of the Company 123

The current target market is by addressing the customer considered a pure B2B market approach. Communication with businesses and winning the customers, starting with the top 100 companies in Germany up to the middle class, has been the clear focus.

Due to the intensified form of independence and freelancing for the IT professionals, results another target group, which at least partially can be addressed with the instruments of B2C marketing. Furthermore they have a significant purchasing power and are willing to invest in their own marketing capability. The offer could be an interesting complement to the efficient utilization of existing resources on weekends.

In addition, by addressing the potential customers via the Internet the selectivity of the target groups no longer exists. The participants of the week, which are sponsored by a company, visiting a from the company perspective necessary qualification measure, are potential participants over the weekend who consider their personal further education as a key fact in order to remain successful in the market.

In order to facilitate internationalization, a suitable platform on the internet has to be provided for the entry into social communities. The areas of different language are more important than national boundaries.

The Company 123 operates with four divisions on the training market, in order to provide their customers a full service (see appendix: divisions of the Company 123).

SWOT Analysis of the Company 123

Summarizing the results of the external and internal analysis in a SWOT – analysis (see “SWOT-Analyses) leads to the following result.

Table no. 1: SWOT analysis

Strengths	Weakness
<ul style="list-style-type: none"> • great client base in Germany • brand name • strong portfolio management • independent company • service orientated • many different topics • Sustainable growth is ensured • Strong customer orientation 	<ul style="list-style-type: none"> • profit orientated • one sided strategic alignment • Contributed hard structures within the companylack of need of matchin • strong hierarchy little innovation
Opportunities	Risks
<ul style="list-style-type: none"> • Developing new portfolio elements such IT topics • Tapping new markets (international) • Increase in international activities • Further development of the target markets 	<ul style="list-style-type: none"> • dependency on suppliers • price dumping by the buyers • new competitors enter the markets • reduce training budget

Source: authors

After a closer look at the SWOT analysis and considering the strengths and opportunities, it becomes obvious that the company is pretty well positioned on the market. Also a clear and permanent successful company development has to be noticed. The commercial target of the Company 123 also reflects this development (Riekhoff, H. C., 2001).

However weaknesses and risks of the Company 123 are not to be overseen or underestimated, since they can affect the company's success significantly. It is the job of the management, to take care that an appropriate strategy ensures that appropriate strategies are implemented as countermeasures for the prevention in the company. A major focus should also be the already mentioned support activities (value chain), because it is only possible to align the main activities in a way that they operate profit maximizing, with the optimal support.

To sum up, it can be outlined that the strategic orientation of the Company 123 is based on the foundation of a sustainable corporate success and is therefore able to meet the conditions for sustainable profit maximization. The currently implemented strategy provides an important competitive advantage and at the same time ensures that all company activities are matched and realized to the appropriate claims of the strategic alignment. So the strategy is driven by the (business) environment surrounding the organization. Therefore the firm tries to create a strategic "fit" or "match" between the firm's capabilities and market opportunities (=Outside-in). The Strategy is so called emergent.

Conclusion

The training business underlies is a cyclical business condition. Particularly in times of shortage of specialized professionals and especially with the growing markets, training is used to train and qualify staff and to motivate the employees to a certain extend. In difficult economic times, a decline in the public seminar business can be compensated by customer individual qualification projects. In addition, large organizations, such as TÜV and DEKRA consider how they could improve the management and the outsourcing of their qualification projects in the future.

The demand for a strategic orientation of the enterprise is conducted recently with increasing frequency. Corporate management has always been important to develop a good strategy and was always a difficult task. A good corporate strategy, however, was never as important as now. So many things cannot be predicted, because the development is so opaque, and we are going through a fundamental phase of change.

Finally, we would like to underline that the vision and the mission of a company are the foundation for formulating the strategy of a company. Nowadays all companies develop corporate strategies and a consistent orientation in order to be competitive on their market.

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A CASE STUDY ON EFFECTIVENESS OF ORGANISATIONAL STRUCTURES UNDER THE EFFECT OF GLOBALIZATION

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Abstract

This article highlights the problem of company's success in today's economic and globalisation context characterized by highly competitive and mostly global markets. In order to keep or develop their market position the enterprises need to adopt quickly the global changing market rules (e.g. pricing models due to new or cheaper market players, organisational structure based on "think global - act local", as well as change of market demands in quality and time). One solution to this problem is the development of a tailored organisational structure, based on the business model of the company. Therefore, the organisational design methodology might be useful to understand this complex phenomenon, to measure it and to adopt the business model on the market demand and economy situation (Luthans, 2009). The aim of this paper is to point out the different common organisational structure models and to evaluate it with a case studies methodology in the manufacturing industry. Furthermore, we will describe a new possible form of organisation structure, a mixed form of different approaches that is nowadays used to set it up by the leadership team. This paper used two research methods, namely: *the expert method* - and *the empirical method* - using a questionnaire with questions and ranking of answers, a representative sample of companies to check the current state of the organisational structure and to offer suggestions for improving with another organisational structure.

Keywords

Globalisation, Organisation Structure, Functional Structure, Geographic Structure, Product Structure, Customer Segment Structure, Channel Structure, Process Structure

JEL Classification

L10, L19, L20, L21, L22

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Introduction

Globalisation is an extensively studied topic in the literature and there are many definitions of economic globalisation. In the last years, hardly any other development had such a high impact on the economic dynamism as the accelerating internationalization of markets and companies. Globalisation has gone far beyond their development on economic effects. This causes changes in the global, social, economic and political life for natural as well as legal persons. (Kommission, 2002).

Countless discussions about globalisation characterized the past years. Globalisation is attributed with a real, contemporary and psychological background (Maier, H. 2007). In public discourse since globalization boost of the 1990th, it has economic connotations. In this article, we define globalisation as particular linked to increased foreign direct investment, transfer of production capacity across national borders, increased importance of financial markets and transnational corporations as well as the separation of value chains into more nations. (Bernerburg & Niederbacher, 2007). The process of cross-border activities, which stimulate internationalization, have resulted in a new competitive environment for businesses and the operating model of companies in general (Theurl, 2007).

Not only the theoreticians study globalisation and reorganisation but also the practitioners and researchers deal with it mainly because of its relevance to keep the market position for a specific enterprise or furthermore to extend the business on a global perspective. To achieve these objectives companies need often to reorganize their business model, organisational structure and adopt the changing market rules due to globalisation effects (Pläging, 2015).

A widely known quality expert, W. Edwards Deming (Maier et al., 2013), incorporated his first challenge in a quote: "*You can't manage what you can't measure*". However, there is no unique strategy how to reorganize a company. To develop an effective framework for the measurement of the degree of reorganisation, the following aspects must be understood: a new perspective on the measurement of the organisation structure and performance is necessary. A pre-assessment is necessary, which can be achieved through a series of questions, such as: How good and effective is the current operating model to achieve the business strategy? Is the operating model well supported by the organisational structure in place? Is there a clear definition of organisational structure and a unique understanding how it should work, is the leadership efficient and let us name it flexible enough in decision making within this structure? Are the organisational structure and organisational processes, which matter measured? Do they assess the organisational structure within the past three to five years? Do they have clear design principles defined, which are the key success factors for the organisation? There are no "magic indicators" to measure the success of organisational structure; the organisational set-up is too important not to be measured accurately.

1. Research methodology used for assessment of organisational structure in industry

From January 2016 until October 2016 we have conducted 30 interviews in medium sized companies at the manufacturing industry with a structured questionnaire on this topic.

Three questions to rate from 1 (excellent) down to 5 (inefficient) these questions. Furthermore there was one open question asked, about what would be a proper approach to set-up a different than these six structure examples. There they came up with interesting

answers, which can be used as a trend and should be more evaluated in the future on these outcomes.

Based on six typical organisational structures, which we can find in the literature (although there are many variations on these six schemes – *Understanding Organisations Part 1*) we ask about the effectiveness, the leadership power, structure to be successful on a global market view. The interviewees ranked these three answers and we made up a weighted average out of this answered, which are presented below in the authors charts. The fourth question is presented separately, which was about to come up with ideas for a different organisation structure. Therefore, we will show a graphic as well to and we are going to describe them.

Each of the graphic shows two organisational structures and the outcome of the question rated in a weighted average. The number 30 means that there are 30 responses to the questions. We asked 30 management level persons at manufacturing industry, all of them answered each question.

2. Research results regarding the organisational structure in industry

The first figure shows the six typical types of organisational structures and gives a summary, overview about main benefits and challenges based on that specific structure.

Organisation Type	Short Description	Main Benefits	Main Challenges
Functional	<ul style="list-style-type: none"> Organisation aligned around functions or departments Organisation enables scale and typically provides the lowest cost level 	<ul style="list-style-type: none"> High functional competence Highly specialised skills Efficient functional work 	<ul style="list-style-type: none"> Risk of internal focus No bottom-line responsibility Complex cross-functional coordination
Geographic	<ul style="list-style-type: none"> Organisation aligned around geographic regions Enables organisation to effectively deliver on regional specific differences 	<ul style="list-style-type: none"> Focus on regional needs Highly responsive to customers 	<ul style="list-style-type: none"> Higher cost structure Requires significant coordination across functions and segments
Product	<ul style="list-style-type: none"> Organisation aligned around its products and services Enables innovation and through leadership and focus on product demand 	<ul style="list-style-type: none"> Rapid product innovation Bottom-line responsibility Higher focus on customers Integration of functions 	<ul style="list-style-type: none"> Insufficient economies of scale Low build-up of competencies Interdependencies of products
Customer Segment	<ul style="list-style-type: none"> Organisation aligned around customer segments served Enables to focus on unique needs of customer segments 	<ul style="list-style-type: none"> Focus on customer segment needs Integrated delivery stream 	<ul style="list-style-type: none"> Higher cost structure Low build-up of competencies Barriers to coordination within functions to ensure consistency
Channel	<ul style="list-style-type: none"> Organisation aligned around distribution channels Enables the organisation to optimize delivery through each channel 	<ul style="list-style-type: none"> Optimised delivery through each unique distribution channel Establish new distribution channels (e.g., internet vs. bricks and mortar) 	<ul style="list-style-type: none"> Higher cost structure Cannibalisation of customer base
Process	<ul style="list-style-type: none"> Enables the organisation to operate with complex processes within the value chain High level of cross functional integration is needed 	<ul style="list-style-type: none"> Handling of complexity Integration of functions Higher focus on customer 	<ul style="list-style-type: none"> Few synergies Difficult to build competencies Difficult bottom-line responsibility

Fig. no. 1 Organisation structures; summary made by authors

The functional organisation structure means that the organization is aligned around departments and typically provides low cost rates. The geographical structure is about building up the functions in each geographic with more flexible in decision making in each region. The product organisation is built up as profit centre based on their products. This means concrete that each product or product group has an own organisation to be flexible to develop and push the product to the market. At the customer segment, structure the organisation is aligned to their customers and enabled an integrated delivery stream. The organisation at a channel view is organised and focused to optimize distribution. Process

organisation has the aim to enable end-to-end processes along the value chain (e.g. record-to-report, order-to-cash, purchase-to-pay, hire-to-retire).

2.1. Research results regarding the effective organizational structure of all of these six from organization structures

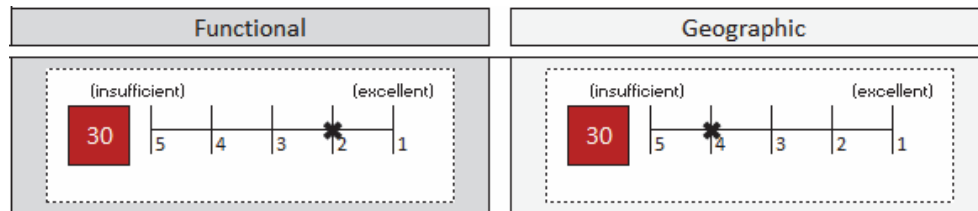


Fig. no. 2 Organisation mixed structures according to the author's research

The functional structure is rated in average as 2. This means its sufficient to built up funtional structure to operate the company international wide in good manner. The geographic view is not that efficient from the view of the interviewees. This means the control is in the regions and requires high coordination from the regions.

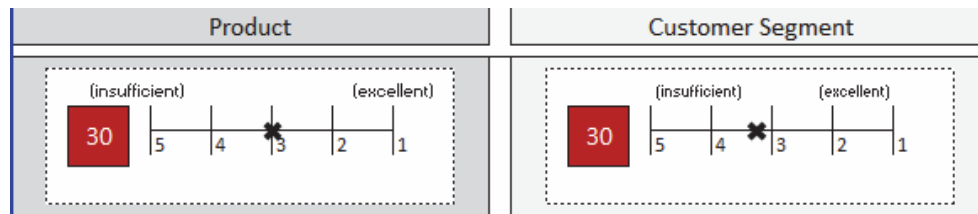


Fig. no. 3 Organisation mixed structures according to the author's research

The product oriented organisational structure is rated as a 3. This means is effective enough, stable. The customer segment organisation structure is rated as 3.25 which is slightly worse rated due to the higher cost structure and barriers to coordination within functions to ensure consistency.

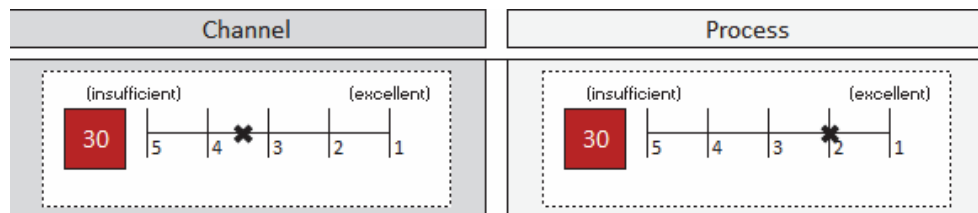


Fig. no. 4 Organisation mixed structures according to the author's research

The channel form is rated as the worse compared to the others. This is a result of the dependency of the buyer (e.g. companieds which produce plastic bottles are usually close to the locations of Coca Cola Company) and maybe that there is little independence but high integration and lower costs to have a good margin. Process organisation is rated highly, it

enables the company to think end-to-end in process interactions in the value chain and to link the competencies within this workflow (Mateescu et al., 2016).

2.2. Research results regarding the most efficient leadership team in decision taking supported by organizational structure

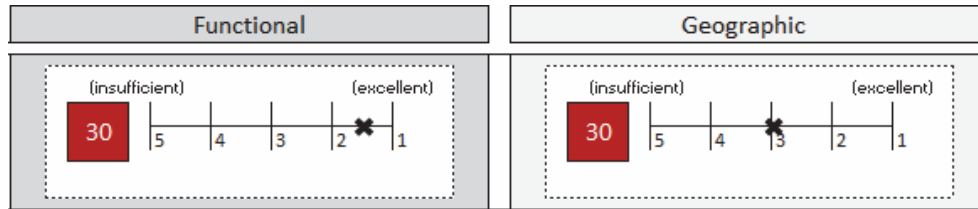


Fig. no. 5 Organisation mixed structures according to the author’s research

The functional form enables the leadership team to make decisions quickly top down to the functions, no matter where they are located. This is rated by 1.5. The geographic structure is rated with 3.0 because the regions have there regional head usually and so there is more hirachy in place.

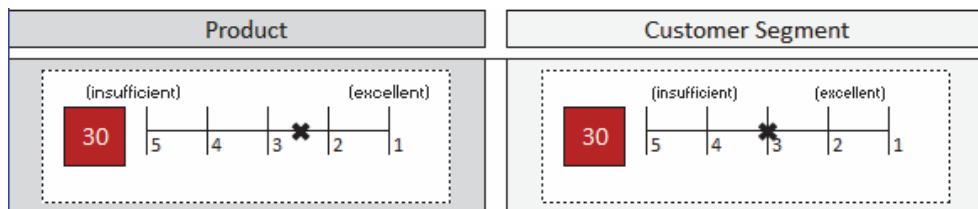


Fig. no. 6 Organisation mixed structures according to the author’s research

The producte structure is rated as 2.5 in terms of decicion efficient leadership team decision making. The leadership team has the product/ portfolio heads to put through their decisions into the operating line. Customer segment is ratd less high as a 3, due to the focus on customer and not on own structures this is little bit independent and needs always to reflect highly the decisions if its in line with the main customers.

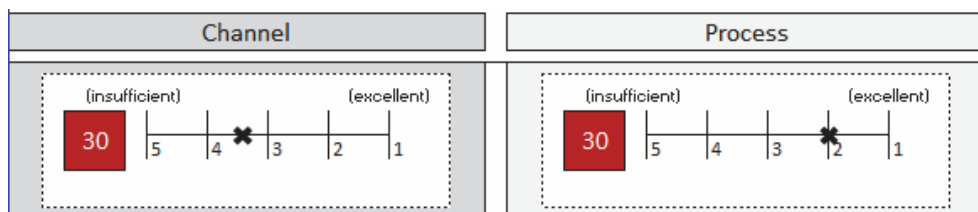


Fig. no. 7 Organisation mixed structures according to the author’s research

The Channel organizational structure supports only little the leadership team by decision making, as outcome from the interviewees 3.4. The channel is at the end of the value chain. So the leadership team focuses more on delivering not that much on production or products or competencies of the company. The processes view supports well the leadership due to

the end to end structure the workflow is approved as well as the decisions can be made and will be taken throughout the whole process. But due to the high integration this means lot of interfaces which can slow down the process to bring decisions made by the board down to the operative business.

2.3. Research results regarding the most recommended organizational structure set-up to work in a global market environment or to go with a global strategy

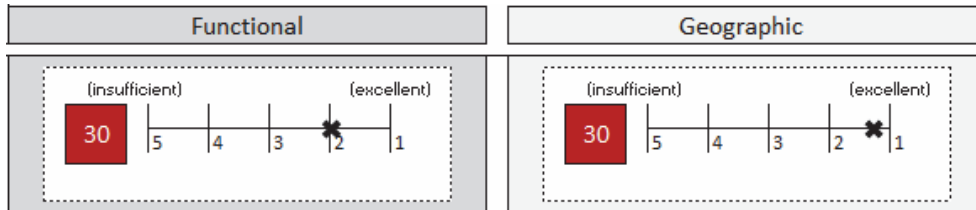


Fig. no. 8 Organisation mixed structures according to the author's research

The functional structure is rated highly by a 2. It supports a global organisation strategy. The geographic structure is the best to support global operations and rated with a 1.25. This is because it's adopted to the local or regional demand law and can operate more efficiently in a global context to deliver with local people the local demand on time. But the downside, coordination here, is not that easy from the headquarter.

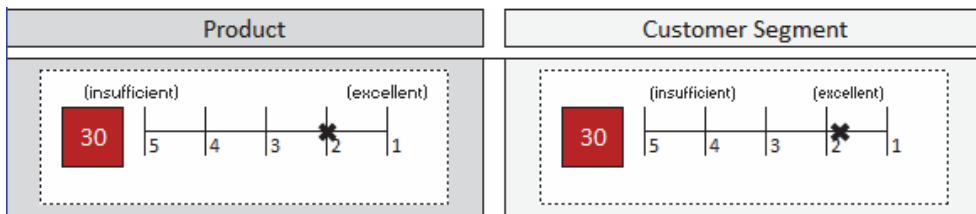


Fig. no. 9 Organisation mixed structures according to the author's research

By product organisation, structure companies can enable good to deliver globally. If there is a product focus, then you have a focused view on product development also for different geographies. This is rated in the questionnaire from the 30 participants as a 2.0. Customer segments support highly the global structure from the interviewee's point of view, rated by 1.75.

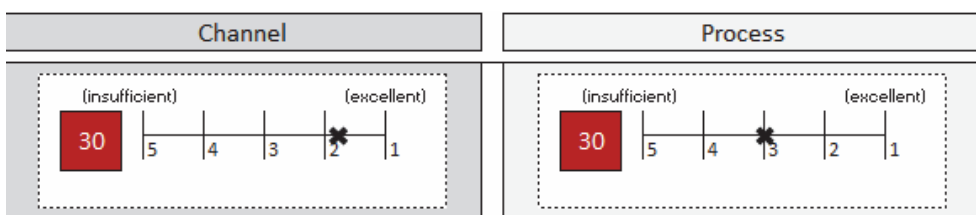


Fig. no. 10 Organisation mixed structures according to the author's research

Same for the Channel, this supports global strategy due to the narrow linkage and integration with the customers at the product value chain. Process organisational structure is rated by an 3, because to have processes end-to-end in place can be complicated in an international view cause different accountabilities, legal structures and this without borders can cause lot of interfaces and exchanges which need time.

2.4. Research results regarding a possible organizational structure combining all the advantages to work in the competitive globalization

Organisation Type	Short Description	Main Benefits	Main Challenges
<p>Matrix</p>	<ul style="list-style-type: none"> It's a mixture of a divisional model and functional model 	<ul style="list-style-type: none"> Very flexible in resource and capability using, quick response to business requirements within a company, enables cross functional/ divisional/ regions thinking and working 	<ul style="list-style-type: none"> Reporting conflicts, conflicts of interest within the different leads
<p>Team/ Project</p>	<ul style="list-style-type: none"> Working within groups for a specific project 	<ul style="list-style-type: none"> Flexible and resources related to the specific project requirements 	<ul style="list-style-type: none"> Could cause responsibility issues between line and project lead

Fig. no. 11 Organisation mixed structures according to the author's research

The open question to the interviewed persons was what would be a proper combination of different types of organization structure, based on their experiences. Most of the interviewees had responded that there is a big overlap of all when it comes to a matrix organisation. The Matrix can be a mixture of a divisional and functional model. There needs to be clear and well-defined governance in place. The governance describes the rules how the organization will operate, decision-making rules, reporting streams and lines, accountabilities and e.g. committees in place to work and to make decisions with responsible persons cross-functional, divisional or even regional.

Conclusions

The outcome of this paper and questionnaire was that there are four different scenarios, different organizational model approaches, which can support to deliver the company's products or services. From a global perspective, the global approach is recommended because in that way the company can focus on local markets with local people and act narrower to the local demand, rules and law. In general, the outcome is that there can be a mixed form of organizational structure used.

Most of the structures nowadays and even for the near future are more team or project based. Because most of the time the company needs resources and capabilities of cross functions to work on specific topics internally as well as externally for their clients. The most proper way is the matrix organization structure because this is a solution to support the line project manager with line management resources (Laegaard, 2006). Usually the line management has the decision making right in terms of development plan of employees and the project head has the lead of the functional use and deployment of the employees within the project period (Luhans, 2009).

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PORTFOLIO DIVERSIFICATION POTENTIAL ON CAPITAL RETURNS OF ALBANIAN BANKS, BEFORE AND AFTER THE 2008 FINANCIAL CRISIS

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Abstract

This paper presents a profile of the Albanian banking sector, through the financial indicator Return on Equity (ROE) taking in consideration the interval of time 2006-2015 considering also data frequency of 3 months. The focus of this paper is the investor who wants to invest in bonds to build an optimal portfolio. The investor is supposed to take the same investment decision in 2008 and 2015. This assumption is used to see the effect of the financial crisis' on the returns of the invested capital of commercial banks. To achieve this goal, is built a vehicle capital pricing model (CAPM) and is used the Jensen techniques of overestimation or underestimation of financial securities. Efficient front investment is realized through Lagrange multipliers and with the help of capital distribution line (CAL) have been identified optimal investment portfolios in equity. Although the negative effects of the 2008 financial crisis have accompanied decreasing returns and increasing risk, in this paper, considering even the absence of stock exchange securities in Albania, the goal to determine the value at risk, the value of the returns and the bank premium is achieved.

Keywords: investment position, optimal portfolio, banking system, ROE

JEL Classification: C61, G11, G14.

Introduction

In this paper there is analyzed the importance and the level of diversification of the invested capital in the banking system in Albania, showing the impact of the financial crisis in the return on this capital. The focus of the study is the investor who wants to invest in bonds to build an optimal portfolio. The investor is supposed to take a decision in 2008 and then take the same decision in 2015. This is used in order to observe the effect of the financial crisis on the return of banking capital and the risk premium on investment. This assessment of the Albanian reality is difficult to achieve in a high degree of reliability, whereas Albania does not have a liquid secondary market of financial securities. This paper aims to analyze the potential of diversification of portfolio return of capital invested in the Albanian banking sector before the 2008 financial crisis and after the crisis. There are several reasons that motivate us to do this paper:

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- *first*, there is no previous quantitative study that quantified on this financial aspect, because the effects of the financial crisis in the banking system are only seen in terms of liquidity management and non-performing loans, non-refundable capital;
- *secondly*, this assessment would represent a measurable "start-up" of these banks, if they were listed on the securities exchange, such as the return of shares in the first days in stock market;
- *thirdly*, researchers and academics can make a measure of return on equity of banks in Albania even in the absence of stock of securities, for various research purposes.

The following analysis of paper includes all commercial banks in the Albanian banking sector (16 banks). The results of return on capital invested by all banks represent a time series with 3-monthly frequency for the years 2006-2015. In this paper there are not included companies with other activities, due to a change of the nature of the activity, capital adequacy regulations and supervision, etc.

1. Literature review

Return on invested capital in each company, which aims to profit, is affected by its performance (Gitman, 2010). The performance and risk of banks is analyzed by several financial indicators with accounting nature that make this possible, such as: return on equity (ROE), earning per share (EPS), operating profit margin, etc. ROE is a good indicator measuring the discount rate the shares of banks (Velez-Pareja, 2000). It is also observed that there is a stable and important statistical connection between the indicator ROE and the discount rate of companies stock listed on stock exchange (Hevert, 2014). This conclusion is supported by Ketchum and Kim (2013). Banks capital structure is guided by regulations and not from the free hand of the market, so that the main variable is equity financing and its component elements (Sironi, 1999 and Antonio, 2002). Using ROE as the return rate of stock has some drawbacks, because the investor does not understand the creating value process and time value movement (Malkelainen, 1998).

Assessing the profitability of shares listed on stock market is measured by capital asset pricing model (CAPM) which describes the relationship between risk and expected return and that is used in the pricing of risky securities (Traynor, 1961; Sharpe, 1964 and Lintner, 1965). Using the CAPM model in countries that do not have capital markets or their capital markets are illiquid (as the case of Albania) is difficult to apply because this method has is a high error margin. However, certainly CAPM model represents the best estimate model of the return rate on the stock, even for banks. Nowadays, many financial consultants make estimates derived from CAPM model, based on ROE (Graham and Harvey, 2001).

Besides the lack of securities stock in Albania, another limitation of this paper is the exclusion of all other economy sectors. The reasons why companies in other sectors are not taken into this study are: *first*, companies (also big businesses) in Albania have significant problems of diversification their capital structure; and *secondly*, the companies data in Albania are part of the financial statements and the profit level has been and continues to be under the influence of tax evasion or economic informality (Ministry of Finance of Albania, 2015).

2. Methodology and data

CAPM model for the Albanian banking system: The model of price of a capital asset (CAPM) is a model that links the required rate of return of an asset, with his risk as measured by the coefficient β (systemic risk). According to this model, the expected return of a financial title " k_i " is given by the formula: $k_i = r_F + \beta[r_M - r_F]$. Where, " r_F " is risk-free rate, in Albania taken interest rates on Treasury bills with a maturity of 12 months. " r_M " is the market rate of return. Rate market we take the average ROE level before the financial crisis period (2006-2008) and after the financial crisis (2009-2015). β indicator for each share of banks counted by the formula: $\beta_i = \rho_{iM} \frac{\sigma_i}{\sigma_M}$. Where: " β_i " is systematic risk for each bank; " σ_i " is the standard deviation of ROE for each bank; " σ_M " is the standard deviation of the returns of the market; " ρ_{iM} " stated ROE correlation coefficient of the bank "i" with banking market. The data in this study are the financial results of the level of return on equity (ROE) for each bank in the banking system in Albania for 2006-2015 time series, 3-monthly frequency. This indicator is computed by the formula:

$$ROE = \left(\frac{3 - \text{month profit}}{\frac{(\text{the equity at end of period}) - (3\text{-month profit}) + (\text{the equity at beginning of period})}{2}} \right) * \frac{12}{3}$$

Remark with $\Delta = \{k_i \text{ (according to CAPM) - ROE (average of each bank)}\}$, this technique is called Jensen, from which we analyze the position of investors, of the shares of banks. According to the ROE-s of the Albanian banking system, denote $X = (x_1, x_2, \dots, x_{16})$ vector weights investment in banks' capital, k^* remark the desired rate of the investor's ROE, in order to minimize the portfolio variance, $Var(x)$ efficient portfolio will be:

$$\begin{cases} x_1 + x_2 + \dots + x_{16} = 1 \\ x_j \geq 0 \text{ për } j = 1, 2, \dots, 16 \\ k_1 x_1 + k_2 x_2 + \dots + k_{16} x_{16} = k^* \end{cases} \quad \text{and} \quad Var(x) = \sum_{i=1}^{16} \sum_{j=1}^{16} x_i x_j cov_{ij}$$

Where: cov_{ij} is covariance of the shares i with the j . With the method of Lagrange multipliers, we have:

$$F(\min) = \sum_{i=1}^{16} \sum_{j=1}^{16} x_i x_j cov_{ij} + \lambda_1 \left[\sum_{i=1}^{16} x_i k_i - k^* \right] + \lambda_2 \left[\sum_{i=1}^{16} x_i - 1 \right]$$

We find minimum values of partial derivatives equated to zero and, so we found the front efficient for different k^* . $K = (k_1, k_2, \dots, k_{16})$ is the vector of returns (ROE average of 3 months before the financial crisis after financial crisis). While the optimal portfolio will be calculated by the model of capital distribution line (CAL). The equation of the line CAL is tangent with efficient front, and is calculated by straight line CAL: $return = r_F + m * risk$, where " m " is the slope of the line, and it is calculated from the equation of derivatives respective functions.

3. Analysis of results

Investment Position: Simulated results of CAPM model (through ROE) indicate change of position evaluation of banks shares individually to the market. This change comes as a result of the financial crisis of 2008. In Table 1, there is the shown the investment position before the financial crisis (where the risk-free rate is obtained average rate of Treasury bills with a maturity of 12 months of 2008 which was 8.14%). Also, there is shown there investment position after the financial crisis (where the risk-free rate is obtained average rate of Treasury bills with a maturity of 12 months of 2015 which was 3.26%).

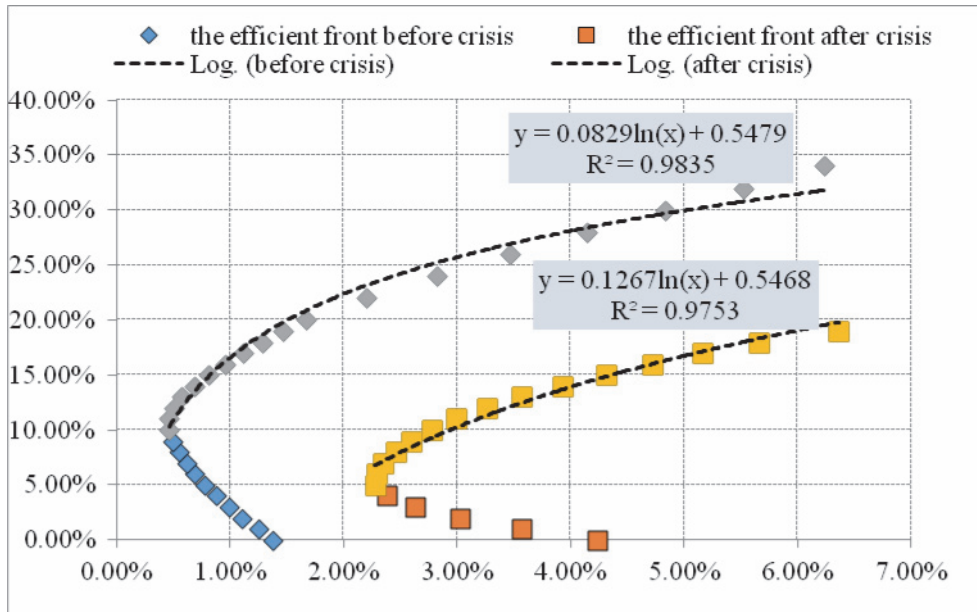
Table no.1: Investment position before the 2008 financial crisis, Jensen techniques

<i>Banks Name</i>	<i>Before the crisis 2008</i>		<i>After the crisis 2008</i>	
	β	<i>Investment position</i>	β	<i>Investment position</i>
Alpha Bank Albania	1.2	NV	0.2	MV
Commercial Bank Albania	-0.5	NV	0.4	NV
Credins Bank	2.3	NV	0.8	NV
Credit Bank of Albania	0.2	MV	0.6	MV
Emporiki Bank Albania	1.6	MV	5.2	MV
First Investment Bank Albania	1.8	MV	0.2	EF
International Commercial Bank	-1.1	NV	0.6	NV
Intesa SanPaolo Bank Albania	1.7	NV	0.7	NV
National Bank of Greece Albania	3.9	MV	0.5	MV
ProCredit Bank	2.9	NV	0.2	EF
Raiffeisen Bank Albania	0.9	NV	1.4	NV
Societe Generale Albania	0.3	MV	0.1	MV
Tirana Bank	0.4	NV	2.1	MV
Union Bank	-1	MV	-0.3	NV
United Bank of Albania	0.9	MV	0.8	MV
Veneto Banka	0.5	MV	2.8	MV

Source: Calculations by the authors in Excel. Note: NV = undervalued, MV = overvalued and EF = efficiency.

Before the financial crisis, none of the banks did have efficient evaluation, as market. However, based on the end of that period (fourth 3-quarter of 2008) there is detected an overestimation trend of the bank shares. Whereas after the financial crisis, two banks have efficient assessment, namely as market, and there is an unequal division of evaluation and undervaluation, 8 banks are overvalued and 6 banks are undervalued.

Albanian banking system and their efficient investment front: Using Microsoft Office Excel 2010 program, Add Ins - Solver, for each bank we will take in consideration the weight that their share should have on efficient portfolio. Portfolio return “ r_p ” has fixed values starting from 0% up to a maximum value (corresponding to the extreme values of potential return of the portfolio of securities mentioned above, excluding short sale) with constant progressivity 1%, in order to have a high precision model and a sufficient number of values. Results obtained are as in the following *chart*:



Source: Calculations by the authors in Excel

From the chart, we can observe a pronounced disconnect of efficient investment front, due to the financial crisis of 2008. So this crisis has had a significant negative impact on portfolio diversification potential of invested capital in the banking system. Based on the interpolated equation in logarithmic form for both efficient fronts (before and after the crisis) we see a big difference in deteriorated displacement after the financial crisis. Since logarithmic functions of the two efficient fronts have a coefficient of determination (R²) greater than 95%, we will accept these functions for analysis of finding the optimal portfolios.

Optimal portfolio by line CAL: On investment theory, the optimal portfolio is located where the curved line of efficient front of risk free securities is tangent to the capital allocation line (CAL) which starts from the risk free rate (r_f). Let us find the optimal portfolio of 16 banks in the survey. So CAL is a line that begins at the point (risk; return) = (0; 0.0814) in Albania case, before financial crisis. The value 8.14% is the Treasury Bond rate with maturities of 12 months, the average in 2008. CAL equation of the line tangent to the efficient front has the slope "m". Defining $x = risk$ and $y = return$, from the interpolation model of the efficient front function in banking system equity before financial crisis in 2008, we get the function: $return = 0.547 + 0.082 * \ln(risk)$, from which:

$$m = \frac{\partial return}{\partial risk} = \frac{0.082}{x_0}$$

Tangential points, which represents the optimal portfolio before the financial crisis is (x_0 ; y_0) and it is taken out of the equation of straight CAL: $y - y_0 = m * (x_0 - x)$ which passes through the points (0; 0.0814) and (x_0 ; y_0). Since we know the slope of the straight-and we

know its point, it follows that: $y - y_0 = \frac{0.082}{x_0} \cdot (x - x_0)$. If $(x_1; y_1) = (0; 0.0814)$ is the risk free coordinate, than tangential point $(x_0; y_0)$ is $y = 16.34\%$. As seen, optimal portfolio before the 2008 financial crisis has the return 16.34% and the risk premium of this optimal portfolio is: $k_i - r_F = 16.34\% - 8.14\% = 8.2\%$, while this portfolio risk is 1.01%. We will use the same technique for the computation of the line that begins at the CAL point CAL (risk; return) = (0; 0.0326) in Albania case, before financial crisis. The value 3.26% is the Treasury Bills rate with the maturities of 12 months, the average in 2015. The optimal portfolio after financial crisis has the return rate 15.86% and the risk premium of this optimal portfolio is: $k_i - r_F = 15.86\% - 3.26\% = 12.6\%$, while this portfolio risk is 4.67%. From the values of optimal portfolios in 2008 and 2015, we can see that the return rate without risk was too high before the financial crisis while later there was a pronounced decrease of this rate, reaching the lowest values in the free economy days in Albania. Meanwhile, it is noticed deterioration of portfolio return and risk of optimal portfolio (optimal portfolio significantly dominates before the financial crisis). This brings another worsened phenomenon in recent years in the capital share of the Albanian banking system, which is the risk premium increasing by 4.4% (which shows a rising trend in the capital market risk). However, the financial crisis of 2008 has had a different impact from one bank to another. This phenomenon can easily be seen from the distribution of investment rates in the optimal portfolios, summarized in Table 2. Let us analyze the optimal portfolio that our banking system had before the 2008 crisis (RF-2008) and after financial crisis (with r_F of 2015):

Table no. 2: Percent distribution of investment in optimal portfolios

<i>Investment before crisis</i>		<i>Investment after crisis</i>	
<i>Bank</i>	<i>Weight</i>	<i>Bank</i>	<i>Weight</i>
Alpha Bank – Albania	10%	Commercial Bank Albania	57%
Commercial Bank Albania	41%	First Investment Bank– Albania	5%
First Investment Bank– Albania	14%	Intesa SanPaolo Bank Albania	21%
International Commercial Bank	3%	ProCredit Bank	4%
National Bank of Greece – Albania	0%	Raiffeisen Bank – Albania	10%
Societe Generale Albania	23%	Union Bank	3%
Union Bank	8%	Total	100%
Total	100%		

Source: Authors' Calculations in Excel

According to *Table 2*, we see that from 16 commercial banks in the banking system, 6 of them are not part of the optimal investment portfolio both before and after the financial crisis of 2008. While from 10 banks represented in the allocation of optimal portfolios, only 3 of them are present in both the optimal portfolios (before and after the crisis), this shows that the financial crisis has fundamentally influenced the Albanian banking system in their position of risk and return.

Conclusions

In this study we analyzed several aspects that relate to the efficiency of the banking sector in the absence of a secondary capital market. The study was based on 3-month financial

data of 16 commercial banks operating in Albania for 2006-2008 and 2009-2015 in order to identify the impact of the financial crisis in this sector. As a return of bank stocks is considered the financial index return on equity, ROE. According to the model simulation CAPM and the analysis of Jensen technique, we conclude that before the 2008 financial crisis, none of the banks has not efficient assessment, namely division in overvaluation and undervaluation is equal. But after 2008 there is seen a trend appreciation of the shares of banks, both in number and in value bank return.

The analysis of efficient investment frontier from 2006-2008 compared to 2009-2015 has a pronounced break as a result of the financial crisis of 2008. The financial crisis in Albania has had a greater negative impact on portfolio diversification potential capital investing in the banking system. Before the crisis, the optimal portfolio has the return 16.34%, the risk 1.01 % and the risk premium 8.2%. After the crisis, the optimal portfolio has the return 15.86%, risk premium 4.67% and 12.6% risk. After 2008, the capital share of the Albanian banking system has a growing trend of risk capital. On the other hand, from all 16 commercial banks in the banking system, 6 of them are not part of the optimal portfolio investment both before and after the financial crisis of 2008. While from 10 banks represented in the optimal allocation of portfolios, only 3 of them are present in both the optimal portfolios (before and after the crisis), a fact that shows that financial crisis has fundamentally influenced the Albanian banking system in their position to risk and return.

Risk assessment of activity and operations of the banks in Albania should be deeper, occupying their main policies. Also, the Central Bank should increase monitoring in banking risk assessment.

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THE CURRENT STATE OF ALTERNATIVE INVESTMENTS IN RENEWABLE ENERGIES OF INSTITUTIONAL INVESTORS IN GERMANY

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Abstract

This article reviews the current trend of investments in renewable energies. In particular, institutional investors like pension funds and insurances need to look for new opportunities of profitable and adequate investments with regard to fulfill their obligations. Objective of this paper is to highlight certain aspects of this kind of investment constellation. In order to evaluate these issues, several studies and publications of official associations, statistical offices and German Federal Ministries have to be evaluated. In this paper, furthermore, tax implications will be pointed out. Especially, a German phenomenon will be emphasized, after which institutional investors lose their tax-privileged status through investing in typical closed-end investment structures. This tax effect can be described as a commercial infection of the yields, which have also a direct impact on the performance of the investments. In order to solve this kind of tax disadvantage, the papers carves out the possibility of interposing a corporation in the investment structure.

Keywords

Alternative Investments, Closed-end Investment Funds, Commodities, Renewable Energies, Institutional Investors, Commercial Infection

JEL Classification

G23, K34

Introduction

Capital investments in shares and particularly bonds – besides real estates the traditional asset classes – become unattractive both for private investors and institutional investors, based on the expected prolonged low-interest-rate phase within the European Union in special. Therefore all investor groups are looking for alternatives. Especially tax privileged institutional investors like pension funds, health insurance funds and foundations regularly need adequate returns of their participations to fulfill their obligations related to statutes of the articles. These investor groups especially, are forced to a greater extent than the others to reflect in investing in alternative investments.

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For this reason a literature review is necessary to classify the asset classes, which will be covered by alternative investments. Precisely large investors like institutional take renewable energies for an appropriate asset class in 2016 (Scope 2015a), in which an above-average yield can be achieved. Tax efficient structuring means higher profits according to the profitability of an investment. Since recently, however, institutional investors are subject to a permanent risk of losing their tax privileged status by investing in typical closed-end investment structures.

1. Literature Review - Classification of Alternative Investments

1.1 Asset Classes

In fact, there is no generally single accepted definition of alternative investments (Dönges 2008; Sokołowska 2014). One approach is to differentiate between traditional investments and alternative investments. Within that context alternative investments belong to modern financial instruments. Following Busack and Kaiser (2006), alternative investments is an investment strategy in several assets, in traditional asset classes as well, but the strategy differs from the investments in traditional assets. The whole literature uses several interpretations of alternative investments. According to Chorafas, et al. (2003), it is hard to find a clear and precise definition of alternative investments. Furthermore, a very strong diversity within the group of alternative investments can be identified as well as in the assets it serves. To substantiate the meaning alternative investments they will be described in assets, which represent an “alternative” understanding. So alternative investments can be classified as follows (Table no. 1).

Table no. 1 View of Asset Classes of Alternative Investments

Asset Classes of Alternative Investments				
Hedge-Funds	Private Equity	Infrastructure	Commodities	Other
Tactical	Venture Capital	Economic	Hard Commodities	Aircraft
Event Driven	Buyout Capital	Social	Soft Commodities	Art
Relative Value				Wine

Source: derived from BVAI 2016a

The chart shows a simplified representation of asset classes making no claim to be exhaustive from the author’s point of view. This selection of asset classes cannot be consistent in the general comprehension: Some parts of the literature do not consider the asset classes of infrastructure and other (Dönges 2008 with further references) or include real estate as part of alternative investments (BVAI 2016). Dorsey (2007) and Dönges (2008) are also considering currencies as a part of alternative investments. This short overview highlights the different way of looking on alternative investment, basically with regard to the high diversity and the individual features of alternative investments.

Because in the general comprehension commodities, regularly, are an asset class of alternative investments, this article shall focus on investments in commodities. Commodities can be divided into the following categories (Table no 2):

Table no. 2 View of Commodities

Commodities					
Hard Commodities			Soft Commodities		
Energy	Precious metal	Industrial metal	(Weather)	Agriculture	Livestock farming
Crude oil	Gold	Aluminum	Weather derivate	Corn	Cattle breeding
Natural gas	Silver	Nickel		Wheat	Cattle farming
Coal	Platinum	Chrome		Timber	Pork
Renewables	Palladium	Titanium		Soya	

Source: derived from Faust 2006, p. 44; BVAI 2016b.

1.2. Investment Instruments for Commodities

The participation in the performance of commodities can be placed in several instruments (Table no. 3). The direct investment is uncommonly and rarely. In general, solely investments in gold are also traded physically. (Busack and Kaiser 2006). The dominant form is the indirect investment in commodities. Indirect instruments, which are at the investor's disposal, are forward contracts and options, certificate, exchange traded funds (ETFs), exchange traded commodities (ETCs), commodities linked notes (CLNs), as well as open and closed-end investment funds. The investment conditions ETFs and ETCs can provide for a physical custody to represent a substantial capital investment.

Table No. 3 Simplified Tax Classification of Standard Products

Investment Instrument	Tax Classification
Forward contract (Future)	Unconditional Forward Contract
Option	Contingent Forward Contract
Certificate	Debt Security
ETC	Debt Security
ETF	Investment Fund (UCITS)
Closed-end Investment Fund	Alternative Investment Funds (AIF)

Source: Schmidt (2015).

2. Research Methodology

Based on evaluations of several studies and publications of alternative investment associations (Federal Association of Real Assets and Investment Funds "BSI" 2014, Federal Association of Alternative Investors "BVAI" 2016a, BVAI 2016b), German Federal Ministries (Federal Ministry of Economics "BMW" 2014, Federal Government "BREG" 2016), further statistical offices (Scope 2015a, Scope 2015b) and special literature investment, some trends can be identified. Furthermore, these sources provide information concerning alternative investments' motives and yield factors. Important tax aspects have to be added with regard to real net yield after taxes. The authors of this paper want to consider special tax impacts on institutional investors by investing in typical corporate structures, which can reduce pre-tax returns up to 30%.

Essentially, this paper is initiated from the question of a tax efficient structuring of alternative investments. This issue is a current challenge of institutional investors and, in particular, a German phenomenon due to the still existing trade taxation (“Gewerbsteuer”).

3. Taxation of Alternative Investments in Germany

3.1 Forward Contracts and Debt Securities

The taxation of forward contracts is different: It depends on the special arrangement of these products. For capital investors gains of unconditional and contingent forward contracts constitute one group in the catalogue of capital incomes (Art. 20 (2) No. 3. EStG – Einkommensteuergesetz). In particular, the fiscal allowance of losses by forfeiting of these products will be controversial disputed (compare Heinicke and Krüger 2016, p. 1671).

Yields of debt securities, in general, represents interests or interest-like capital claims (Art. 20 (1) No. 7 EStG). These kinds of returns are uncomplicated for international institutional investors, in special, because no withholding taxes are retained and so no problems with regard to refund can arise.

3.2. Privileged Investment Funds

Based on AIFM-Directive of the European Union (Directive 2011/61/EU), new legislation in Germany through the AIFM-UmsG (Act of 4 July 2013, BGBl. I 2013, p. 1981) and the AIFM-StAnpG (Act of 18 December 2013, BGBl. I 2013, p. 4318) has extended the taxation of investment funds as well as the supervisory regulation. Since then, it will be differentiated between privileged investment funds and investment corporations.

In this comprehension, privileged investment funds are UCITS (Undertakings for the Collective Investment in Transferable Securities) according to Art. 1 (2) Directive 2009/65/EC. For the purposes of this Directive, UCITS means an undertaking (i) with the sole object of collective investment in transferable securities or in other liquid financial assets referred to in Article 50(1) of capital raised from the public and which operate on the principle of risk-spreading; and (ii) with units which are, at the request of holders, repurchased or redeemed, directly or indirectly, out of those undertakings’ assets. Action taken by a UCITS to ensure that the stock exchange value of its units does not significantly vary from their net asset value shall be regarded as equivalent to such repurchase or redemption.

The qualification of a privileged UCITS leads to a modified kind of net income method with special tax deferral effects of certain capital gains (in detail: Elser et al. 2015, 420, Art. 3, 4). Especially ETFs will be applied for these legal consequences. Distributions of out these UCITS qualify for tax purposes as dividends (Art. 2 (1) 1 InvStG – Investmentsteuergesetz).

3.3 Alternative Investment Funds (AIF)

Generally, Alternative Investment Funds (AIF) are classified as all funds, which are not subsumed under the above mentioned UCITS-directive (COM 2009, p. 2). Alternative Investment Funds (AIF) may also qualify as privileged investment funds, if they fulfill all requirements regarding to Art. 1 (1b) InvStG. It is not common that AIF meet the demands of a privileged investment funds (Kind and Haag 2010, p. 1526). Typically, in the range of

AIF, they are established closed-end investment funds with no right to return the shares (Wassermeyer et al. 2015, p. 482). Thus will be taxed privileged solely open investment funds, which fulfill several investment restrictions and are controlled.

In the legal consequences, commodity funds for institutional investors qualify regularly as AIF (COM 2009, p. 2). Before implementing the new German Investment Fund Rules, it was disputed whether commodity funds could fall within the scope of the German Investment Fund Rules. Background of this dispute is mainly caused by the BaFin circular of 22 December 2008 (14/2008), where an investment fund is compliant with the principle of risk diversification through investing in more than three assets (quantitative test) subject to different investment risks (qualitative test). Confirming this case, a look-through-approach may be applied possibly by taking into account assets underlying the fund's assets. Furthermore, following BaFin (14/2008), a specific weighting of the assets may also lead to the principle of risk diversification not being complied with. Through the extension of the framework of the German Fund Rules, the discussion became obsolete, with the effect that commodity funds are qualified as so-called Investment Corporations ("Investitionsgesellschaft") (Art. 1 (1c) InvStG). That means that the new legislation has strengthened the regulation for alternative investment structures, which typically invest in renewable energies and timber (Elser and Stadler 2014).

German inbound investments, in such structures particularly, are implemented by a GmbH & Co. KG (limited partnership with a limited liability company as general partner). This kind of corporate structure generally leads to a commercial infection (Art. 15 (3) 2 EStG). It refers to a special effect of deemed commercial infection ("gewerbliche Prägung") in German tax law, when general partner of a limited partnership solely is represented by a corporation. In that context, regardless of the concrete activity, even if just asset-managing, the limited partnership is classified as a business entity taxed by trade taxes. In contrast operating of (i) solar or (ii) wind parks, (iii) hydroelectric power stations or (iv) biomass plants – these are the main source of German renewable energies (Fraunhofer ISE 2015) – represent originally a business respectively commercial activity.

In that context, tax privileged institutional investors like pension, death benefit and support funds participate in such structures to improve their results in practice. Hereby, a risk can arise by a commercial infection through that participation and the loss of the tax privileged status (Wassermeyer et al. 2015). A participation in such a typical fund structure can lead to the loss of tax privileges in all investment segments of the investors, what means unlimited, as well as restricted to the area of the specific investments. The loss of tax privileged depends on the following aspects:

Based on the Federal Fiscal Court (I R 52/13), the Federal Ministry of Finance has published an interesting administrative order (IV C 2 – S 2706/14/10001), after which the participation in a commercial partnership of an institutional investor constitutes an own business (a so-called "Betrieb gewerblicher Art"). That means that the tax privileged investor solely loses its privileged status in the amount of the gain of the commercial partnership. That, of course, describes a better situation than the complete loss of the tax privilege. This kind of partial commercial infection the Federal Fiscal Court (I R 60/10) denied at a limited partnership of a tax privileged foundation, where the partnership was asset managing and just deemed commercial. As consequence, it will be relevant for a partial or complete commercial infection whether partnership is operating commercial, in fact, or asset-managing and just deemed commercial. To find a way out of a partial or complete commercial infection of a tax privileged institutional investor it is recommended

to interpose a corporation (Elser et al. 2015, 456, p. 17). Through this it is possible to avoid a commercial infection and leads to a requalification of commercial gains into dividends for the capital investor.

Conclusions

There is no general valid definition of alternative investments. One possibility could be to differentiate between traditional investments and alternative investments. Another approach could focus on the special investment strategies in the field of alternative investments. Finally, it is difficult to find a clear and precise definition of alternative investments. That depends on the diversity within the group of alternative investments as well as in the customized strategies of the asset classes it selves. Alternative investments can be classified as Hedge-Funds, Private Equity, Infrastructure, Commodities, Real Estates, Currencies and others, like wine.

The political statements in Germany and the macroeconomic perspective present a big trend in expansion of new renewable energy plant. Especially institutional investors are looking for adequate returns of their investments to fulfill obligations in context with their statutes. With regard to the expected prolonged low-interest-rate phase within the European Union, further investments in alternative asset classes are planned in 2016. These alternative investments, particularly for institutional investors, are structured as closed-end funds, typically under the legal form of limited partnerships (Wassermeyer et al. 2015).

It will be differentiated between privileged investment funds and investment corporations. New regulations make it more difficult for investment funds to reach the privileged investment fund rules. The qualification of a privileged UCITS leads to a modified kind of net income method with special tax deferral effects of certain capital gains. Alternative Investment Funds (AIF) may also qualify as privileged investment funds, if they fulfill all necessary requirements. However, this failed because AIF typically are closed-end investment funds, which supply no right to return the shares regularly.

The participation of a tax privileged institutional investor in a commercial partnership represent an own business within the scope of the investor's activities, which means that the tax privileged investor solely loses its privileged status in the amount of the gain of that commercial partnership. Completely different, in the case of an investment in a limited partnership, where the partnership is asset managing, but deemed commercial, too. This leads for the complete tax status of a privileged institutional investor like a pension fund to a complete commercial infection of all returns, the investor has generated. To find a way out of a partial or complete commercial infection of a tax privileged institutional investor, it is recommended to interpose a corporation.

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ANALYZING THE CULTURE CONSUMERS AT THE TERRITORIAL LEVEL BY THE PRINCIPAL COMPONENT METHOD

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Abstract

The main objective of this paper concerns the interaction between four indicators expressing cultural consumption and two significant indicators expressing the consumption availability that satisfies the population's spiritual needs, in each Romanian county and in Bucharest, in 2014.

The variables introduced in the analysis are "Active readers in libraries", "Spectators at cinemas", "Spectators and auditors to artistic performances", "Visitors to museums and public collections", "Unemployment" and "Average monthly net nominal earnings". The results triggered by the statistical method "Principal components analysis (PCA)" revealed significant correlations between the variables taken into consideration and highlighted the similarities and differences between the analyzed statistical units.

Keywords

Active readers in libraries, spectators and auditors to artistic performances, average net nominal earnings, principal component analysis.

JEL Classification

I20, J30, Z10, C10, C38

Introduction

The main research objective is represented by the analysis of book consumers, performances at cinemas, artistic performances, museums and public collections, depending on the population's cash availability and the indicators "Unemployment" and "Average monthly net nominal earnings".

For the purpose of this analysis, we compiled the latest statistical data on the cultural consumption in all 41 Romanian counties and Bucharest, data provided by the National Institute of Statistics - Romania (NIS), the reference period being the calendar year 2014.

The variables considered in this analysis are "Active readers in libraries", "Spectators at cinemas", "Spectators and auditors to artistic performances", "Visitors to museums and public collections", "Unemployment" and "Average monthly net nominal earnings", which

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characterize the population's cultural consumption preferences per consumption profiles. The study assesses the interaction between these variables by applying the statistical method known as "Principal component analysis" (PCA); data processing, testing the significance of indicators and the graphical representations were performed by the SPSS statistical software. (Field, 2009)

Since the aim of this paper is to analyze the way in which the population consumes cultural products, it is necessary to make some methodological explanations regarding the content of indicators according to the defining elements provided by the National Institute of Statistics - Romania (NIS).

The indicator "Active readers in libraries" includes the individuals who consulted in the library or borrowed at least once a year a book or a publication belonging to a library.

The indicator "Spectators at cinemas" includes the cinephile audience that was statistically recorded, based on the tickets sold at movie theaters.

"Spectators and auditors to artistic performances" records the number of the spectators who attended a theater performance or concert, based on the tickets sold.

According to statistical data, the indicator with the highest value, i.e. "Visitors to museums and public collections", includes the number of the visitors to a museum or public collection, based on the tickets sold and the participants to the "Night of Museums".

Data and results

After processing the data, we obtained the statistical indicators calculated for the analyzed variables and the graphical representation of these points in the system of factorial axes. It shows the distribution of the 6 variables for each Romanian county and for Bucharest, in 2014.

Taken together, the information on the cultural consumption per consumer profiles shows that the indicator "Visitors to museums and public collections" ranks first, with 34.94% of all culture users, followed by the category "Spectators in cinemas", with 32.63%. The audience devoted to certain artistic performances recorded a percentage of 20.14% and the lowest percentage belongs to the reading of books, i.e. the category "Active readers in libraries", with 12.29%.

At territorial level, the statistics indicate the following situation:

- For the category "Active readers in libraries", the largest number of readers is registered in the following counties: Bucharest Municipality (346,188), Cluj (176,682), Iasi (169,914), Valcea (145,794), Timis (133,499), Suceava (129,165), Prahova (128,267), Arges (127,855); the lowest number is registered in Ilfov (24,122), Giurgiu (35,243), Calarasi (39,014), Covasna (40,267), Caras-Severin (43,722), Salaj (43,895);
- For the category "Spectators in cinemas", the largest number of spectators is registered in the following counties: Bucharest (4,292,000), Cluj (803,000), Constanta (688,000), Timis (545,803), Prahova (464,000), Iasi (397,000), Bihor (367,000); the lowest number is registered in the following counties: Neamt (4,000), Ialomita (5,000), Sibiu (7,000);
- For the category "Spectators and auditors to artistic performances", the largest number of spectators is registered in the following counties: Bucharest Municipality (1,137,510), Olt (800,950), Suceava (621,000), Dolj (308,963), Cluj (260,509), Sibiu (239,066), Timis (228, 987); the lowest number is registered in Teleorman (11,000), Neamt (11,670), Vaslui (16,124), Caras-Severin (18,361);
- For the category "Visits to museums and public collections", the largest number of

spectators is registered in the following counties: Bucharest Municipality (1,462,410), Brasov (1,400,705), Sibiu (882,117), Prahova (698,577); the lowest number is registered in Giurgiu (3,292), Teleorman (5,501), Olt (14,544), Mehedinti (17,847).

It is noteworthy that, in Bucharest Municipality, all indicators, both in terms of the number of spectators and readers, recorded the highest levels, while in the other counties, the situation for each category of spectators reveals some differences, depending on the economic and spiritual features of the respective area.

a. Descriptive statistics indicators (Descriptive Statistics output)

For the category "Active readers in libraries", the average of the readers at country level is 180,002 readers. Thus, apart from Bucharest, all the other counties are situated below this average; from this perspective, the series show a pronounced elongation (kurtosis is 41,189). Basically, 97.6% of the counties are situated below the average.

For the category "Spectators in cinemas", the country-wide average is 480,810 spectators; 4 counties, i.e. Bucharest, Cluj, Constanta and Timis, hover over this medium level. Thus, 97.36% of the counties analyzed are situated below the average.

For the category "Spectators and auditors to artistic performances," the country-wide average is 291,926 spectators; 9 counties (i.e. 21.4%) - Bucharest, Olt, Suceava, Dolj, Cluj, Sibiu, Timis, Mures and Vrancea - recorded a number of viewers above this value.

For the category "Visitors to museums and public collections", the country-wide average is 514,697; 4 counties (9.5%) - Bucharest, Brasov, Sibiu and Prahova - registered values above the average.

It is also noteworthy that, at county level, these indicators show large asymmetries.

b. Correlation matrix

The correlation matrix shows the values of the correlation coefficients for the variables considered in twos. It is a square matrix, symmetrical to the main diagonal (equal to one because a variable is perfectly correlated with itself). The form of the correlation matrix is shown in table no.1.

The analysis of the correlation matrix coefficients allows the assessment of the possibility of applying principal component analysis. The high values of these coefficients (greater than +0.5 or less than -0.5) indicate that there are statistically significant connections between the variables considered (direct connections if the value of these coefficients is positive, reverse connections if the value of these coefficients is negative). In this case, principal component analysis can be applied. The low values of these coefficients show that there are no correlations between statistical variables and, therefore, PCA, whose purpose is to identify these correlations, cannot be applied.

Table no. 1 The correlation matrix of the variables "Active readers in libraries," "Spectators at cinemas", "Spectators and auditors to artistic performances", "Visitors to museums and public collections", "Unemployment" and "Average monthly net nominal earnings"

		Correlation Matrix^a					
		Active readers in libraries	Spectators at cinemas	Spectators and auditors to artistic performances	Visitors to museums and public collections	Unemployment	Average monthly net nominal earnings
Correlation	Active readers in libraries	1.000	.943	.984	.989	-.074	.187
	Spectators at cinemas	.943	1.000	.955	.946	-.199	.395
	Spectators and auditors to artistic performances	.984	.955	1.000	.977	-.081	.245
	Visitors to museums and public collections	.989	.946	.977	1.000	-.118	.232
	Unemployment	-.074	-.199	-.081	-.118	1.000	-.456
	Average monthly net nominal earnings	.187	.395	.245	.232	-.456	1.000

Source: SPSS processing, based on data from the National Institute of Statistics

A correlation matrix feature is that the number of correlation coefficients greatly increases when the number of variables (k) included in the analysis increases, regardless of the statistical collectivity volume. The number of correlation coefficients is $k(k-1)/2$. For a data table showing the values of six variables, the number of correlation coefficients is 15 (see table no.1). This significant increase in the number of correlation coefficients highlights the possibility to interpret the connections between variables only by analyzing the values presented in the correlation Matrix.

c. Calculating the distance χ^2

χ^2 statistics is used in order to test the hypothesis of the independence between the variables studied. For this purpose, the following hypotheses are made:

- hypothesis H_0 , which is the hypothesis of independence (the correlation matrix is an identity matrix), which acknowledges that there are no statistical connections between variables;
- hypothesis H_1 is the hypothesis of dependence, which acknowledges that there are connections between statistical variables. (Dimitrios, Stephen, 2011)
- In order to test these hypotheses, the SPSS software provides (KMO output and Bartlett's Test) both the calculated value of the test statistics ($\chi^2_{\text{calculated}} = 409,275$) and the probability value associated to the calculated test statistics (Sig.)

Table no. 2 The value of test statistics χ^2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	409.275
	df	15
	Sig.	.000

Source: SPSS processing, based on data from the National Institute of Statistics

A value Sig. = 0.000 < 0.05 associated with the calculated value of the test statistics χ^2 shows that the hypothesis H_0 is rejected and the hypothesis H_1 is accepted. It can thus guarantee, with a 95% probability, that there are statistically significant connections between statistical variables. In this situation, the factorial analysis can be applied to the data considered.

The simultaneous analysis of the results triggered by testing the hypothesis of independence, using the test statistics χ^2 , and the determinant value of the correlation matrix allows identifying the properties of this matrix of interest to PCA.

Identifying the existence of the connections between variables is facilitated by calculating the Kaiser-Meyer-Olkin statistics (KMO), Measure of Sampling Adequacy. The values of the KMO statistics can range between 0 and 1. A value greater than 0.5 indicates that there are significant connections between statistical variables; therefore, PCA can be applied. (Pintilescu, 2007). Based on the results outlined in table no.4, the KMO value of 0.801 indicates that there are statistical connections between the analyzed variables, PCA thus providing a good solution.

d. The variance of variables (Communalities output)

The standardization of variables yields new variables of zero mean and variance one. The variances of statistical variables are presented in the Communalities output, as follows:

Table no. 3 The variance of statistical variables²

Communalities		
	Initial	Extraction
Active readers in libraries	1.000	.987
Spectators at cinemas	1.000	.967
Spectators and auditors to artistic performances	1.000	.985
Visitors to museums and public collections	1.000	.980
Unemployment	1.000	.746
Average monthly net nominal earnings	1.000	.725

Source: SPSS processing, based on data from the National Institute of Statistics

The variance values after extracting the factors are calculated based on the results of the Component Matrix output (table no.5). For example, for the variable "Active readers in libraries", we get $\sigma_i = 0,975^2 + 0,194^2 = 0,987$. The high values of the variables' variance after the extraction of factors (Extraction column) reveal that those variables should not be removed from the proper analysis because they are connected to the factorial axes. (Everitt, Dunn, 2001; Pintilescu, 2007)

e. The eigenvalues λ_k , associated to each factorial axis and the variance explained by each factorial axis (Total Variance Explained output)

The eigenvalues of the correlations matrix are shown in the *Total Variance Explained output, column Initial Eigenvalues* (table no.4).

Table no. 4 Eigenvalues of the correlations matrix and the variance explained by the factorial axes

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.023	67.048	67.048	4.023	67.048	67.048
2	1.368	22.801	89.850	1.368	22.801	89.850
3	.536	8.941	98.791			
4	.043	.722	99.513			
5	.021	.350	99.864			
6	.008	.136	100.000			

Source: SPSS processing, based on data from the National Institute of Statistics

In the output above, the eigenvalues of the correlation matrix are $\lambda_1=4,023$, $\lambda_2=1,368$, $\lambda_3=0,536$, $\lambda_4=0,043$, $\lambda_5=0,021$ and $\lambda_6=0,008$. As already mentioned, the eigenvalues correspond to the inertia explained by the factorial axes. Their sum is the total inertia of the cloud of points equal to the number of the statistical variables from the original data table, i.e. the sum of the main diagonal elements of the correlation matrix: $\sum_{k=1}^K \lambda_k = 6$

The software displays these values as absolute (column *Total*) or relative (column *% of Variance*) or as a percentage of the total inertia, as well as cumulative relative values (column *Cumulative %*). (Kachigan, 1982; Pintilescu, 2007)

Thus, the first factorial axis explains 67.048% of the total variance of the cloud of points; the first two factorial axes explain together 89.85% of the total variance; the first three factorial axes explain 98.791% and so on. According to Benzecri criterion, which involves choosing the number of the axes explaining over 70% of the total variance of the cloud of points, for the purpose of our study, we will choose the first two factorial axes. (Benzecri, 1992)

f. The coordinates of the variables on the factorial axes (Component Matrix output)

The coordinates of the variables on the factorial axes show the values of the correlation coefficients between variables and the respective factorial axis.

Table no. 5 The coordinates of the variables on the first two factorial axes

Component Matrix ^a		
	Component	
	1	2
Active readers in libraries	.975	.194
Spectators at cinemas	.983	-.016
Spectators and auditors to artistic performances	.980	.155
Visitors to museums and public collections	.980	.140
Unemployment	-.209	.838
Average monthly net nominal earnings	.375	-.765

Source: SPSS processing, based on data from the National Institute of Statistics

The values in table no.5 show the position of variables on factorial axes. For example, the variable "Active readers in libraries" has a high positive coordinate (close to 1) on the first factorial axis (0.975) and a low positive coordinate on the second factorial axis (0.194). This shows that the variable will be graphed in the positive quadrant on both factorial axes. The variable "Spectators at cinemas" has a positive coordinate on the first factorial axis (0.983) and a negative coordinate on the second factorial axis (-0.016). The high values of the variables' coordinate on the factorial axes show that those variables are highly correlated with the respective factorial axis.

The variables' coordinates on the factorial axes are the linear equation coefficients of the connections between variables. For the data in table no.5, the first factorial axis is a new variable defined by the linear combination of the initial variables, of the form:

$F_1 = 0.975$ "Active readers in libraries" + 0.983 "Spectators at cinemas" + 0.980 "Spectators and auditors to artistic performances" + 0.980 "Visitors to museums and public collections" - 0.209 "Unemployment" + 0.375 "Average monthly net nominal earnings".

In order to identify the variables that explain the second factorial axis, we select those variables from table no.5 (column Component 2) that have higher coordinate values. It is noteworthy that the formation of the second factorial axis is explained, for the example, only by "Unemployment" and "Average monthly net nominal earnings".

g. The contribution of variable X_j to the inertia of axis k (Component Score Coefficient Matrix output)

The high values of the contributions reveal the significant importance of the respective variable in differentiating the statistical units considered (Spircu, L., 2005). Thus, (according to table no.6), all variables contribute to the formation of the first factorial axis, and, as far as the second axis is concerned, the only variable that does not contribute is "Spectators at cinemas".

Table no. 6 The contribution of variables to the inertia of the first two factorial axes

Component Score Coefficient Matrix		
	Component	
	1	2
Active readers in libraries	.242	.141
Spectators at cinemas	.244	-.011
Spectators and auditors to artistic performances	.244	.113
Visitors to museums and public collections	.244	.102
Unemployment	-.052	.612
Average monthly net nominal earnings	.093	-.559

Source: SPSS processing, based on data from the National Institute of Statistics

Conclusions

The graphical representation, which is actually a review of the previous results, allows viewing the position of variables in the factorial axes system, identifying the direction and intensity of the relationship between variables. The graphs highlight easier the position of variables in the factorial axes system and identify the direction and intensity of the connections between the analyzed variables:

- as far as the direction of the connection between variables is concerned, it can be considered that there is a direct connection between the variables represented on the same side of a factorial axis.
- as far as the intensity of the connections between variables is concerned, it can be considered that there is a strong connection between the variables represented close to the correlation circle.

As far as the direction is concerned, it can be considered that there is a direct connection between the variables represented on the same side (positive or negative) of a factorial axis. These variables are positively correlated with each other and have the same sign of the coordinate on the respective factorial axis. Therefore, on the first factorial axis, there is a reverse connection between the points "Active readers in libraries," "Spectators at cinemas", "Spectators and auditors to artistic performances", "Visitors to museums and public collections" and "Average monthly net nominal earnings" on the one side, and "Unemployment", on the other side. There is a direct connection between the points "Active readers in libraries," "Spectators at cinemas", "Spectators and auditors to artistic performances", "Visits to museums and public collections" and "Average monthly net nominal earnings", variables situated on the right side of the graph.

On the second factorial axis, there are significant differences between "Active readers in libraries", "Spectators and auditors to artistic performances", "Visitors to museums and public collections" on one side, and "Spectators at cinemas" on the other.

As far as the counties are concerned, the factorial axis 1 (the vertical one) indicates that there are vast differences between the Municipality of Bucharest (28), Timis (38), Vrancea (42) on one side, and Alba (1), Mures (29), Tulcea (39) on the other side, regarding the structure of the participants in the act of culture in all its forms.



Figure no.1 The graphical representation of the variables' position in the system of the first two factorial axes

Source: Processing based on data from the National Institute of Statistics

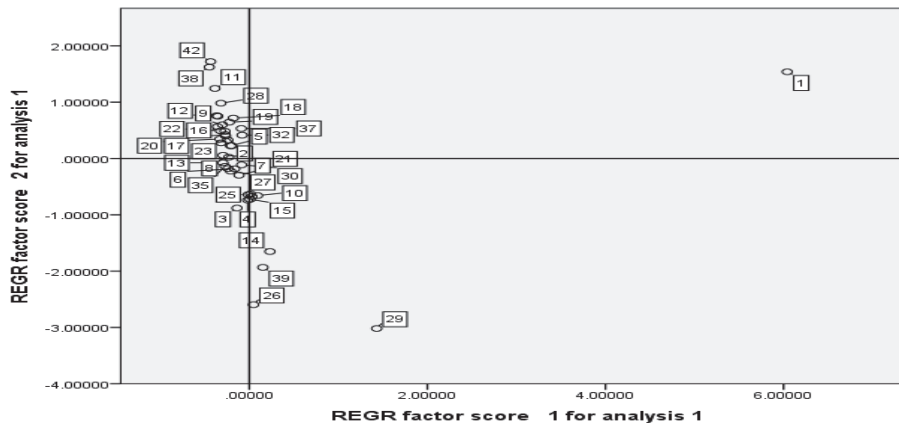


Figure no.2 The graphical representation of the territorial units (counties) on the first two factorial axes

Source: Processing based on data from the National Institute of Statistics

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ANALYZING "THE WORKFORCE COST" AND "THE NET NOMINAL EARNINGS" IN THE MAIN ECONOMIC ACTIVITIES, BY PRINCIPAL COMPONENT ANALYSIS

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Abstract

The "Workforce cost" and the "Net nominal earnings" are decisive characteristics of the labor market that reflect the labor supply of individuals and the labor demand of economic entities.

This paper aims at studying the statistical connections between the indicators "Average monthly workforce cost" and "Average monthly net nominal earnings", by the statistical method "Principal component analysis (PCA)", for the main activities of the national economy, in 2014.

The results obtained after carrying out this research showed that, on the one hand, there are significant correlations between these two indicators; on the other hand, there are also several similarities and differences between the analyzed economic activities.

Keywords

Average monthly workforce cost, average net nominal earnings, economic activities, principal component analysis.

JEL Classification

J30, J31, J32, C10, C38

Introduction

The statistical research on "the Average monthly workforce cost" and "the Average monthly net nominal earnings" aims mainly at obtaining the necessary information in order to indicate the statistical connections between the considered variables, the similarities or the differences between the two indicators, structured according to the national economic activities, as defined by the National Classification of Economic Activities (abbreviated in Romanian as CAEN Rev. 2), harmonized with the European classification in the field (i.e. NACE Rev. 2).

The reference period is the calendar year 2014; the latest statistics from the National Institute of Statistics - Romania (NIS) have been processed for the purpose of this analysis.

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In order to ensure a correct understanding of the indicators used in this study, we consider it appropriate to make some methodological specifications regarding their content.

The "Workforce cost" and the "Net nominal earnings" are decisive characteristics of the labor market, reflecting the labor supply of individuals and the labor demand of economic entities. From a methodological perspective, they are economic efficiency indicators, having a decisive role for the competitiveness of economic activities.

The first variable analyzed, i.e. "Workforce cost", represents the total expenditure borne by employers for the employment of personnel. It includes the gross amounts paid directly to employees (direct expenditure), i.e. salaries in cash and in kind, and other expenditures of the entity incurred by the workforce (indirect expenditure), relating to employers' social contributions, vocational training costs, other costs related to the employment taxes regarded as labor costs, wherefrom the received subsidies are deducted (Regulation EC no. 1737/2005).

A second variable included in our research, i.e. "Net nominal earnings", is obtained subtracting the following items from gross nominal earnings: tax, contribution of employees for health social insurance, individual contribution of state social insurance and employee contribution to unemployment insurance budget.

Average monthly earnings represent the ratio between amount paid to employees by economic units in the reference month, irrespective of due period and average number of employees. Average number of employees represents an arithmetic mean calculated based on daily number of employees in the reference month.

The net nominal earnings are directly influenced by the tax imposed on the gross nominal earnings. The net nominal earnings are intended to either satisfy the material and spiritual needs of employees or to saving.

According to the definition of the NIS, the gross nominal earnings comprise salaries, respectively rights in cash and in kind for employees for the work done (including for overtime) according to salary type, increases and indemnities as percent of salary or in fixed amounts, other additions to salary according to the law, amounts paid for time not worked (indemnities for rest and study leaves, holidays and days off, amounts paid from salary fund for medical leaves), premiums, holiday bonuses and other amounts paid from salary fund according to normative documents and collective labor contracts, amounts paid from net profit and other funds (including equivalent value of meal tickets).

For this statistical analysis, we took into account the following variables: "Average monthly workforce cost per employee" and "Net monthly nominal earnings" for the national economic activities of Romania, in 2014. The analysis method that can be applied in order to study the connections between them is "Principal component analysis" (PCA). After processing the data, we obtained, starting from a large set of data, several statistical indicators calculated for the two variables analyzed, and a graphical representation of the units analyzed through a system of factorial axes that highlights the similarities and differences between the main national economic activities.

1. Methodology

The statistical method used is represented by "Principal component analysis (PCA)". Data processing, testing the indicators' significance and the graphical representations were performed by the SPSS statistical software.

The principal components analysis is a descriptive method that helps us to analyze the combinations of numeric variables. The objectives are:

- highlighting the statistical connections between the analyzed variables;
- highlighting the similarities/differences between the statistical units analyzed according to all recorded variables;
- explaining the similarities/differences between individuals, in terms of the analyzed variables.

The principal components analysis can be applied only to quantitative variables, expressed in the same measurement unit. If the variables are expressed in different measurement units, then their standardization is achieved (Pintilescu, 2007; Spircu, 2005).

2. Data and results

Table no. 1 shows the distribution of the indicators "Average monthly workforce cost per employee" and "Average monthly net nominal earnings", on a sample of 19 national economic activities, for 2014.

Table no. 1 Distribution of the indicators "Average monthly workforce cost per employee" and "Average monthly net nominal earnings", on a sample of national economy activities, for 2014 (RON)

No.	National economic activities	Average monthly workforce cost per employee	Average monthly net nominal earnings
1	Agriculture, forestry and fishing	2248	1270
2	Extractive industry	6740	3260
3	Manufacturing industry	2802	1578
4	Production and supply of electric and thermal energy, gas, steam and air conditioning	5565	3093
5	Water supply; sanitation, waste management and remediation activities	2726	1509
6	Constructions	2181	1240
7	Wholesale and retail trade; repair of motor vehicles and motorcycles	2421	1412
8	Transport and storage	3065	1707
9	Hotels and restaurants	1651	958
10	Information and communications	5679	3357
11	Financial intermediation and insurance	6523	3708
12	Real estate transactions	2429	1344
13	Professional, scientific and technical activities	4254	2442
14	Activities of administrative services and support services	2203	1261
15	Public administration and defense; public social insurance	3925	2754
16	Education	3039	1733
17	Health and social assistance	2861	1496
18	Arts, entertainment and recreational activities	2204	1249
19	Other service activities	2003	1141

Source: Institutul Național de Statistică (National Institute of Statistics)

Altogether, the information provided in this table reveals that the difference between the maximum and the minimum level of the two indicators is very high, and that more activities recorded low values and only a few activities recorded high values. Thus, the indicator "Average monthly workforce costs per employee" has the lowest value for the activity "Hotels and restaurants", i.e. 24.5% of the highest value recorded for the activity "Extractive industry" (1651 RON compared to 6740 RON). In its turn, the indicator "Average monthly net nominal earnings" also has the lowest value for the activity "Hotels and restaurants", i.e. 25.8% of the highest value recorded for the activity "Financial intermediation and insurance" (958 RON compared to 3708 RON).

By comparing the values recorded by the two indicators for the economic activities with the national average of 2988 RON for "the Average monthly workforce cost per employee" and of 1697 RON for "the Average monthly net nominal earnings", the economic activities were grouped into two broad categories. The first category includes 47% of the activities that recorded, for the two indicators, values higher than the national average; the second category comprises 53% of the activities that recorded values below the average per total economy.

At sectorial level, compared with the average per economy, "the Average monthly workforce cost per employee" was significantly higher for the following activities: "Extractive industry" with 125.6%, "Financial intermediation and insurance" with 118.3%, "Information and communication" with 90.1%, "Production and supply of electrical and thermal energy, gas, steam and air conditioning" with 86.2%, "Professional, scientific and technical activities" with 42.4%, "Public administration and defense; public social insurance" with 31.4%. For the activities "Transport and storage" and "Education", there was recorded a value higher only by 2%.

The most relevant values for the average monthly workforce cost per employee, registered below the average per economy, occur in the following activities: "Hotels and restaurants", lower by 44.7%; "Service activities", by 33%, "Constructions", by 27%; "Activities of administrative services and support services", by 26.3%; "Arts, entertainment and recreation", by 26.2%; "Agriculture, forestry and fishing", by 24.8%.

Regarding the variable "Average monthly nominal net earnings", the highest values above the national economy average, achieved in 2014, occurred in the following activities: "Financial intermediation and insurance", by 118.2%; "Information and communication", by 97.8%; "Extractive industry", by 92.1%; "Production and supply of electrical and thermal energy, gas, steam and air conditioning", by 82.3%; "Public administration and defense; public social insurance", by 62.3%; "Professional scientific and technical activities", by 43.9% ; "Education", by 2.1%; "Transport and storage", by 0.6%.

"The average monthly net nominal earnings" situated, in 2014, at a level far below the national economy average, were registered in the following activities: "Hotels and restaurants", lower by 43.5%; "Other service activities", by 32.8%; "Constructions", by 26.9%; "Arts, entertainment and recreation", by 26.4%; "Activities of administrative services and support services", by 25.7%; "Agriculture, forestry and fishing", by 25.2%; "Real estate transactions", by 20.8%; "Commerce", by 16.8%; "Health and social assistance", by 11.8%; "Water supply, sanitation, waste management and remediation activities", by 11.1%; "Manufacturing industry", by 7% .

The discrepancies among the values recorded between the different economic activities lead us to conclude that the national average calculated for the two indicators is not representative and, for this reason, we focused our statistical research, by using the

principal components analysis, on the study of connections, similarities and differences between the two variables considered.

In order to achieve these research objectives, the SPSS data processing triggered the following results:

a. Descriptive statistics indicators (Descriptive Statistics output)

At the sample level (the 19 activities), "the Average monthly workforce cost per employee" recorded an average of 3395.74 RON, with a standard deviation of 1593.869 RON, and "the Average monthly net nominal earnings" recorded an average level of 1921.68 RON, with a standard deviation of 876.831 RON.

b. The correlation matrix

The correlation matrix of variables is the symmetrical square matrix obtained by multiplying the matrix of the initial data table with its transpose (the Correlation Matrix output). The determinant of the correlation matrix, which can range between 0 and 1, shows the intensity of the correlations between variables (Everitt, Dunn, 2001).

Table no. 2 The correlation matrix of the variables "Average monthly workforce cost per employee, per activity" and "Average net nominal monthly earnings per the activities of the national economy"

Correlation Matrix ^a			
		Average monthly workforce cost per employee, per activity	Average net nominal monthly earnings per the activities of the national economy
Correlation	Average monthly workforce cost per employee, per activity	1.000	.978
	Average net nominal monthly earnings per the activities of the national economy	.978	1.000

Source: SPSS processing, based on the data in table no.1

The correlation coefficient of the two variables, i.e. 0.978, indicates that there is a strong connection between the variables "Average monthly workforce cost per employee" and "Average net nominal monthly earnings", for the national economic activities. Within the system of the factorial axes, the points represented by these variables will be located in the same quadrant within a short distance from each other.

c. Calculating the distance (statistics) χ^2

χ^2 statistics is used to test the hypothesis of the independence of the studied variables. For this purpose, the hypothesis H_0 is formulated, which admits that there is no statistical relationship between the two variables ("Average monthly workforce cost per employee" and "Average net nominal monthly earnings"). Hypothesis H_1 is the hypothesis of dependence, which acknowledges that there are statistical connections between the two variables.

Table no. 3 Value of the test statistics χ^2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	51.741
	df	1
	Sig.	.000

Source: SPSS processing, based on the data in table no.1

In table no. 3 is presented χ^2 statistics, based on the data from table no.1 (KMO output and Bartlett's Test) (Dimitrios, Stephen, 2011).

The calculated value of the test statistics χ^2 is 51.741. The significance level appropriate to this value is Sig. = 0.000 < 0.05; therefore it rejects the hypothesis H_0 . Thus, it can be guaranteed, with a 95% probability, that there are significant statistical connections between the statistical variables considered. In this situation, the principal component analysis can be applied to the data considered. The simultaneous analysis of the results obtained by testing the hypothesis of independence, using the test statistics χ^2 and the value of the determinant of the correlation matrix allows us to identify the properties of this matrix of interest to the PCA (Pintilescu, 2007; Spiricu, 2005). The identification of the connections between variables is facilitated by calculating the Kaiser-Meyer-Olkin statistics (KMO), Measure of Sampling Adequacy. The value of the KMO statistics can range between 1 and 0. A value greater than 0.5 indicates that there are significant connections between the statistical variables; therefore, the PCA can be applied (Benzecri, 1992). For the variables "average monthly workforce cost per employee" and "average net nominal monthly earnings", we obtained the value of 0.5 (table no.4), which indicates that there are statistical connections between variables.

d. The eigenvalues of the correlation matrix associated with each factorial axis and the variance explained by each factorial axis (Total Variance Explained output)

The eigenvalues of the correlation matrix are those values that correspond to the inertia (spreading) explained by the factorial axes. Their sum is the total inertia of the cloud of points equal to the number of the statistical variables of the original data table, i.e. the sum of the main diagonal elements of the correlation matrix ($1.978 + 0.22 = 2$).

Table no. 4 The eigenvalues and the variance explained by the factorial axes

Component	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.978	98.901	98.901	1.978	98.901	98.901
2	.022	1.099	100.000	.022	1.099	100.000

Source: SPSS processing, based on the data in table no.1

The software displays these values as absolute (column Initially Eigenvalues Total) or as relative (column Initial Eigenvalues % of Variance), as a percentage of the total inertia and as well as cumulated relative values (column Cumulative %) (Field, 2009). The first factorial axis explains 98.901% of the total variance of the cloud of points, and the second

factorial axis explains 1.099%. The most important differences between the national economic activities in terms of the recorded variables are highlighted by the first factorial axis. In interpreting the factorial axes, we should take into account that the first factorial axis is the one that explains the key differences between the economic activities. In other words, it is sufficient to explain the first factorial axis due to the high share of the variance explained by it (Kachigan, 1982).

e. The coordinates of the variables on factorial axes (Component Matrix output)

The coordinates of the variables on factorial axes show the values of the correlation coefficients between variables and the respective factorial axis.

Table no. 5 The coordinates of the variables "Average monthly workforce cost per employee" and "Average net nominal monthly earnings", per national economic activities, on factorial axes

Component Matrix ^a		
	Component	
	1	2
Average monthly workforce cost per employee, per national economic activities	.994	-.105
Average net nominal monthly earnings, per national economic activities	.994	.105

Source: SPSS processing, based on the data in table no.1

These two values are coefficients of the linear equation showing the importance of each variable in the formation of the first factorial axis.

Conclusions

The graphical representation, which is actually a review of the previous results, allows viewing the position of variables within the system of factorial axes, identifying the direction and the intensity of the connections between variables, the similarities and the differences between the economic activities, as far as the two analyzed variables, i.e. "average monthly workforce cost per employee" and "average net nominal monthly earnings", are concerned. Each variable, respectively each economic activity, is positioned on this graph according to its coordinate on the respective axis. As far as direction is concerned, it can be considered that there is a direct connection between the variables represented on the same side (positive or negative) of a factorial axis. These variables are positively correlated with each other and have the same coordinate sign on the respective factorial axis.

The coordinates of the variables "average monthly workforce cost per employee" and "average net nominal monthly earnings" are positive; this is why they are represented on the right side of the graph, very close to each other, revealing thus a strong direct connection between them, also confirmed by the high correlation coefficient obtained, i.e. 0.978 (table no.2). The position of the national economic activities on the first two factorial axes is shown in figure no. 2.

The first factorial axis highlights two homogeneous groups of statistical units (national economic activities):

- On the one hand, there is the first group which consists of the following activities: 2,4,10,11,13,15 - "Extractive industry", "Production and supply of electric and thermal energy, gas, steam and air conditioning", "Information and communications", "Financial intermediation and insurance", " Professional, scientific and technical activities ", " Public administration and defense; public social insurance ".
- On the other hand, there is the second group of units, which consists of the following activities: "Agriculture, forestry and fishing", "Manufacturing industry", "Water supply", "Sanitation, waste management and remediation activities", "Constructions", Wholesale and retail trade", "Repair of motor vehicles and motorcycles", "Transport and storage", "Real estate transactions", "Activities of administrative services and support services", "Education", "Health and social assistance", "Arts, entertainment and recreational activities", "Other service activities".

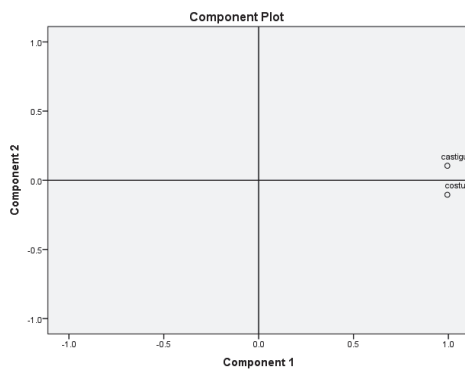


Figure no. 1. Graphical representation of the variables' position in the first two factorial axes system

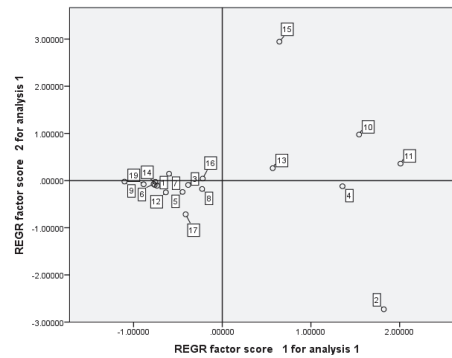


Figure no. 2. Graphical representation of the national economic activities on the first two factorial axes

Source: Processing based on data from the National Institute of Statistics

There are differences as regards the variables analyzed, between these two groups of units. The most important oppositions are characteristic of the activities located in the extreme positions: between the left and the right side of the first factorial axis. Thus, it is noteworthy that the activities falling in the first group registered an "average monthly workforce cost per employee" higher than the average level (3395.74), and an "average net nominal monthly earning" higher than the average earnings at the sample level (i.e. the 19 classes of analyzed activities), as opposed to the activities of the second group, which recorded values under the average level. These differences between the national economic activities at the sample level, in terms of "the average monthly workforce cost per employee" and "the average net nominal monthly earnings", highlighted by the analysis of the first factorial axis, are the key differences that characterize them, as the variance explained by this axis is the highest (98.901%).

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A STUDY OF THE IMPACT OF INVESTMENTS IN ECONOMIC VALUE OF THE FIRM IN INTERNATIONAL COMPETITION

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Abstract

Investments in plants, innovation, R&D and equipment are key factors for international companies to have a bigger market share and thus a rising economic value. These key factors are basically part of the strategic decision to maintain the competitive position at global level.

The paper highlights the present economic situation in Germany and shows the medium term investment developments. The authors used the public reports of the German companies to have a valid database. The data is analyzed by economic value such as turnaround, Tobin's Q ratio, EBIT and investments. From the overall database publicly traded German companies were selected for the timeframe 2008 to 2014.

The conclusion of the study is that the analyzed companies used a mixture of investments clearly showing a correlation between the above mentioned key factors and the increase in economic value. However there were also different cases where the outliers were very strong.

Keywords

Economic value, investments, international competition, strategy.

JEL Classification

M1 [M10, M14, M16]

Introduction

One of the biggest challenges for all kind of companies is the dynamic development of the markets. Not only the customer behavior, the complete framework seems like a never-ending story (Bain, 1959). While companies have a slower profit growth in global economy, the absolute number of competitors is still raising (Dobbs & Koller, 2015).

The entrepreneurs in global competition have new challenges. It is called as a „transition from industrial society to a new company“ based on knowledge (Violeta, et al., 2011). This known situation is explained by „rearrangements of values, beliefs, economic and social

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structures, political systems and concepts...“ (Drucker, 1999). Violeta counts some different facts of this situation, e.g. the fact of global economy and the fact of the necessity of a sustainable and socially responsible economy (Violeta, et al., 2011) to invest in research and development, in assets and in intellectual assets will be the necessary step to prepare for the competition situation (Dobbs & Koller, 2015).

1.1 Current approaches and literature review in analyzing the economic value and the strategic situation

The situation among existing competitors is the basis to generate a successful strategy. As showed, Violeta et al. (2011) defined the knowledge as the most important resource of a company. Porter defined pricing differentiation as a dimension of competition (Porter, 1980). Of course, Porter named some more „familiar forms“ like new product introductions, advertising campaigns and service improvements or other facts like corporate social responsibility (Verjel, et al., 2015). But Porter did not explain what exactly it means (Porter, 1999). Porter’s other dimensions like „product features, support service, delivery time, or brand image“ are given on markets but will not or less erode profitability (Porter, 2008).

Of course, the effect of pricing of a product or a service to profitability is directly measurable. But companies are complex systems, customers change their behaviors (Drucker, 1999). So it will be necessary to find out, if there are some other facts than the known dimensions, which are relevant in a competitive situation.

In addition to Porter there is a very helpful model of Joe Bain (1959), the Structure-Conduct-Performance Paradigma (SCP). This model explains the behavior of companies in different situations. The structure of the markets is the reason of the company performance, which is depending on the strategical market behavior (Bain, 1986).

The causal chain is: Structure of market (S) - market behavior (C) - company performance (P)

Bain shows us a background story, but he does not explain how companies get knowledge of the structure of the markets (Bain, 1959) or even other effects like the "importance of social and environmental responsibility" (Verjel, et al., 2015).

Strategy is one the most important decisions of entrepreneurs and has a huge impact on the performance of the firm (Robert Huggins, 2011). As entrepreneurs act in various industry sectors, the strategies will be different, too. So there is no general valid approach. To know what competitors do, what they plan and how they do it, is an important driver of strategy (Phillip Phan, 2003). Finally, the strategy of the entrepreneur is the instrument to overtop competitors (Akpoyomare, et al., 2012). The two parts of a strategy, differentiation and positioning are the main key facts in framing an entrepreneur’s strategy (Akpoyomare, et al., 2012). While markets become more and more global, companies needs physical and mental differentiation of the product (Akpoyomare, et al., 2012). In a study to measure the intended strategy, the results show the top strategic priorities (Kisfalvi, 2002). These top strategic priorities are among other things, product innovation, accessibility of information and forming/optimizing lucrative partnerships (Porter, 2008). These three named samples are completely dependent on behaviors and give advantages to competitors (Kisfalvi, 2002). So there is a high necessity to know the advantages of the competitors on the markets.

1.2 Tobin's Q as a characteristic number for measuring the economic value

In order to prove the given theory, the main question for the companies is how to measure and know the present status of the competition. All strategic activities are adjusted based on the degree of competition. The current analysis consists of the characteristic number of "Tobin's Q" which measures the relation between the equity market value and the equity book value (Gerke, 1994). The market value is the evaluation of shareholders (sum of all shares) and the book value is the sum of reproduction costs. As the reproduction costs are basically hard to measure, literature shows the value of all assets as the book value (Brealey & Myers, 1988). The formula is:

$$q = VM / VB \quad (1)$$

where:

- q - Tobin's Q
- VM - equity market value
- VB - equity book value

In this approach we use the Tobin's Q to evaluate if there is a benefit for shareholders and mark this as an economic value. We assume *ceteris paribus* situations as in some other studies there are other variable factors like the gross domestic product, global environment or critical political situations like war (Gerke, 1994). Other additional effects of the entrepreneurship are for example marketing actions, diversification in product portfolio, interests and taxes and the form of organization. The average of Tobin's Q for German industrial companies starting from 1968 is always higher than 1, what means that the equity market value is higher than the equity book value (Gerke, 1994; Stevens, 1986). The situation seems clear: these companies have a monopolistic situation with a high market share. Another explanation for Tobin's $Q > 1$ is an advantage of a company in the technology area and therefore the opportunity is to obtain higher market prices (Stevens, 1986).

2. Research methodology applied for analyzing and defining the effect of investments on economic value

We used a sample of the public reports of the years 2008 to 2014 of German companies listed in the indices DAX, MDAX and SDAX. The data sample includes all branches except the banking sector. We clearly separated the performance of turnover, investments in R&D and assets, the EBIT, the market value and the book value. To calculate the results we used the absolute yearly value, the percentage difference of each year in the analyzed period and the average of each characteristic number and highlighted it in the following study. In order to drive a better understanding of the logic applied, the methodology is also presented in several graphs.

Further, it was examined in the analysis of whether over time the investments affect the results of the company. Investments are made during a fiscal year, and depending on the type and size of an investment, the effects might be delayed. This "time lag" is also a subject of the present analysis.

3. Research results

We extracted the investment in plant and equipment, innovation, research and development (R&D) and calculated the relation to turnover. Usually there are similar approaches available showing this effect, but all of them are done for the US market and with data samples of US companies (Kim & Lyn, 1986). These studies show a significant correlation between investments and Tobin's Q. Additionally, these studies are made in the 1980s, so it is not clear if the results are transferable to German industry of today with all the changes in global and local competition and political challenges. Following this approach, we added the relation between turnover and investment to the given findings of Tobin's Q. The formula is:

$$qUa = (VMa / VBa) / (IASSETsa / Ua) \tag{2}$$

where all characteristic numbers a = average 2008-2014:

- qUa - Tobin's Q investment ratio
- VMa - equity market value
- VBa - equity book value
- IASSETa - investment in plant, equipment, innovation, research, development
- Ua - turnover

Our result is shown in following figure:

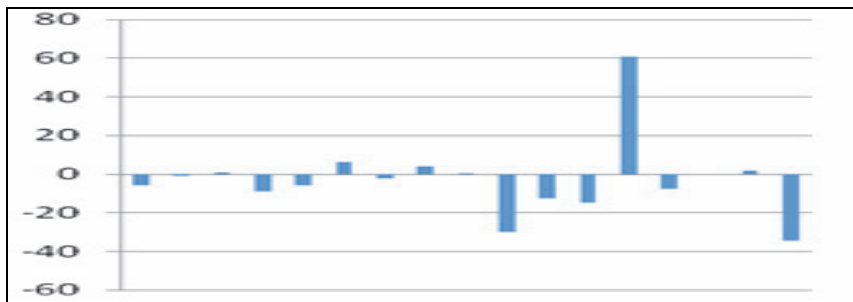


Figure no. 1: Tobin's Q investment ratio 2008-2014
 Source: according to the study conducted by the authors

The Y-Axis shows the Tobin's Q ratio in percentages, the X-Axis shows the different selected companies. The new characteristic number of the Tobin's Q investment ratio shows the absolute relation between the Tobin's Q and the relation of investment to turnover. This analysis shows the economic value of the investments in the timeframe 2008-2014. The full average is -2,49% and it gives us the information that in most cases the investments are not a positive economic value if we only focus on this aspect. The results are basically different to other studies where a clear and overall positive result is shown (Kim & Lyn, 1986). With only this result, we ask the question: Why do companies invest if the result is mostly negative? To answer this question, we have to look in more detail to other factors that might have an influence on our analysis.

3.1 Correlations to the economic value of a company

To find out if there is a statistical correlation between the investments and the economic value, we used the below graphical representation. The analysis shows following results:

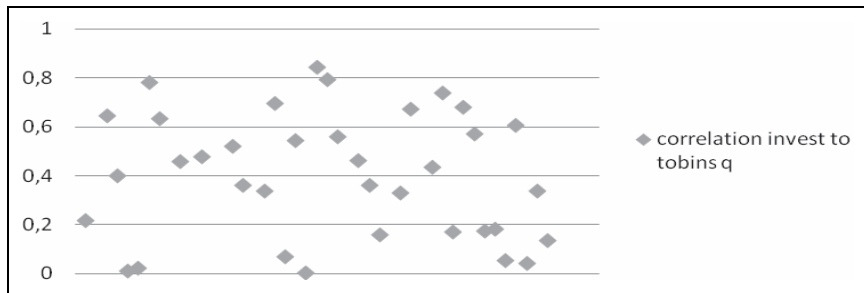


Figure no. 2: Correlation of Investments to Tobin's Q, 2008-2014
Source: according to the study conducted by the authors

We concluded that there is a wide range of results for the timeframe 2008 - 2014 for the German companies and we interpreted the results as a mid-correlation ratio. The results with a very low correlation (lower than 0,2) are companies with very low investments. We found out, that these companies are mostly services companies. This does not mean necessarily that services companies have a lower Tobin's Q compared to the industrial companies. It implies that these services companies can raise their economic value, the Tobin's Q with lower investments. The nature of services companies is characterized by human capital while industrial companies have to invest in machines and new production technology. In addition to the results shown above, we found out that especially industrial companies have a mid to high correlation of the characteristic numbers of Tobin's Q and investment. As this result is only one indicator of the economic value, we decided to additionally analyze the correlation of the investments and the yearly turn over in the years 2008 to 2014.

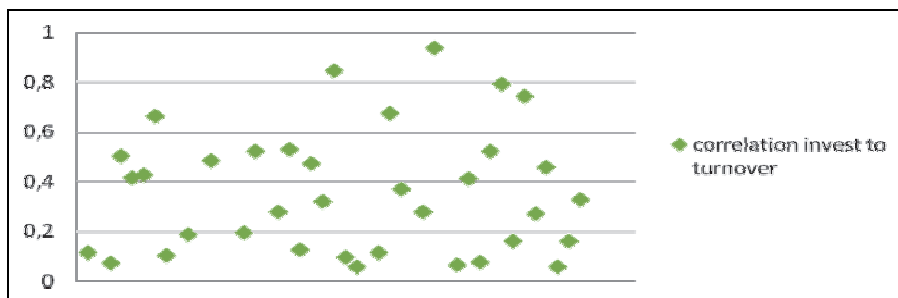


Figure no. 3: Correlation of Investments to turnover, 2008-2014
Source: according to the study conducted by the authors

It is easy to see in below figure no.4, that the correlations are mostly low. As a result we found out that there is no statistical significant correlation. We could not find an effect of investments on turnover. This result is completely different to the past approaches taken in

the US market. We have a correlation of the investment to Tobin's Q but not in the absolute characteristic number of turnover. We focused our study on the companies with high correlation to find out if there are differences in the different industry areas. But there is significant difference. We found in all branches we analyzed (e.g. industry, trade, food, automotive) companies with low and high correlations. So the basic question is, why can we see an effect to rising market value if there is no significant rising turn over? As another step we analyzed the effect of investments to the EBIT which is an additional signal for shareholders about the dividends.

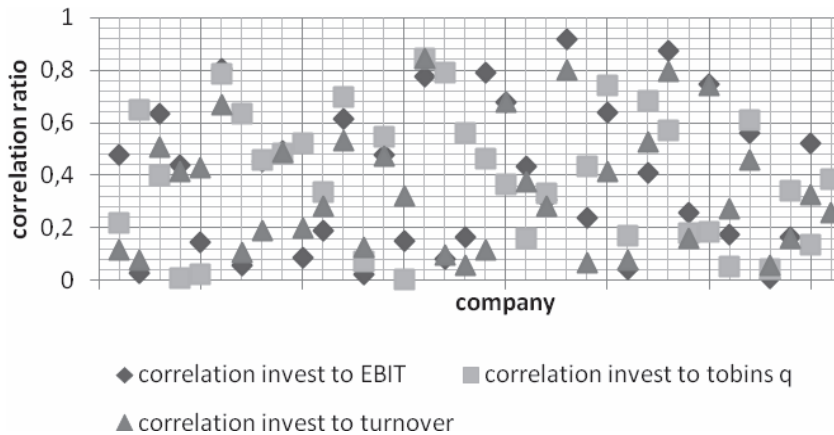


Figure no. 4: The correlation of investments to EBIT, turnover and Tobin's Q during the years 2008-2014
Source: according to the study conducted by the authors

According to the above shown figure, we found out that the correlation of investment to EBIT is very different for each company. The statistical difference between the correlation of investment to Tobin's Q is low. If we focus on each company we can clearly show a high correlation between the EBIT, turnover and Tobin's Q. The EBIT is thus decoupled and behaves independently. The EBIT decreases due to the investment performance of a company, depending on the depreciation. Furthermore, the EBIT figure takes account of additional costs and expenses of the company, which are in sales and Tobin's Q is not taken into account and thus independently affect EBIT.

3.2 Compound Annual Growth Rate Analysis

To create a clear view we analyzed and compared the average of all data in the years 2008 to 2014 in figure no.5.

On the Y-axis we show the growth rate and on the X-axis the data sample of the analyzed companies. In figure no.5 the Compound Annual Growth Rate (CAGR) shows the outliers which are mainly responsible for the low significance of our statistical results. If we are going to exclude the outliers it means that there is a basic correlation of investments to Tobin's Q, to EBIT and to turnover. There is no given explanation why we found these heavy outliers so the reasons should be examined by each individual company.

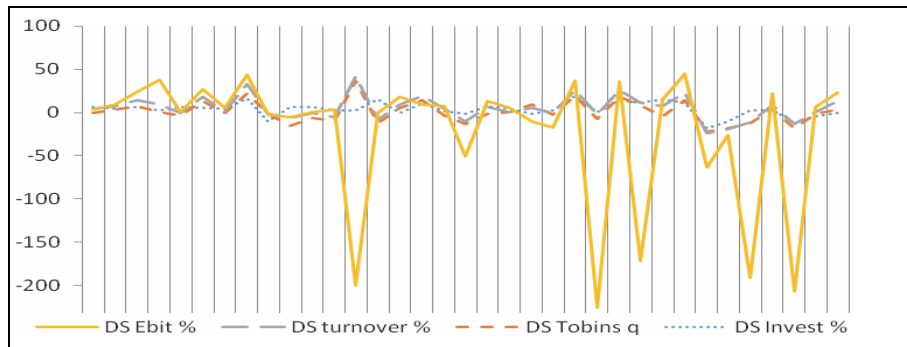


Figure no. 5: Compound Annual Growth Rate 2008 - 2014: The average of different characteristic numbers

Source: according to the study conducted by the authors

We refer to the Structure-Conduct-Performance Paradigma of Joe Bain (1959) which explains the structure of the market as an effect on the performance of the firm. The seven statistical outliers are showing in focus on the EBIT a huge difference to the average of all other companies in our study. We explain these outliers with their special market situation including the competitive situation.

These outliers are strong samples that especially the EBIT can differ very heavily from all other characteristic numbers of economic value. In total the investments grow with 3,75% during the years 2008 to 2014 while the EBITS decreases at the same time with -27,48% and the turnover increases with 4,56%. If we exclude the outliers the EBIT increases with 4,88%. That means, the turnover, EBIT and Tobin's Q will increase higher than investments.

Conclusions and future directions

Entrepreneurs raised their investments in the analyzed timeframe between 2008 and 2014. The turnover, EBIT and Tobin's Q raised too. But there is no statistical significant correlation. This means that the investment is not the major factor for the increased economic value. Additionally the authors concluded that there is a very strong variation of the EBIT for some companies, which has a statistical influence on the overall results. In order to increase the economic value of a company is not only a question of high investments. There are external factors that also have an influence on the economic value of a company. Further it could be clearly demonstrated by the Compound Annual Growth Rate that there are virtually no significant time lags between the time of investment and the effect on the results. A "time lag" could not be detected and possible downstream effects on the economic value could not be observed. The Compound Annual Growth Rate moves significantly statistical and is highly correlated with the other analyzed data across time.

As companies are complex systems the authors will have to pursue an additional approach to analyze the specific market situation of the selected companies.

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AN ANALYSIS OF THE CONSUMER BEHAVIOUR IN ROMANIA FROM THE CARD PAYMENT PERSPECTIVE

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Abstract

Card use at the point of sale increased extensively in recent years in Romania and many issues regarding patterns of the buying behavior and consumer preferences can now be analyzed. Using primary data of card usage from an important Romanian bank, this paper examines the transactions by the Merchant Category Codes (MCC) and describes the current consumer preferences in Romania from a cards payment usage perspective. The purpose of this study is to examine the consumer behavior in Romania as it can be extract from the card payments. This represents an important study for the Romanian consumer since data of card usage are not public available for researchers due to competitive reasons.

Keywords

Card payments; consumer behaviour; Romania; electronic.

JEL Classification

D12; E42.

Introduction

The card usage at the point of sale is subject to increasing attention in Romania due to a dramatically increase in recent years. According to National Bank of Romania statistics, one of two card transactions is made at merchants. In this context, questions about consumer's use of cards are becoming more intriguing. Card transactions are electronically registered and can facilitate analysis regarding the consumer behavior in general.

This paper examines issues related to consumer behavior by exploiting a unique set of data obtained from a representative medium size-bank in Romania to capture patterns and preferences of the consumer. We begin this study by examining the current state of the card payments in Romania and then examining in particular data from a bank card portfolio.

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1. The Romanian Card Industry

With a card, a consumer uses the credit or debit card by presenting it to the retail merchant as a payment method. The merchant point of sale device initiates a transaction message, which travels over the network to the bank that issued the card or its processor, which in turn checks the record of the cardholder's account. Then, the issuing bank sends an authorization message back to the merchant. The transaction proceeds and the purchase amount is blocked in the cardholder's account in real time until the settlement is done. Then, the transaction runs over the card network and to the issuing bank and the cardholder's account is debited after a short delay, usually within two days (Borzekowski, Kiser and Ahmed, 2008).

According to National Bank of Romania, at the end of 2015 the card market recorded 14.9 million cards at a population of 20.1 million. Of this number, 12.3 million are debit cards and only 2.4 are credit cards that can be used for cash withdrawals at 11,492 ATMs and electronic payments in 144,441 POS devices installed in merchant stores.

Table no. 1 Cards market in Romania (2013-2015)

Year	Total number of cards	Debit cards	Credit Cards	Active cards	ATM devices installed in the country	POS devices installed in merchant stores
	(thousands)	(thousands)	(thousands)	(thousands)	(thousands)	(thousands)
2015	14,960.5	12,481.2	2,479.3	11,259.7	11.0	137.4
2014	14,542.2	12,234.6	2,307.6	11,038.4	11.0	135.5
2013	14,148.7	11,921.4	2,227.3	11,332.4	10.8	128.0

Source: National Bank of Romania

Despite the increased number of issuing cards in recent years, cash is still the king and remains the dominant form of payment for most of the consumers if we take in consideration the statistic of cash withdrawals vs. POS transactions but, in any case we can see a notable tendency for increasing the electronic payments market correlated with the growth of POS terminals available for the card payment.

Table no. 2 Cash withdrawal vs. POS transactions in Romania

	2013	2014	2015 T1
	(mil. Romanian LEI)	(mil. Romanian LEI)	(mil. Romanian LEI)
Cash withdrawals at ATM	114 672,86	122 860,79	30 913,61
POS transactions	20 635,44	23 577,30	5 899,91

Source: National Bank of Romania

2. The Consumer Behaviour Analysis

The rapid growth of card payments has drawn the attention of the researchers for this area but few data were made public by the banks due to competitive reasons. In recent years there have been various studies on consumer behavior from the card usage perspective (Dutta and Weale, 2001; Rysman, 2007; Borzekowski, Kiser and Ahmed, 2008; etc.) but most of them have focused on the mature markets of the West and not treated the card adoption in its early stages as occurs now in the East.

Many local academic contributions were made by addressing key issues surrounding card payments in general (Iuga, 2010; Gyula, 2013; Turkes, 2015) and payment network in particular (Ghiba and Avadanei, 2010; Popovici, 2015). Although important findings have emerged from these studies, they have not provided much information regarding the consumer behavior of the cardholder.

This article breaks the existing silence in literature by obtaining transactional data from a representative medium-size bank in Romania whose name we will not mention for competitive reasons as it was agreed with bank representatives. The analyzed portfolio includes almost 300,000 cards with at least 1 transaction in the year 2015 spread throughout the country since the bank mentioned in this study has national representation through its 150 branches. The data delivered was analyzed by segmenting the transactions based on the Merchant Category Codes (MCC) used by VISA and MasteCard systems.

In terms of turnover the analyze revealed that the main destinations of expenses for the cardholder are the food and non-food products for households available in Supermarkets (27.43%), followed by the clothing acquisitions (13.76%). These facts show that individuals seek for new technological opportunities to improve their comfort or lifestyle and to save time.

Table no. 3 Cardholder transactions by Volume

	MCC	Main Code	% Volume
1	5411	Grocery Stores and Supermarkets	27.43%
2	5651	Family Clothing Stores	13.76%
3	5541	Service Stations (with or without ancillary services)	8.50%
4	5211	Lumber and Building Materials Stores	4.56%
5	5912	Drug Stores and Pharmacies	3.24%
6	5732	Electronics Stores	2.37%
7	5812	Eating Places and Restaurants	2.31%
8	5712	Furniture, Home Furnishings, and Equipment Stores, Except Appliances	2.20%
9	4900	Utilities — Electric, Gas, Heating Oil, Water, Sanitary	2.20%
10	5691	Men's and Women's Clothing Stores	1.81%

Source: own adaptation based on primary data obtained from a Romanian bank

The ranking is almost similar when referring to the number of transactions. The largest number of transactions are in the grocery stores and supermarkets, mainly because of the frequency of these types of shopping (41.11%). On the second position in terms of transactions we found the clothing stores, followed by the service stations and pharmacies.

Table no. 4 Cardholder transactions by the Number of Transactions

	MCC	Main Code	% Number of Transactions
1	5411	Grocery Stores and Supermarkets	41.11%
2	5651	Family Clothing Stores	10.30%
3	5541	Service Stations (with or without ancillary services)	8.81%
4	5211	Drug Stores and Pharmacies	6.04%
5	5912	Eating Places and Restaurants	3.35%
6	5732	Telecommunication Services, Including Local and Long Distance Calls, Credit Card Calls, Calls Through Use of Magnetic Stripe Reading Telephones, and Fax Services	1.92%
7	5812	Utilities — Electric, Gas, Heating Oil, Water, Sanitary	1.87%
8	5712	Lumber and Building Materials Stores	1.78%
9	4900	Fast Food Restaurants	1.61%
10	5691	Miscellaneous Food Stores — Convenience Stores & Specialty Markets	1.54%

Source: own adaptation based on primary data obtained from a Romanian bank

According to records the average amount for an electronic transaction in Romania is 437 RON to buy electronics. This means that the value for card payments is higher for furniture, home furnishings and equipments (297 RON). Also, Romanians prefer to spend money using a card payment method for the basic needs. The average transaction value for men's and women's clothing is 160 RON and for family clothing stores 154 RON. Romanians use their credit card to pay moderate amounts for food or medicines (eating places and restaurants-80 RON, grocery stores and supermarkets-77 RON, drugstores and pharmacies-62 RON). They make on an average less than 30 RON electronic transactions to eat in fast food restaurants.

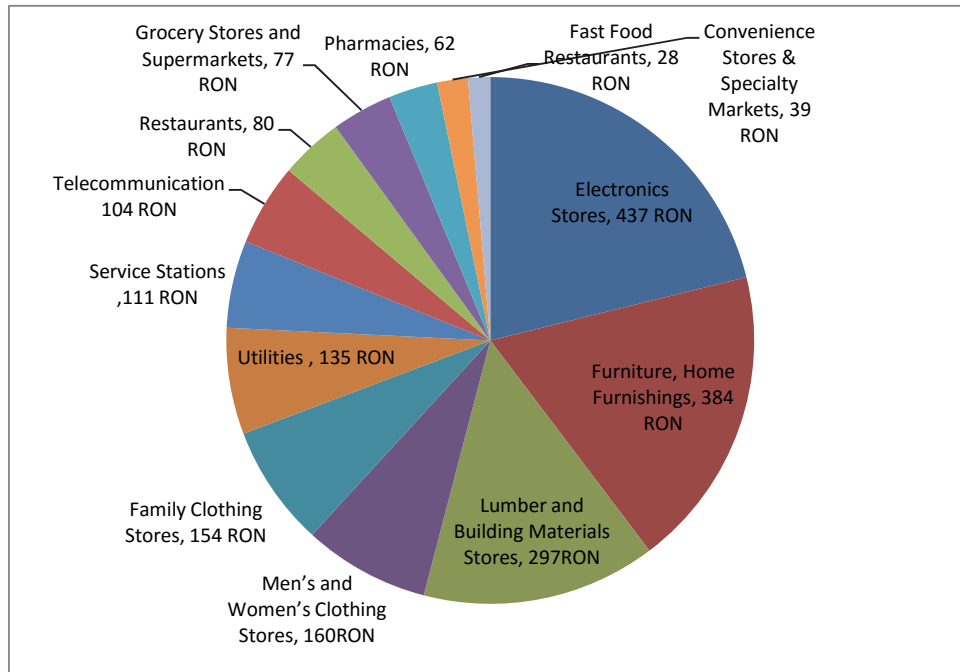


Figure no.1 Card transactions by Value (Romanian Leu)

Source: own adaptation based on primary data obtained from a Romanian bank

From a demographic point of view the South- Eastern Romania scored the most significant numbers in terms of transactions (98, 847), volume (9,458,759 RON), average transactions (96) and average spending (1314). Romanians use mostly electronic payment in Bucharest and surrounding areas (Ilfov) as number of transactions exceeds 450,000 and volume of money spent is 33, 919, 675 RON.

Practically, the value of electronic transactions in Bucharest covers almost half of the total amount of POS payments (926,469) all over the country. This behavior is based on the fact that people living in towns have access to more sources of information, promotion of electronic transactions has been much more encouraged by public authorities and financial partners, stressful and hectic urban life offered them a choice for fast payments and most individuals developed skills specific to new generations.

Table no. 5 Transactions by Region

Region	No of Transactions	Volume (RON)	Average Transaction	AVG Spending/Card
SE	98,847	9,458,759	96	1,314
NE	73,955	5,522,435	75	941
SW	50,132	3,701,725	74	771
Bucharest & Ilfov	454,167	33,919,675	75	1,707
NW	70,129	5,052,505	72	887
Center	35,435	2,532,274	71	786
W	75,965	5,938,347	78	1,062
S	67,841	5,313,321	78	784
TOTAL	926,469	71,439,041	77	1,210

Source: own adaptation based on primary data obtained from a Romanian bank

Conclusions

This paper provides an unique set of data from the banking industry in order to explore the payment behavior and patterns of the Romanian consumer. Electronic transactions reveal certain particularities of consumer behavior. Card usage for POS transactions in Romania demonstrates tendencies for a maturing market in the area of electronic payments.

Future research can be done in the area of payment behavior as card payment is slowly becoming the dominant form of payment for many consumers and the transactional data will be available for the researchers investigating patterns and preferences in the consumer behavior.

According to statistics, the Romanian consumer prefers to use the card payment mainly for current needs (supermarkets, clothing stores, etc.). Another important aspect is the fact that Bucharest concentrates almost half of the card payment transactions in the country, revealing a lack in card payments adoption for the rest of the country, both for the merchants and the cardholders.

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FURTHER APPLIED TECHNIQUES ON FOOD PACKAGING AND LABELLING

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Abstract

In the generation of new concepts for food packaging, the importance of food quality and safety is crucial for the consumer. The future of food packaging through visionary models contributes to the development of the international market.

Therefore, the present study begins with highlighting the importance of Food Law regulation, international trade and packaging directives set to inform the consumers in an accurate manner.

The second part of the research presents both food packaging and labelling innovative techniques and details the relation between technical and marketing function of Packaging. Furthermore, using the combination between numerous integrated systems such as packaging techniques and electronics to interact between the package and food product, the research presents the current model of Visionary - Smart Packaging and shows the consumer benefits brought by this model.

The research concludes with the report findings on global packaging development through innovation performed by Euromonitor International in 2015.

Keywords

Visionary packaging model, smart packaging techniques, modern consumer needs, innovative labelling, packaging development

JEL Classification: L66, O31, Q55

Introduction

Since decades of the food industry evolution, packaging has grown substantially in importance to product marketers and consumers. As nowadays consumers' mobility increases, they are seeking valuable packaging solutions that can cope with fast pace living standards. This is where functional packaging or "smart" packaging comes in, progressively becoming a consumer expectation.

Therefore, in this context the main objectives of the paper are to identify the legal framework of food packaging and labelling in the European Union and International Trade. Moving forward to detailing innovative food packaging and labelling functions and

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techniques and last but not least to highlight the consumer benefits of a current model of Visionary - Smart Packaging using the latest industry techniques.

The paper presents the main aspects of food regulation regarding packaging and labelling to gain a broader view on the legal framework and afterwards showing the main functions and techniques of packaging which show a clear link between technical and marketing function of Packaging. The paper therefore analyses most innovative developments of labelling and importance to the consumers and food industry.

Using the combination of packaging techniques and electronics to interact between the package and food product, the research methodology consists of detailing the current model of Visionary - Smart Packaging. The research highlights the consumer benefits brought by this model and concludes with the report findings on global packaging development through innovation performed by Euromonitor International in 2015.

1. Legal framework – food law regulation

Nowadays, the importance of Food Law Regulations is critical as a result of increased international trade of goods requiring merchandising know-how, the government development of laws on food packaging and labeling, standardization, the indication of ingredients and environmental issues. (Dima, 2000)

The European Parliament and the Council of the European Union General Food Law is the parent legislation covering all aspects of food production, preservation and storage (Food Research Association, 2007). Two of the primary functions of packaging are to protect food from contamination and to preserve the integrity of the product. These are requirements of the packaging material itself. The materials may contain substances which are able to migrate into the packaged food.

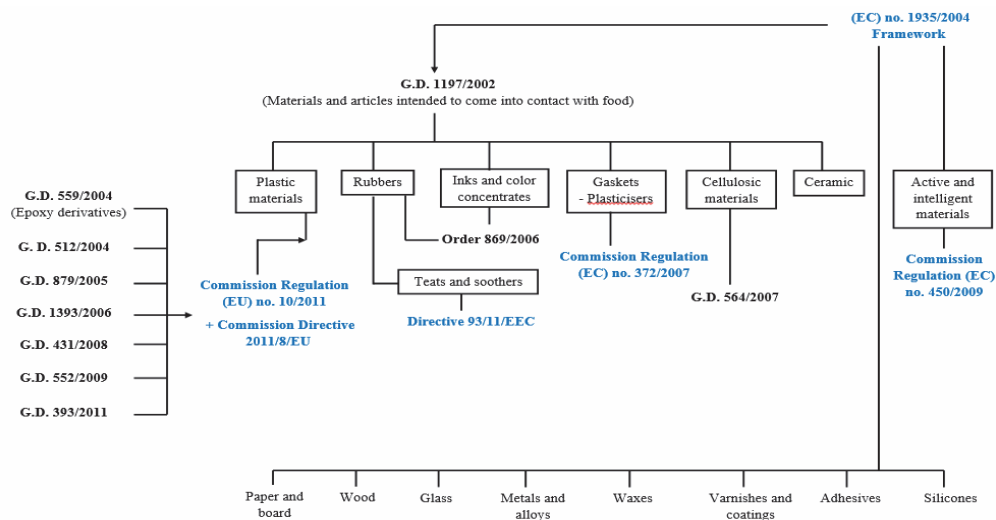


Figure no. 1 Own representation based on European Commission Regulation (EU) no. 10/2011 <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32011R0010>

To protect consumers against potential risks of oral packaging exposure the EU legislation has five main instruments: Regulations, Directives, Decisions, Recommendations and Reviews. The safety of food packaging is based generally on the loss of potentially toxic substances and the absence of migration of such substances. Materials covered by the EU legislation such as: plastics (including paints and coatings); regenerated cellulose; elastomers and rubber; paper and paperboard; ceramics; glass; metals and alloys; wood (including cork), textile products, paraffin and microcrystalline waxes - as shown in the figure above, in contact with food must satisfy these requirements.

The EU Regulation ensures the quality of food for human consumption and animal feed. It guarantees the free movement of safe and healthy products in the EU market. In addition, food legislation of the European Union (EU) protects consumers against fraudulent or deceptive commercial practices. Safety regulations stipulate the following provision: any food product hazardous to health and / or unfit for human consumption must not be marketed. To determine whether a food product is safe or not, the following aspects should be taken into consideration:

- normal operating conditions;
- information conferred to the consumer;
- immediate or delayed health effects;
- cumulative toxic effects;

Other International Food Regulations are as follows:

1. The Code of Ethics for International Trade of food items adopted by the Codex Alimentarius Commission on its 13th session (December 1985)
2. The General Agreement on Tariffs and Trade (GATT) as an appropriate instrument to regulate international trade.

Food producers must enforce food law at all stages of the food chain, from production and processing to transport, distribution and supply. If the manufacturer believes that a food product or packaging is harmful, immediate withdrawal shall be initiated from the market.

2. Innovative Food Packaging and Labelling Functions and Techniques

Packaging is a coordinated system of preparing goods for transport, distribution, storage, sales and consumer use. Packaging is a service and business function which in its most fundamental form contains, protects/preserves, transports and sells a product. (Soroka, 1996 pg 3)



Figure no. 2 The Three Levels of Packaging

Source: own research

When discussing packaging functions it is mandatory to know that there are three different levels of packaging as described in the figure above.

1. Primary (sales) packaging is the packaging which surrounds the product when it is sold to the final consumer, having direct contact with the product and other packaging to complete the sales unit such as label, leaflet in a printed carton or tray, lid in a printed sleeve.
2. Secondary (grouped) packaging is used to group sales units and eases handling in the selling environment at point of sale to the consumer such as corrugated outer case, thermoformed plastic tray.
3. Tertiary (transport) packaging such as pallets, stretch wrap is used to facilitate handling and transport of sale units or secondary packs in order to avoid physical handling and transport damage. (Soroka, 1996)

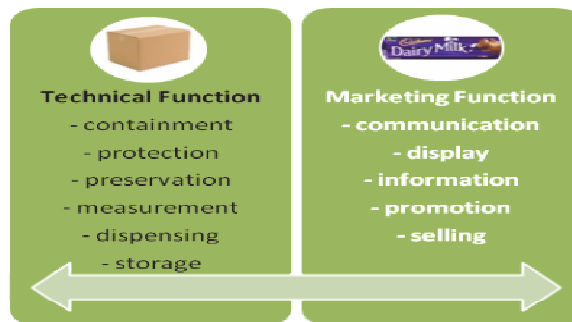


Figure no. 3 The relation between technical and marketing function of Packaging

Source: based on Soroka, W., 2006. Fundamentals of Packaging Technology, The Institute of Packaging

Packages fulfill a number of vital functions in the process of sourcing from the manufacturer and reaching the consumer. Among the range of functions that packaging includes as shown in the figure above are the following:

- protection and preservation - preventing physical damage and stopping or inhibiting chemical and biological changes during transport, handling and storage;
- Information / promotion - providing company and product information, instructions for use, storage and handling, machine-readable barcodes or man / attracting sales, branding and image;
- rationalization / efficiency - to facilitate the distribution and storage of a certain quantity of product ;
- Security - highlighting tamper packaging, anti - counterfeiting;
- Convenience – re-closable packaging, distribution.

Such as packaging, labelling also has got many requirements which need to be considered from the beginning of product development which are closely linked to advertising and marketing of the product. The food product label must be clear and easy to read, permanent, easy to understand, easily visible and not misleading. It must also show the list the ingredients and certain warnings such as allergen information as follows:

- The name of food on the label must accurately describe the product, reflecting consumer’s expectations, for example milk and dairy cannot be used for non-dairy products.
- the list of ingredients need to be listed in descending order by weight of the product taking into account tolerances for ingredients which are used in variable proportions
- health and nutrition claims must be very accurate, for example when expressing “low fat” the product must be qualified as low in a certain nutrient
- allergen labelling is extremely important as of when the product contains certain ingredients known to cause allergic effects, these ingredients must be highlighted in the labelling. (CCFRA, 2007)

Table no. 1 Main functions and types of packaging labels

MAIN FUNCTIONS	ID Traceability Identificati on Safety	DECO Decoration Premium	INFO Multipage Use instruction Legal information	PROMO Promotion Amusement Gadget	PERFO Industrial advantage Efficiency	ERGO Advantage Practicality
LABELS						
Coupon light			✓	✓		
Double view		✓	✓		✓	
Neck label		✓		✓	✓	
Anti – theft	✓				✓	✓
Digi label				✓	✓	

Source: Own representation based on www.autajon.com

As seen in the above table no. 1 the main functions of packaging labels are: traceability and identification, decoration, information, promotion, efficiency, industrial advantage and practicality. The column on the left shows different modern types of packaging labels. For example the double view label is printed with images to be seen from both sides requiring transparent packaging of the product. Its main functions are visual effect of the image, information about the product such as ingredients and efficiency due to automatic application, environment friendly and increased communication space. The digital label on the other hand is printed digitally as the name suggests with a very high print quality, being directly transferred from the computer to the material and it is very useful for variable data printing thus providing traceability.

3. Consumer benefits from Smart Packaging Technologies- Case Study

Packaging innovation often involves greater functionality. Nowadays consumers live at fast pace hence they are seeking valuable packaging solutions that can make their lives easier. Smartphones and apps like QR scanning now offer instant access to information and individual lifestyle statistics. This is where functional packaging or “smart” packaging comes in, progressively becoming a consumer expectation.

The present case study focuses on presenting some of the most recent and visionary packaging techniques that bring consumer benefits and brand awareness. Starting with the state of the art in smart packaging technologies, the case study shows recent innovations performed in the Packaging industry and concludes with the findings of a recent report

developed by Euromonitor International on the smart packaging industry as shown in the report finding section c) of the Case Study.

a) Smart Packaging Technology

Smart Packaging is the result of the combination between numerous integrated systems such as chemistry and electronics to interact between the package and food product to obtain increased shelf life or sensory properties. (Han, 2014) According to Jung Han, in a study about packaging performed in 2014, the four most essential smart packaging technologies for food products designed to meet consumer expectations are the following:

- Conventional Packaging - Custom functional packaging focused on design and technology integration into packaging; materials and decoration capabilities for products on shelf and deliver on the brand;
- Hybrid Packaging - Combines rigid and flexible materials in order to create custom solutions that build value for both brands and consumers. The main advantages of this technology are the following: improved economics, shelf presence, convenience, and sustainability;
- Active Packaging - Advanced materials and electronics to enable additional function and protection to new package and device platforms
- Intelligent Packaging - Custom package platforms offering dynamic and immersive experiences that enable interaction between brand, consumers, and retailers.

b) Smart Packaging discoveries – temperature sensors

Companies such as Ripesense™ and Thinfilm™ are producing high quality smart packaging technologies which include sensors that are activated to detect product temperature, motion (traceability of the product), consumer touch (facilitating sense for blind customers) and proximity of the customer through GPS tracking.



Figure no. 4 Intelligent packaging through temperature sensors

Source: Ripesense™ (http://www.ripesense.co.nz/ripesense_howitworks.html)

The Ripesense™ temperature sensor is one example of intelligent packaging that can detect the juiciness of the fruit product according to the number of days at room temperature. The RipeSense™ label, gives a colour change based on the levels of ethylene in the package, after appropriate calibration According to the sensor, up to two days the fruit is turning from crisp to firm and in the following five days it becomes juicy as shown in the graph above. The concept of sensory food design is what dominates this decade. It is shown by “The Brand Sense Study” by Martin Lindstrom, that taste, smell and appearance of a

product are ranked together on the scale of importance to the consumer, therefore creating new levels of sensor preference (Lindstrom, 2015).

c) Report findings on Global Packaging Development – bringing consumer satisfaction through innovation

Focusing on visionary/smart packaging, according to a recent the study conducted by Euromonitor International -the world’s leading independent provider of strategic market research.- performed in 2015, consumers are demanding to both brands and the packaging industry to innovate and to focus on reducing costs and increasing revenues while driving brand awareness, sustainability, competitiveness, food safety and consumer satisfaction, shelf life, and consistency.

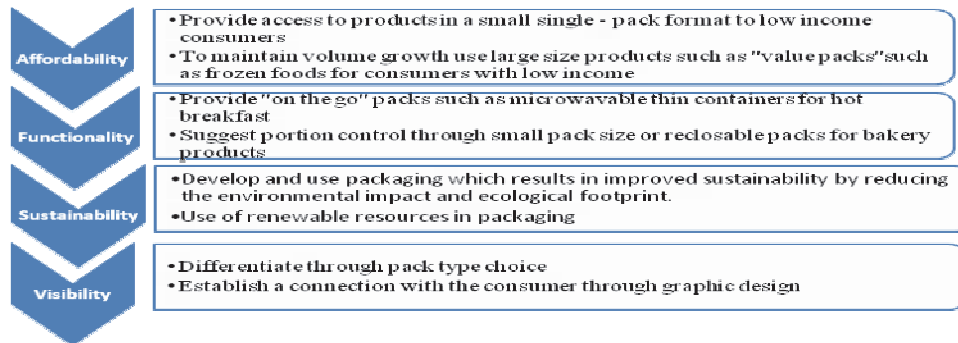


Figure no. 5 How packaging innovation can help achieve consumer satisfaction

Source: adapted from Euromonitor International report, <http://www.euromonitor.com/global-packaging-developments-building-brand-success-through-innovation/report>

As summarized in the above figure, the Euromonitor study concludes that smart packaging innovations brings consumer benefits and helps achieve brand success through four main characteristics: affordability, functionality, sustainability and visibility each characteristic being linked to a smart packaging solution.

Conclusions

In the last decades, packaging has grown substantially in importance to product marketers and consumers. The importance of food law regulations is critical as a result of increased international trade of goods requiring merchandising know-how, the government development of laws on food packaging and labelling, standardization, the indication of ingredients and environmental issues. Packaging innovation often involves greater functionality therefore packages fulfil a number of vital functions in the process of sourcing from the manufacturer and reaching the consumer.

Such as packaging, the research shows that labelling has also got many requirements which need to be considered from the beginning of product development which are closely linked to advertising and marketing of the product. Nowadays modern labels offer both information, industrial advantage and efficiency as well as innovative solutions such as anti-theft, digital labels and double view.

The research focused on the most innovative – visionary developments in packaging and labelling providing insight of the four most essential smart packaging technologies for food products designed to meet consumer expectations: Conventional Packaging, Hybrid Packaging, Active Packaging and Intelligent Packaging. The paper highlights the findings of a case study focused on intelligent – smart packaging starting with the concept of sensory food. The Ripesense™ temperature sensor is one example of intelligent packaging that can detect the juiciness of the fruit product according to the number of days at room temperature.

The research methodology continues with the Euromonitor International report from 2015 on Global Packaging Development. This report finds that smart packaging innovations brings consumer benefits and helps achieve brand success through four main characteristics: affordability, functionality, sustainability and visibility each characteristic being linked to a smart packaging solution.

Therefore the paper concludes that visionary techniques of food packaging and labeling are a must have in today's emerging markets and must bring functionality to the packaging industry and ensure consumer safety and satisfaction.

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THE NEW GENERIC TOP LEVEL DOMAINS – REAL INNOVATION OR JUST ANOTHER GOLD RUSH?

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Abstract

The internet organisation ICANN authorised an unprecedented expansion of the domain name space in 2011. Domain endings like .photo, .wine, .love, .berlin, .hamburg and .bank are now available for registration. The article tries to determine if this extension does have a positive effect on competition and represents a real innovation. The registration numbers in different domain endings are evaluated. The main finding is that the extension did not lead to substantial innovations – although it offers new innovative domain name combinations. Rather it increased the value and the registration numbers of .com domain names. The new domain extensions have also become a playing field for investors and speculators.

Keywords

Innovation, competition, domain name, internet.

JEL Classification

L10, L86

Introduction

People and organisations that intend to register an internet domain name have made the experience that it is difficult to register a domain name that fits their requirements as the desired one is often already registered by somebody else. Especially, meaningful domain names in the popular domain ending .com – that are not already registered - are hard to find.

The Board of Directors of the internet organisation ICANN (Internet Corporation for Assigned Names and Numbers) authorised the launch of an unequalled domain expansion program in 2011. This expansion has changed the domain market significantly. New domain players have entered the market and the entrenched participants try to maintain their market shares. Also, the new endings offer innovative options for marketers, companies, individuals and organisations. A website with the address www.myname-academy.com is not so concise and easy to remember as a site www.myname.academy.

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Domain names fulfil not only a technical function. They are also traded as an object of value. The purpose of this article is to analyse the development of the market. It will also determine if this large increase in domain extensions is a real innovation or just satisfies the profit seeking of certain stakeholders.

1. The development of the domain market

Domain names represent – from a technical point of view - addresses on the internet. The domain name system (DNS) ensures that servers, PCs and other devices connected to the internet can be reached worldwide. It functions like a telephone book that translates domain names into computer readable, numerical IP addresses (and vice versa).

Besides country specific domain name endings like .de (Germany), .ch (Switzerland) or .ro (Romania), only 22 generic domain extensions like .com, .net, .info, .org or .edu existed until the end of 2013. The rightmost element of a domain name is formally termed Top Level Domain (TLD) – in the case of the web address *www.ase.ro* the TLD is .ro.

In order to extend the domain name space, ICANN opened an application round in January 2012. The extension of the domain name space was seen by ICANN as fostering choice, innovation and competition (ICANN, 2011). The organisation received a total of 1,930 applications for the so-called new generic Top Level Domains (new gTLDs).

ICANN has so far delegated more than 930 new gTLDs (March 2016). A TLD is delegated to a registry (operator) who manages the authoritative database for all registered domain names of its TLD. Not all TLDs are publicly available for registration as some companies applied for so-called brand TLDs that allow the company to register domain names only for its own organisation. Companies like Philips, Jaguar, Audi, SAP and Sony applied for their own brand names as a TLD – e.g. the endings .audi and .philips.

Domain names are not only technical identifiers, but also real estates in the virtual world. In the 1980s and early 1990s the registration numbers were still moderate and many names available for registration (the very first domain name was registered in 1985). Only little by little it developed into a gold rush that led to a still enduring boom for domain names (Huber and Dingeldey, 2004).

The vast enlargement in the number of TLDs could increase especially the value of the domain ending .com. Building more side streets enhances the value of real estate in main streets according to Karl Ulrich of Wharton University (Wharton, 2014).

Amazon applied for 76 and Google for 101 domain extensions respectively. Worries about a domination of the internet market place by a few powerful players in the future have come up as they did not only apply for their brand names like .kindle, .amazon or .google, but also for generic endings like .app, .book, .shop and .movie (Corwin, 2012). Fears exist that Google and Amazon not only dominate ICANN auctions (for TLDs with more than one applicant) with their deep pockets, but also that Google may favour its own domain endings in search results (Corwin, 2012).

According to some experts, the majority of domain names in the new gTLDs were registered by investors and speculators. The domain expert Rick Schwartz estimates that 98% or more of the domain names in the new gTLDs were registered by speculators. He mentions that the ratio concerning .com is different – here, 98% of the domain names were registered by businesses to establish an online presence (Schwartz, 2015).

This would lead to the assumption that the growth in the new domain endings can be attributed to a large extent to speculation and only to a smaller extent to a real acceptance of the new gTLDs.

The hundreds of new gTLDs have also been controversial from the trademark and cybercrime perspective. It is costly for companies to secure and defend their trademarks in hundreds of different TLDs and also governments and law enforcement agencies are alarmed by the additional burden that this large number of new TLDs poses in fighting different cybercrimes (Kruger, 2015).

1.1 Research methodology and goals

Scientific literature about the internet domain name business is very rare and mainly focused on ICANN's governance and policy issues. The topics of competition and regulation in the domain name business are mainly discussed in articles outside the academic sphere.

The registration numbers in several TLDs were analysed from different angles. The percentage of parked domains was also taken into account. It will indicate inter alia how many websites are active and is an indicator of possible speculations in the new gTLDs. The first new gTLDs were introduced in 2014. Therefore, the long-term effects cannot be appraised yet. However, some trends are visible.

1.2 Results

Undoubtedly, the expansion of the domain name space led to a wider choice in domain extensions. New gTLDs like .mba, .coffee, .photo, .webcam, .shop, .love, .tickets, .news, .legal, .management etc. offer innovative and creative possibilities for marketers, businesses and individuals.

If the domain name policies of "sensitive" TLDs (e.g. .bank or .tickets) are restrictive, it can increase the security of transactions on the internet. If only verified banks are allowed to register a .bank domain, consumers could be relatively sure to reach only a bank – and not a site that pretends to be a bank. But this tight regulation usually involves that the registration numbers in this TLD will be low as the number of banks is limited. The prices for these gTLDs are generally higher due to the extra security layer and the reduced economies of scale (although economies of scope might exist if the same registry offers also domain name registrations in other TLDs).

Nevertheless, businesses might have problems finding suitable domain names as many of the popular ones are often already registered in the new gTLDs soon after they become generally available. Out of the 15.6 million domain names registered in the new gTLDs, 75% were parked on 8 March 2016 (nTLDstats, 2016). These domain names are not in active use. Reasons for this can be manifold. The domain registrant might keep the domain for a later project or tries to earn money by placing ads on websites with his domain name. However, it can be suspected that many of these domain names were registered by speculators and investors who intend to sell or more generally monetise their assets.

The graph below (fig. no.1) displays that the boom for .com domain names does not show any signs of a downswing. On the contrary, .com became now of interest especially for Chinese investors which even urged VeriSign to warn investors in a filing to the US Securities and Exchange Commission in November 2015 (VeriSign, 2015).

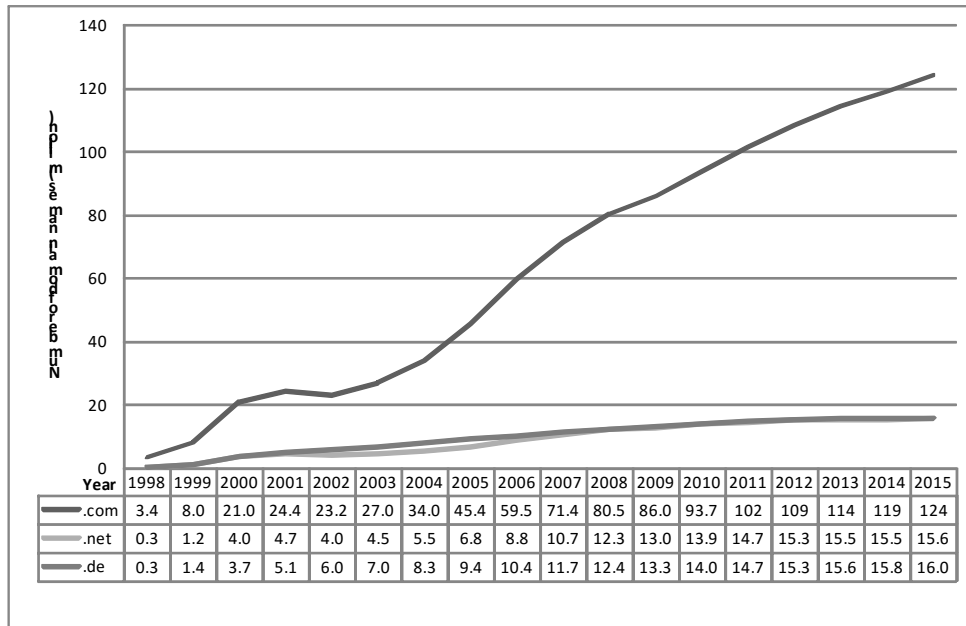


Figure no. 1 Development in the number of .com, .net and .de domain names[†]

Source: for .com and .net: ICANN (2001-2015) and Zooknic (1998-2000); for .de: DENIC (1998-2015)

As can be seen, domain endings like .de or .net have experienced a more sound and organic growth, grow quite in parallel and enjoy similar registration numbers.

The introduction of new domain endings could so far not stop this boom in .com domain names. It supports the assumption of Karl Ulrich that the new domain endings even increased the value of .com (Wharton, 2014).

On 31 October 2015, 123.8 million .com domain names had been registered. The dimension of .com in comparison to the other domain endings is shown in fig. no. 2. It is visible that the .com domain ending is far ahead of any other TLD. The .tk domain (on second place) is only that prominent as the majority of these domain names were registered free of charge and therefore cannot be taken as a relevant reference. The only new gTLD that was able to reach the Top 20 table so far is the TLD .xyz.

[†] The .com and .net figures for 1998-2000 are based on data of the following year (early January), all 2015 figures are based on 31 October 2015.

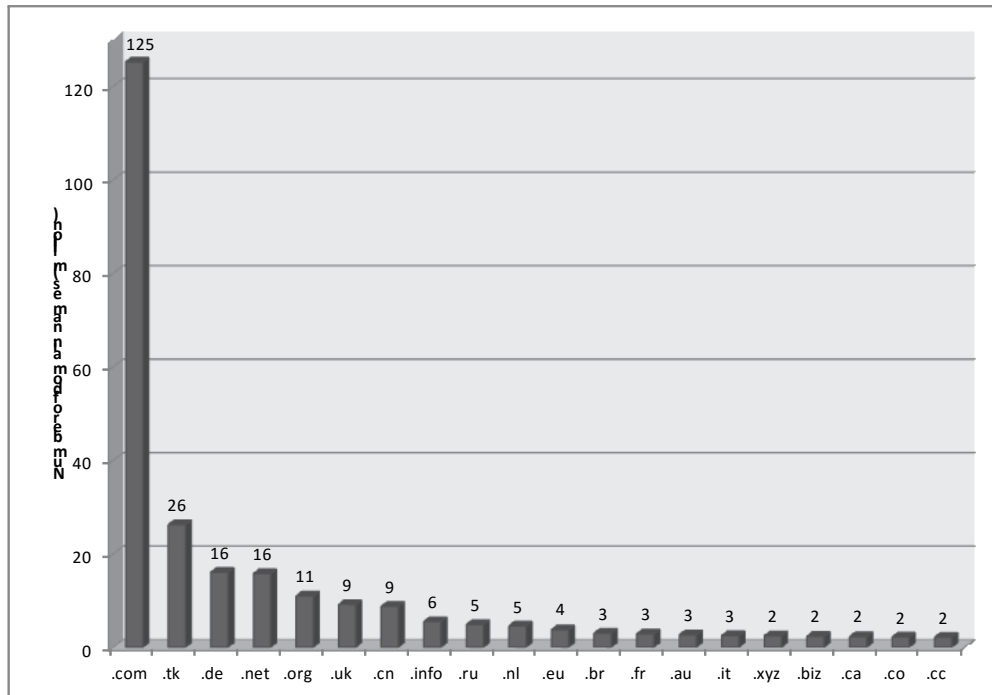


Figure no. 2 TOP 20 TLDs overall[‡]
Source: Domaintools.com, 2016

The registration numbers in the TOP 20 new gTLDs are shown below (table no.1). The .xyz domain ending is the current leader. Many domain registrars ran campaigns and provided promotional offers for .xyz. Therefore, the figures have to be treated with care as it needs to be seen how the registration numbers will develop once the registrants have to pay the “full” price without any promotional discount (domain names are usually paid for on a yearly basis). The case of .berlin displays that the first euphoria can vanish quickly. The general availability of .berlin started in March 2014. In the first hours after .berlin was generally available about 30,000 domain names were registered. In December 2014, .berlin reached 155,200 domain names – also with the help of promotional offers. On 30 November 2015 this number had dropped to about 58,000 domain names (ICANN, 2015).

[‡] Data as of 22 February 2016.

Table no. 1 TOP 20 New gTLDs §) **)

No.	TLD	Domains	Share
1	.xyz	2,554,008	18.0%
2	.top	1,584,375	11.2%
3	.win	774,218	5.5%
4	.club	715,886	5.1%
5	.wang	649,870	4.6%
6	.网址	346,276	2.4%
7	.science	342,346	2.4%
8	.bid	295,471	2.1%
9	.red	285,086	2.0%
10	.link	284,684	2.0%
11	.ren	240,512	1.7%
12	.party	228,166	1.6%
13	.click	204,421	1.4%
14	.online	180,421	1.3%
15	.loan	176,254	1.2%
16	.website	156,540	1.1%
17	.date	143,588	1.0%
18	.site	139,474	1.0%
19	.space	132,624	0.9%
20	.work	101,436	0.7%

Source: ntlstats.com, 2016

The goals of companies like Amazon and Google are not obvious yet. Google managed for example to gain the domain ending .app for USD 25,001,000 during an ICANN auction. Amazon acquired the TLD .buy for USD 4,588,888 and the TLD .spot for USD 2,200,000 (ICANN, 2016). Auctions have been used by ICANN as a last resort in the case that several equally eligible applicants exist for one domain ending that could not reach an agreement among each other.

Conclusion

The new gTLDs provide innovative and more target-oriented domain extensions for marketers, businesses and individuals. Nevertheless, the .com TLD is still THE domain name extension. The registration numbers for .com domain names still rise significantly despite the fact that many meaningful names are already registered. VeriSign as the registry for .com domain names is still dominant on the market and possesses market power. Currently, no other TLD is able to threaten VeriSign's position in .com. ICANN also does not seem to hold any intent to regulate the market in order to bridle any significant market power.

§ “网址” stands for web address or website in Chinese.

** Data as of 23 February 2016.

The numbers in many new gTLDs seem to be inflated. Investors were eager to register domain names in the new domain endings. Sales promotions in the new domain extensions supported this trend. Several new gTLDs like .berlin have already experienced a downward trend. For some TLDs/ registries it will be hard to break even and to survive. It can be expected that the market will consolidate. Larger registries will take over smaller ones.

Overall, the new gTLDs are no real innovation and also did not lead to an increased competitive pressure for VeriSign so far. The pressure to introduce the new gTLDs came inter alia from stakeholders that were interested to make a fortune. In this sense the introduction has been like a virtual gold rush. It needs to be seen how the long-term development will be for the new gTLDs and who will be the winners and losers in the market.

It is up to further research to determine the nature of the parked domain names. Are they mainly registered by speculators or by businesses and individuals keeping them for a later project?

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REAL ESTATE TAXATION SYSTEM IN ALBANIA AND CHALLENGES FOR A EUROPEAN FISCAL SYSTEM

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Abstract

The fiscal system is the main source of income for the government to fulfill its functions. Taxation has a significant impact on the economic development of a country, contributing on employment, public policies, welfare of citizens etc. European countries are still trying to overcome the problems caused by the financial crisis, by using mechanisms with the least possible negative social impact. The Albanian policymakers and economic researchers should understand and adapt these new opportunities, where the harmonization of the central and local government is a crucial requirement.

The taxation of property is still facing several problems, such as: the formalization of the real estate, institutional cooperation, the determination of the taxable amount, the levying process, the role of tax's agent, legal and institutional regulations etc. This article aims to modestly contribute to the improvement of the property taxation system as an opportunity to increase revenues of the local government budget. Therefore we will discuss the problems faced by the property tax system from the transition economies point of view and comparing to the developments in the Eastern the Western countries of Europe.

Keywords: property tax, local government, tax base, buildings, agricultural land, public policy.

JEL Classification: H710, H7, H2, R22, Q15, G380

Introduction

The taxation of property is not a new element of the fiscal system, but it is a concept closely related to the concept of state and the execution of its functions. The 25 years of transition in the Albanian economy are associated with legal problems of the property alteration and the role of state in a market economy. The process of economic decentralization and the recognition of property started after the '90s. Several public enterprises were privatized, but this process was not accompanied with the legal transfer of ownership as no ownership certificates were distributed to the final owners of the property.

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This phenomenon led to the illegal fragmentation of property, especially in the urban and coastal areas. The process was characterized by informal financial transactions done mainly on cash basis, and the offices of property registration was not involved in the transfer of ownership. Consequently no benefits were received by the state budget. Even though this process started in the first years of the open market economy, these properties are still informally rented, excluding the application of the tax on rental income.

Despite of the efforts made for the registration of the real estates, neither the local government nor any agencies have a complete database or register of real estate due to the urban informality which has accompanied the process of legalization. Almost all of the country's territory is in the process of urban planning. For purposes of this process, the first step is to assess the current situation, which will serve as the basis for the decision-making and improvement of the situation. The acceleration of this process with the participation of the community, the registration of all the existing real estate, the check of the data accuracy and information exchange between all stakeholders (the local government, registration offices, tax authorities, urban development offices etc.) require accurate and immediate actions and the separation of responsibilities among actors as well.

1. Property tax base in Albania and its evaluation methods (brief comparison with European countries)

The evolution of the legal package in our country in line with the social-political development has brought continuous changes on the Law " On immovable property taxes in the Republic of Albania". After the '90s, the economic decentralization was accompanied by the first fiscal package with five important laws in the field of fiscal legislation. The objective of this session of the paper is the identification and analysis of the legal reforms on the immovable property (real estate) tax in Albania.

The deep reformation of the law on real estate tax after the change of the political and economic system has started in 1994 as a consequence of the development of the tax reform in the Republic of Albania. The first law on the property tax is the Law no. 7805 dated 16.03.1994 "On property tax in the Republic of Albania", which stipulated the two types of this tax: (I) the tax on buildings and (II) the tax on agricultural land. The implementation of the law started in 1995 and the Ministry of Finance was the responsible authority for the tax revenue forecasts and for the distribution of tax sources to the central government (40%) and the local government (60%). For the first time after the '90s, the tax was defined in Albanian Lek (ALL) per m² of the construction area. For real estate tax purposes, constructions were classified in five categories, where the most important ones were: buildings for commercial activities (100-200 ALL/ m² per year), residential buildings (6-30 ALL/m² per year), public buildings (2 ALL/m² per year).

In 1998, the administration of the property tax revenue was completely transferred to the local government units, while the former electricity enterprises continued to play the role of the agent and benefited 5% of the income collected. The Law 8982 dated 12.12.2002 "On the local tax system", classified the property tax as local tax and the local government units were given four years in order to prepare the accurate administration and infrastructure to manage this tax. In the Law No. 9632 dated 30.10.2006 "On the local tax system" (article 9, paragraph 2 - Types of taxes), the property tax is determined as local tax classified in two types: (I) tax on buildings and (II) tax on agricultural land, both taxes were subject to the above law.

Subjects of taxation are all physical and legal persons, domestic or foreign, owners or users of real estate in Albania. Taxes are calculated as annual obligation of taxpayers. The changes of the law amended in the law No. 10117 dated 23.04.2009, determined the minimum categories of the tax base and the levels of tax indicators for each category for the tax on buildings and agricultural land (table no. 1). The real estate tax is currently levied on the area of the property (m² and hectare). The tax base on buildings is levied based on the building area or its integral parts measured in m², while the tax on agricultural land is set on the land area measured in hectare. Taxes are calculated and paid on annual basis and revenues from this source are 100% managed by the local government units.

Table no. 1 Minimum reference levels of tax on buildings for municipalities

Building categories	Zone I	Zone II	Zone III
	ALL /m ²	ALL /m ²	ALL /m ²
I. Residential buildings			
- Constructed before 1993	15	10	5
- Constructed during and after 1993	30	12	6
II. Other buildings			
- For commercial activity and services	200	150	100
- Others	50	30	20

Source: Local revenues Manual, 2011

Notes:

(1) Zone I: Municipalities of Tirana and Durres. Zone II: Municipalities of Vlore, Fier, Saranda, Pogradec, Korce, Elbasan, Berat, Lushnja, Gjirokastra, Shkodra, Lezha and Kavaja . Zone III: All other municipalities (around 52 other municipalities).

(2) In rural areas (communes), the minimum level of tax for each building category is half the level of the corresponding minimum indicator of the tax set in the municipalities where the commune is located.

Despite the improvement of the legislative framework on tax administration, the real estate tax contribution in the budget remains in low levels compared to the contribution of the total tax revenues in the budget and GDP. Local government revenues account for about 4.5% of the tax revenues or 4% of the budgeted revenues. Referring to the year 2013, 59% of local government revenue derived from the income tax on small business, 23% from local taxes and the rest of 18% from the property tax (buildings).

Considering all the above analysis, we can conclude that:

- Real estate tax revenues are in very low levels.
- The tax base on real estate categories is very low, especially the tax base set on agriculture land.
- The administration process of the real estate tax remains critical. It is evaluated that this tax is not collected more than 40%.

Based on these considerations, in the context of drafting the 2014 budget after the economic crisis and the need for additional financial sources, several changes were made in the building tax base.

The new Law no. 181/2013 dated 28.12.2013 "On some amendments to the Law No. 9632 dated 30.10.2006 "On the local tax system ", changed" determined the reference levels of property tax on buildings as represented (table no. 2) below:

Table no. 2 Minimum reference levels of tax on buildings for municipalities

Building categories	Zone I	Zone II	Zone III
	ALL /m2	ALL /m2	ALL /m2
I. Residential buildings			
- Constructed before 1993	15	10	5
- Constructed during and after 1993	30	12	6
II. Other buildings			
- For commercial activity and services	400	300	200
- Others	100	60	40
III. Owned buildings or buildings in use, in territories approved as touristic villages	400	400	400

Source: Law nr 181/2013, dated 28.12.2013

Notes:

(1) Zone I: Municipalities of Tirana and Durres. Zone II: Municipalities of Vlore, Fier, Saranda, Pogradec, Korce, Elbasan, Berat, Lushnja, Gjirokastra, Shkodra, Lezha and Kavaja. Zone III: All other municipalities.

The reference tax levels are valid for buildings in urban areas (municipalities), as well as buildings in all areas (urban and rural) of Section III of the table "Owned buildings or buildings in use, in territories approved as touristic villages".

(2) In rural areas (communes), the minimum level of tax for each building category is half the level of the corresponding minimum indicator of the tax set in the municipalities where the commune is located.

(3) For buildings owned by construction companies, which are intended for sale, but that are still unsold, the tax will be set based on destination of use of the building.

- Mortgaged residential apartments will be subject to tax on buildings under the category "Residential buildings".

- Mortgaged buildings for commercial activity will be subject tax on buildings under the category "Other buildings for commercial activity and services".

By comparing the above situation of the fiscal system in Albania with other European countries, we can conclude that:

- In most countries of the region but also in countries of the European Union, real estate includes buildings, land and agricultural land.
- The real estate tax base is set on the market value of real estate, which is considered fair, effective and efficient, more accountable and with on society and the realization of revenue.
- The change from the tax based on the physical features of property to the tax base based on the market value is result of a long historical process and is conducted through several steps that should be taken into account in the developments in Albania.

2. Suggestions for increasing the effectiveness of the real estate taxation system in Albania

The above methods of real estate taxation are recommended to be used in the future in Albania as well. This is a necessity dictated by many factors, and above all by the process of integration of our country into the European Union.

The problem of transfer of real estate taxation from the current system to the taxation of value has a series of problems among which the tax base is the most significant. Will the value of the tax base be linked to the value of the capital market or the physical characteristics of the property? If the real estate markets are fairly consolidated, this is a strong reason to link the taxable values with market values. But if the real estate markets are not complete and are not reasonably well functioning, the best approach is to connect the taxable value (tax base) with the characteristics of the property, such as size and location, etc. In Albania the real estate tax base is the land and buildings (land and improvements). The tax value is determined by multiplying the surface with the tax per m² in the case of buildings or hectares in the case of land. Taxpayers are all physic and legal persons who own such properties.

The tax is not uniform across the country, but it is divided into three levels according to the law. Exemptions from this tax are stipulated into Law no. 9632 dated 30.10.2006, Article 22 Paragraph 4, which states that "the state-owned and local governance units properties used for nonprofit purposes, residential buildings used for non-liberalized rent, buildings used by religious communities are exempt from the tax". Item 6 of this Article stipulates other exemptions from tax payment, which are foreseen in separate laws (work invalids, Albanian veterans of the war against enemy, blind, paraplegic and quadriplegic people).

As seen in Albania and the adoption Law No. 181/2013 dated 28.12.2013 "On some amendments to Law No. 9632 dated 30.10.2006", "On local tax system" value of the tax base is not linked to the value the real estate market but the physical property characterized as area in square meters or in hectares and location. Sometimes the increase in value of real estate is the result of land-use decisions taken by local government, such as granting development rights on land that was formerly agricultural land. In other cases, the value increase is simply a result of population growth. The concept of "the increased value size" is that local governments should be able to define a part of the growth of value of private real estate, to influence them to pay for public services brought as a result of the enhanced . Such a situation makes it necessary to shift from taxes based on physical characteristics such as surface, into the tax based on the value of the real estate market. After this change citizens would expect to see the impact of taxes that they pay for a better infrastructure, improved services and other social improvements in the community. When this is done and they see improvement in their lives, they are more willing to pay taxes and support local officials.

The long-term success of real estate tax will depend largely on the public perception that tax is fair and that the revenue collected from taxes is resulting in improvements to infrastructure and local services. Another potentially important attribute of real estate tax is that, when designed appropriately, revenues tend to increase as the local economy grows (Gjika and Shutina, 2003). If the tax base of the real estate is set on the value of the property, then standards on the valuation of both land and real estate should be determined for tax purposes. What standard should be used to determine the value (market value, the annual rental value, etc.)? To give answer to this question, several administrative issues should be considered:

- What skills and training will be required for staff in order to preserve the value of legally required levels?
- Which level of government and which agency should be responsible for maintaining accurate taxable values?

- Who will provide technical and financial resources to create and maintain acceptable assessment practices?
- Will the assessment practices be monitored and evaluated regularly in order to ensure the integrity and accuracy of the process? If so, by whom?

Part of the success of the system of real estate taxation is collection of the tax. Success requires political gathering, an administration capable and trained, correct application of the law, judicial support and sound administrative practices etc.

Administrative key issues in this area include the following:

- What agencies (institutions or entities) will be responsible for collecting the tax?
- How will tax bills be distributed?
- Where and how they will collect taxes? This is an important point because it affects compliance costs for taxpayers.
- What process will be used to handle complaints?
- What sanctions will be used in cases of non-payment of taxes?
- Will be supervision by other agencies or other levels of government?

Thoughts on the issues that have been raised above and dealing with efficiency in the collection of real estate taxes will be subject to a separate study.

Despite changes in the law approved recently for the way the taxation of real estate which constitute a novelty, yet the level of taxation of real estate is very low. If we compare the level of tax on buildings m² for buildings constructed after 1993 in Tirana with 30 ALL/m², i.e. a residential building with an area 100 m² paid 3,000 ALL per year, with fee-based the average market price of the buildings of these years is around 99,928 ALL/m² (authors' calculations).

Table no. 3 Data on the apartments market in city of Tirana, 2015

No.	Zone	ALL/m2 usable space	No.	Zone	ALL/m2 usable space	No.	Zone	ALL/m2 usable space
1	1/1	98,000	12	5/1	190,000	23	8/3	72,000
2	1/2	80,000	13	5/2	131,000	24	9/1	130,000
3	2/1	187,000	14	5/3	107,000	25	9/2	100,000
4	2/2	135,000	15	5/4	80,000	26	9/3	75,000
5	2/3	95,000	16	6	65,000	27	10/1	145,000
6	2/4	110,000	17	7/1	120,000	28	10/2	140,000
7	2/5	80,000	18	7/2	100,000	29	10/3	100,000
8	3/1	75,000	19	7/3	85,000	30	11/1	87,000
9	3/2	60,000	20	7/4	65,000	31	11/2	75,000
10	4/1	70,000	21	8/1	110,000	32	11/3	70,000
11	4/2	60,000	22	8/2	100,000			

Source: Manual No. 2, Council of Ministers, dated 6.8.2014

The fee 0.1% of the market value applied in most European countries, for the same area of the building value tax is 9,992.80 ALL, more than triple the value of the first, the indicator turns on a fee 0.03% (table nr. 3). In zone II and zone III this indicator reduced by you. In the region, this indicator is about 1% of the value of the building and in the EU countries even higher, so it is imperative to improve the management of real estate tax).

We think the process should be done in several steps:

I. The consolidation of the current system through the collection of taxes from all subjects. Increased inter-institutional cooperation to formalize real estate and creating a register of real estate tax and a land register for agricultural land.

II. Use of revenue from this tax on infrastructure and other public services by increasing transparency and its impact on awareness of the taxpayers it is going to improve services for them. The transition from the current system of taxation base on the surface, in the manner of taxation of real estate value as a modern way of managing real estate taxation, based on the experience of the European Union.

One point of view is that taxes related to a particular property should be commensurate with public services that are used by those who own the property. An alternative point of view is that more valuable properties tend to be controlled by people with higher income and greater capacity to pay taxes. Administrative expenditure monitoring system of real estate taxation is somewhat unclear. A study has suggested that the cost of administering the annual tax on immovable property shall not exceed four percent of the revenue collected (Gallagher, 2004). It is probably more important to adopt a method of sustainable for a particular context and monitor report time.

The effectiveness of a tax on land and property is measured by the increased revenues in sufficient levels to fund the target of public services.

For a system of real estate taxation in order to work properly, there must be a separation of administrative responsibility between the levels of government.

Conclusions

The management of real estate taxation is a significant problem that must be taken into account for the growth of local government revenue. This problem is of a special importance in the current economic developments, where the economic crisis is still present in our country and will serve as an opportunity though modestly to meet the needs of liquidity.

Taxes collected from real estate should be used for expenditure on infrastructure in the form of investment or expenditure for its maintenance as a sensitive element, linking better the taxes paid by the community to the benefits in return of this payment.

The modest changes made to the law on local tax system for some changes in rates of real estate tax for buildings are reasonable and without significant impacts on the tax burden to taxpaying entities.

The amount of revenues collected by local government authorities from real estate taxes is very low compared to the amount forecasted in the budget each year as well as the specific weight in GDP. There is a large fiscal evasion in the collection of real estate taxes from buildings of all types, but especially from residential buildings and also the agricultural

land tax. The efforts made by local government units in this regard so far have been low and often politically influenced.

The tax rate on residential buildings is currently very low and regular payment of them must be worth more to the effect of tax morality (awareness of the taxpayers) considering that 25 years have passed since the process of democratic change. The taxpaying should be seen as a necessity for the benefit of public services.

Despite the shortcomings of the current taxation system of real estate, the most fundamental task remains its consolidation. The new territorial reform of the country has increased this necessity.

The sanctions imposed for non-payment of this tax are almost nonexistent. Sanctions, their calculations and collection should be clear and applicable.

Recommendations

The consolidation of the current system of real estate taxation is a complex process that should be achieved in several steps, emphasizing the followings:

Increasing the efforts and performance of the public administration of local government in terms of real estate tax collection, predicting a new report of this tax collection.

Increasing inter-institutional cooperation to formalize real estate and establishing a fiscal register of real estate tax and a cadastral register for land.

Establishing a specialized national unit that will help in the process of formalization of the immovable properties.

Using the revenues collected from this tax on infrastructure and public services by increasing transparency and awareness that this tax is going to improve the public services offered by the central and local government.

The tax base should be the market value of the real estate and the tax rate should be determined in percentage of the given market value considering building destination. The market value can be changed every 5-10 years and can be determined by Offices of Real Estate Registration. The set of the tax should be product of a broad discussion taking into account the participation of interest groups and political decision-making.

The most important issue that should be understood by policymakers is the fact that the management of the real estate taxation system should be evaluated better than to date. This could also involve the further expanding of the tax base, including other real estate exempt by the current law in force.

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MODELLING URBAN ECONOMIC DEVELOPMENT THROUGH HERITAGE TOURISM SPATIAL ANALYSIS

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Abstract

Sustainable development of urban areas tends to be one of the most important preoccupations for national authorities. Various economical and environmental factors, the technology, the socio-demographical traits of the population, the investments and business types in the area are just a few elements which may influence the development or the decay of a city. For understanding this complex phenomenon, and for modelling the urban growth in terms of citizens' welfare, social, environmental and cultural values preservation, different theories have been built along time. The present paper aims to bring in discussion a nowadays opportunity risen as a result of our advanced digital society – spatial analysis. Thus, by identifying and by measuring economic and behavioural attributes in terms of heritage tourism, by mapping those through GIS instruments, strategic decisions regarding urban development may be taken more correctly and more easily. As a result, this article presents a model of spatial analysis for Baia Mare city in terms of heritage tourism and economic development, outlining directions for urban development optimization.

Keywords

Heritage Tourism, GIS, Spatial Analysis, Urban Regeneration, Business

JEL Classification

L86, O12, O18, P25, R12

Introduction

The issue of sustainability is one of a growing importance in all sectors of activity and it has to be a priority when planning for urban regeneration. Very often, natural resources are not equally spread across a country's territory; from various reasons, infrastructure may be developed in some parts, while in others it may be damaged; tradition, history and natural landscape add personality to some places, while others may lack any distinctive marks. Due to those, in the same country, some regions become more economically developed, hence more attractive for the population, than others. In this context, urban areas are the most sensitive as companies and investments move there where business contacts and opportunities thrive, there where infrastructure, resources and know how facilitates their

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development. Urban agglomerations often attract more businesses, more investments and more people migrating from the poorer areas with fewer development perspectives. Thus, while some urban areas become over populated with local inhabitants and visitors, others turn into desolated and inert places that lack the dynamism and the prosperity brought by an affluent business environment requiring a large number of motivated employees. Thus, while excessive agglomerations endanger heritage assets, environment and the socio-cultural particularities of the area, depopulated cities lack both the financial and the human resources that would allow them to revive the local economy and to preserve the socio-cultural specificity. In order to balance these regional discrepancies, heritage assets should be taken into consideration as part of regional and national socio-economic policies, as heritage is one key driver in tourism sector development (Sabou, 2015). In the same time, acknowledging the importance of heritage tourism opens new perspectives for reaching the sustainability objectives.

Finding the solutions for maintaining the balance between economic developments, a good socio-cultural environment and environmental protection is a great challenge for national, regional and local authorities. The manner in which each authority deals with this issue is reflected in the found and applied solutions. However, establishing the patterns for various economic, environmental, social and cultural phenomena that may influence the development of an urban area is one of the key points in understanding the mechanism of growth. Spatial analysis of data linking these variables with their geographical occurrence may solve complex issues related to urban infrastructure development, investments priorities, environmental protection and economic expansion (Childs, 2004). By taking into account the spatial localization of the studied phenomenon, it measures relationships and predicts future transformations.

1. Review of the scientific literature

Urban regeneration means solving the urban problems through long term strategies, the ultimate goal being the improvement of the economic, physical, social and environmental conditions (Roberts, 2000; Alpopi and Manole, 2009; Tsou et al, 2014). Exploiting the heritage of the cities may be a way out to revitalize the economic, environmental and social functions of urban areas, by promoting sustainable heritage tourism policies.

The heritage of one nation brings out the tradition, the history and the values of the society. Taking into account the advantages of exploiting the heritage and its impact on the economic sector, the real challenge for authorities would be to answer to the following questions: what are the main priorities when choosing the heritage assets to be preserved and included in the development strategies of a city and what would be the social, economical and environmental effects of their choices. The scientific research deployed in this area indicates various models aiming to detect patterns of factors influencing the regional development through heritage tourism. Despite some differences, most of these models take into consideration the changes heritage tourism produces in the daily lives of the residents, by monitoring the touristic demand statistics specific for the area and the development of infrastructure and of certain business fields.

Designing strategies for urban regeneration through heritage tourism involves acknowledging the need for revitalization of urban areas through specific key points:

- Rehabilitation of historical/heritage areas

- Improving life conditions in residential areas, especially in those prone to over traffic and industrial pollution or to an undesired isolation (i.e. poorer marginal quarters which lack public transport, which have very few schools, shops and entertainment places in the surroundings, have damaged roads and neglected landscaping etc);
- Rehabilitation of the public spaces according to the proper architectural style that would harmoniously integrate within the heritage specificity urban authorities want to promote;
- Rethinking urban infrastructure from the point of view of tourists flows, residential impact and business development support.

In order to achieve these objectives, the whole social, economical and environmental context has to be considered. Specific to our digital society, Geographical Information Systems (GIS) applications have proved to be most useful tools for this purpose, because they gather large amounts of information from various areas of interest and display it in a visually attractive manner throughout layers and dynamic correlations (Brueckner and Tetiwat, 2008).

Modelling and interpreting these correlations are the main attributes of spatial analysis applications. When planning for investments with the purpose of developing the heritage tourism, the economic component is vital. As the future flows of incomes generated by this activity should justify the expenses made by authorities and private environment, as well as the short-medium term inconveniences the population has to experience due to public works and changes in infrastructure, it is vital to map the spatial distribution of economic values linked to heritage. Use value and non-use value components don't show every time similar patterns. For a better understanding of these and for obtaining a complete picture of heritage economic values it is recommend to displayed them separately, s well as combined. In this way, mapping process allows the identification of all economic values from the entire urban and surrounding areas.

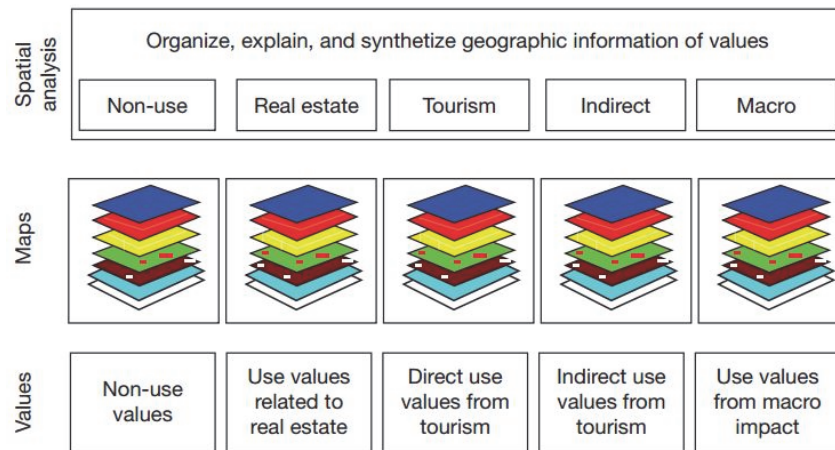


Figure no. 1: Geographic information about values

Source: Ost, 2012

The whole process of explaining and synthesizing geographical information in terms of economic values requires the identification of patterns, connections and the relationships between indicators from all value categories (see Figure no. 1), followed by a thorough modelling. (Ost, 2012).

Spatial analysis is used for solving complex problem and for better understanding of a phenomenon (where and what is occurring). Spatial analysis allows studying about the various characteristics of places and the relationships between them (Harder, 2015).

For a better understanding of the factors influencing the strategies of urban development through heritage, each spatial characteristic may be linked to supplementary information (i.e. when rendering the public transport system, a bus number may be connected with additional details regarding its schedule and the stations it stops; when presenting the cultural attractions of a city, a museum mapped may be linked to its program etc). This additional information has to be collected and compiled. Also, media information (images, video and audio files) has to be stored in the databases and to be linked to the spatial attributes it belongs to, as it may help understanding the phenomena without travelling at the very spot (i.e. when trying to understand why there is always traffic jam at some crossroads, a video file accurately displaying these crowded junctions may reveal the problem while analysing it inside the office). Another excellent reason for linking spatial data with media files describing the reality from the terrain is the possibility to further use the same GIS databases to create touristic interactive guides designed to enhance visiting satisfaction (Noguera et al., 2012)

The mapping of heritage tourism direct use value it based on several indicators. Even if admission fees for visiting heritage assets are the most accurate data for calculating heritage direct impact upon local urban economy, it is helpful to collect and analyze other indicators for a better understanding of the true values provided by tourism (Ost, 2012):

- Carrying capacity
- Access to the heritage
- Number of visitors
- Availability of audio-tours, smart phone applications, souvenir shops, parking, guided tours, public transportation
- Tourists behaviour
- Heritage related events organized in the area.

Mapping has the role to ensure a better overview of those indicators, the dynamic layers of the map revealing the generated impact of heritage tourism upon the city and helping thus to making the best strategic decisions for future urban development.

2. Methodology of research

Creating a model for urban development of Baia Mare city, based on the spatial analysis of heritage tourism impact, requires the following steps:

- Choosing the base map of the area and digitalizing it, taking into consideration the scale required for the following analyses
- Gathering all information of interest and digitalising it, by taking into consideration the resolution and the scale of the base map
- Geo-referencing the layers for the information collected - each layer corresponding to a category of information, by taking into account the coordinates system and the projection system used for the base map.

- Underlining patterns that would render the connections between the various layers of the map
- Analysing the patterns and modelling alternatives for urban development by modifying variables and predicting their behaviour.

In order to perform these steps, Ocad, Global Mapper, Mapinfo and ArcGIS software that allows data visualization, mapping, adding and editing were used. These combined used applications offered the tools and the support for designing the spatial analysis of Baia Mare heritage surroundings and for developing dynamic maps of the area. The obtained thematic maps are in close relationship with economics metrics as, through GIS, it is possible to monitor the heritage assets from an area, to assess their economic impact, to analyze the spatial distribution of various clusters, as well as to follow their evolution in time.

3. Results and discussions

Nowadays heritage assets of Baia Mare city are, in fact, important historical buildings that were once the core of the old city. The newer streets, bridges, parks and modern buildings were gradually built around this unchanged architectural core, the so called by the local citizens: “old centre”. As such, the maps presented in this case study focus on this part of the city containing the vast majority of the heritage assets which are in strong relationship with businesses (hotels, restaurants, souvenirs shops), with public transportation infrastructure and with public institutions. The map shows connections between heritage and the direct use values resulted from heritage tourism. For a better understanding of tourists’ behaviour in relation with heritage assets (see Figure 2), the map presents the most crowded walking routes (yellow colour was used for indicating these).

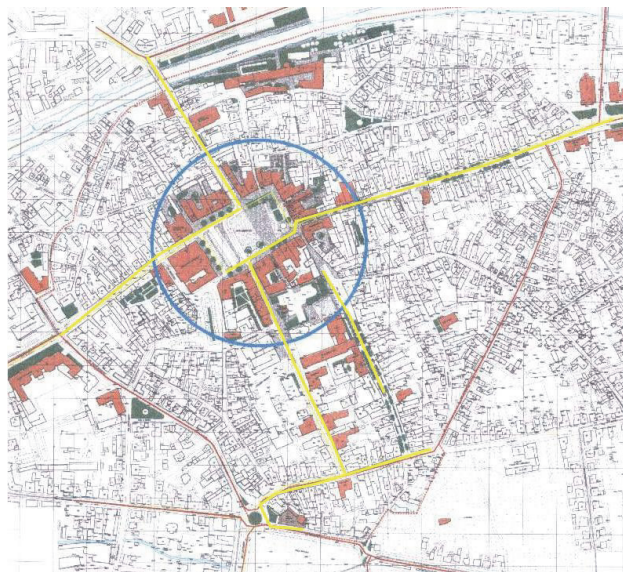


Figure no. 2: Map of the direct use values in relationship with tourists walking preferences in Baia Mare old centre

The following image of Baia Mare historical centre illustrate the potential of mapping direct and indirect use values generated by heritage tourism. Figure 3 A-B shows the heritage buildings, museums and churches (direct use value of heritage tourism) and the hotels, restaurants and shops (indirect use values).

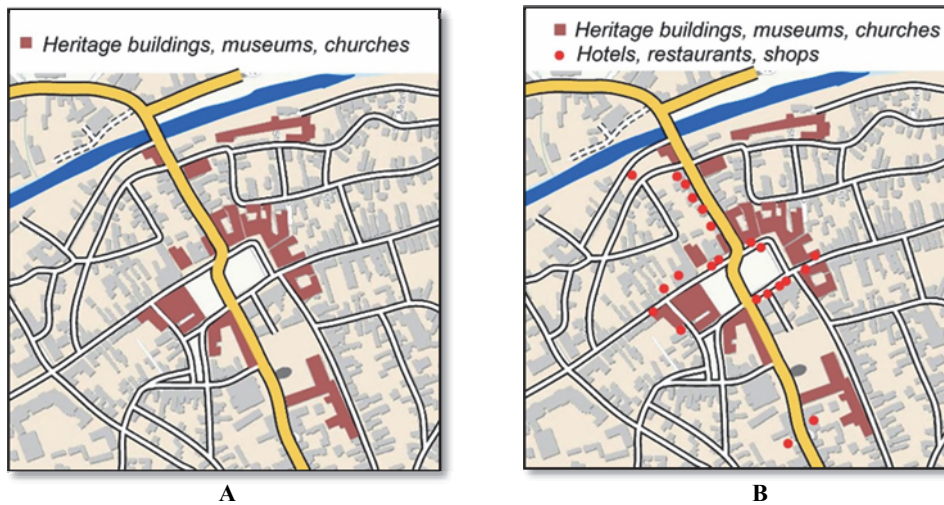


Figure no. 3 A-B: Historical downtown of Baia Mare - (A) Direct Use Values and (B) Indirect Use Values

As it can be noticed, main hotels, restaurants and souvenirs and handcrafting shops gravitate around the restored heritage assets of the old centre. Looking at the main walking routes chosen by the tourists, it can be remarked that they converge towards this historic area of the old city. However, by analysing the spatial distribution of heritage assets, alternative walking paths with additional touristic attractions could be suggested. Thus, the over-crowding would be diverted from the area, reducing the extra noise and traffic for the people inhabiting the old centre. In the same time, the alternative neighbour streets would create opportunities for other small businesses developments. One suggestion would that of a tour including the banks of the river and walks through the old streets of Baia Mare leading to the old heart of the city, instead of the main roads. In order to see if the model is feasible, further spatial analyses will have to be performed to test all social, economical and environmental parameters and to predict the modifications that would occur on medium-long term for the most relevant issues: business development, local population satisfaction or dissatisfaction, infrastructure and costs, environment and heritage protection.

Conclusions

Revitalizing the urban historical sites, improving infrastructure and cultural heritage protection ultimately contribute to business and economic development, to new employment places and to a general revival of the urban areas. Planning investments designed to support heritage tourism as part of the urban development strategy requires a thorough analysis of all aspects involved: social, economical and environmental. In terms of economic benefits, heritage tourism may be regarded through its two facets: direct-use

value and non-direct use value. These should be taken into consideration when redesigning the urban change based on heritage tourists flows.

As part of GIS applications, spatial analysis helps understanding heritage tourists, local citizens and businesses behavioural patterns. It helps modelling urban development, by accurately mapping these patterns, by indicating connections and by predicting outcomes induced by change. Mapping heritage economic values leads to a better understanding of an overall social and economical context, the case study about the centre of Romanian city - Baia Mare, presenting the basic elements of spatial analysis for urban development through heritage tourism.

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OBSERVING PATIENTS' RIGHTS, BETWEEN PERCEPTION AND REALITY

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Abstract

Increasingly, both at the European level and internationally, the idea has gained ground that an investment in health actually represents an investment in a country's economic prosperity. (The Council of the European Union, 2006). With all the financial and legal efforts registered in this field, not only in Romania, but at an international level as well, criticism is on the increase. As a consequence of the degradation of the population's health, of the rise in healthcare costs, of a more quality-based medical procedure, as well as a consequence of the competition brought forth by the private practices to the public healthcare services, the patient is progressively treated as a client, whose rights are and must be respected and whose satisfaction must be monitored; the numerous reports and research studies carried out within the European Commission also stand proof of this fact. (Patient Safety and Quality of Care, 2014; Patients' rights in the EU, 2014; Patient Safety in the EU: 2014, etc.)

Following the methodology of the pilot study, the purpose of the present paper is to highlight the extent to which the patients' rights are known and observed in Romania; our analysis of the specialized literature, of the reports and of the current national and European legislation has enabled us to gather information and to clarify the theoretical concepts we use.

Keywords: Patient rights, patient satisfaction, healthcare services, quality.

JEL Classification: I15, K32

Introduction

In the large framework of the services, Healthcare services play a central role, being the most important services offered to the population. As beneficiaries of these services, which are essential for a population's health status and for a country's future, and as a consequence of the ever-growing competition between the private and public sectors, we consider that patients must be treated as proper clients and consumers of the services offered by the different healthcare suppliers, whose rights must be known and observed, as in the case of consumers of any products and services on the market. Also, in this case,

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patients can contribute to the development and increase of the healthcare services quality, through correct information and proper sanitary education, which would allow them to knowingly get involved and aspire to a good health state, in accordance with their continuously increasing requirements.

1. The methodological design, by means of summarizing the most recent specialized literature on quality management and integrated management

It is not only healthcare services that raise numerous discussions, but also the notion of patient, which has evolved in time, also with the focus of medical services on total quality and excellence.

While Law 46/2003 on patient rights defines the patient only as a "*healthy or sick person who uses health services*", the World Health Organization, in Section 2 "Quality concepts and Tools" of the report called "*Quality and accreditation in health care services - a global review*" (2003) refers to patients as "consumers, users and clients" (p. 64): "*„a satisfied paying patient is a commercial asset; users increasingly assert moral and legal rights to consent and to make informed choices*" whose rights must be acknowledged and observed. While the Explicative Dictionary of the Romanian Language (2009) defines "*healthcare assurance (protection)*" as being "*a complex of measures established by the state in order to prevent disease, to consolidate and restore health, to extend lifespan and the work capacity of the people*", additionally, healthcare assurance also represents one of the fundamental citizen rights stipulated by the Constitution of Romania (art. 34), as well as one of the fundamental consumer rights, whereas "*patient protection*" is defined as "*by laws on freedom of information and on the general protection of consumers and their data*" (World Health Organization, 2003, op. cit. Willison, D., 2000).

Although patient rights are included among the fundamental human rights, it was only in 1994, within the European Consultation on the Rights of Patients, held in Amsterdam, that the principles and strategies for promoting patient rights were defined and the *Declaration on the Promotion of Patients' Rights in Europe* was adopted, followed by *The Ljubljana Charter on Reforming Health Care*, endorsed in 1996, and by *The Jakarta Declaration on Health Promotion into the 21st Century*, endorsed in 1997.

After having studied the legislation on patient rights in the EU member states, we have selected, for exemplification, the following three cases: the law in one of the former socialist countries, a EU member state - Lithuania; a country which ranks among the smallest EU member states - Cyprus, as well as the legislation in the UK, which we have chosen due to the conciseness of the regulated rights, since the UK is well known for its focus on quality in all social and economic areas.

In the Republic of Lithuania, the "Law on patients' rights and the compensation for the damage done to their health" was adopted in 1996, amended in 2009, and it stipulates the following ten rights of patients: *Right to High Quality Health Care Services; Right to Choose a Health Care Institution and a Health Care Professional; Right to Information; Right not to Know; Right of Access to Entries in One's Medical Records; Right to Privacy; Specifics of the Right to Privacy; Patient's Right to Anonymous Health Care; Patient's Participation in Biomedical Research and Teaching Process; Right to Compensation for the Damage.*

The Safeguarding and Protection of the Patients' Rights Law, 2004, of the Republic of Cyprus stipulates the following 15 patients' rights: *Right to health care and treatment* (according to the patient's needs, within a reasonable period of time, unconditionally in case

of medical emergencies; high quality services, through the cooperation of all service suppliers and medical institutions involved in diagnosing and treating the disease etc); *Dignified treatment* (according to the patient's own religious and cultural values, ensuring the access of the family and friends, psychological support etc); *Access to health care services* (available and affordable services, in harmony with the possibilities of the health care system and of the available financial, human and material resources); *Prohibition of unfavourable discrimination* (in case there is a need to choose which of the patients will benefit from a certain health care service, this shall be done without discrimination of any kind, in a fair manner, based on the objective scientific / professional criteria); *Health care in a medical emergency or in a life threatening situation* (in case there is a medical emergency, the medical institution or the physician shall examine and treat the patient as soon as possible and in the best conditions possible; if this cannot be done, the patient shall be transferred to a different institution); *Medical examination in an Emergency Department*; *Right to information*; *Health care with the consent of the patient* (the patient has to express consent to the treatment after having received in-depth information they can understand - innovative treatment, transplants etc; exceptional cases when the medical information is not given to the patient but to their family etc); *Medical information*; *Health care without the consent of the patient* (when the patient is in a mental or psychological state preventing them from expressing consent; if that is the case, the consent is considered to be implied; in the case of minors, consent must be expressed by the parents or by other authorized persons, etc); *Participation of the patient in scientific research or experimental treatment*; *Confidentiality*; *Protection of the patient's privacy*; *Rights of the patient regarding medical records access*; *Right of representation* (in patient groups or associations, with a view to expressing their opinions on health policies and their implementation).

The National Health Service Constitution - NHS in the UK looks completely different. Published in 2012 and amended in 2015, it only stipulates six generic rights of patients. The Constitution is legally binding for all the bodies of the National Health System, for the private sector and for all suppliers in the field; it includes the patients' rights, the rights of patients' families and of their next of kin, of the employees, and their responsibilities as well. The Constitution lays down the following rights of patients: *Access to health services*; *High quality services and environment*; *Nationally approved treatments, programmes and medication*; *Respect, consensus and confidentiality*; *Informed choice*; *Involvement in the patient's own health care and in the NHS activity*; *Complaints and damages*.

Starting from the remark that, in spite of existing differences, the national health care systems in the EU member states all focus on the same fundamental patients' rights, in 2002, the *Active Citizenship Network* along with other civil organisations elaborated a document called "*European Charter of Patients' Rights*", which stipulates 14 fundamental rights: *the right to preventive measures, access, information, consent, free choice, privacy and confidentiality, respect for patients' time, observance of quality standards, safety, innovation, avoidance of unnecessary suffering and pain, personalised treatment, and the right to complain and to receive compensation.*

In 2003, Romania adopted *Law no. 46 on Patient Rights*, which includes the fundamental patient rights as well as penalties for the medical staff in case these rights are infringed; however, it does not include any provisions with respect to the patients' responsibilities, as is the case with other European laws. Under this law, the fundamental patient rights in Romania are the following: *Patients have the right to the highest quality of medical care*;

Patients have the right to be respected as human beings, with no discrimination; Patients have the right to access medical information; Patient consent regarding the medical procedure; The right to confidentiality regarding the patient's information and private life; Rights of the patient in the field of reproduction; Patient rights to treatment and medical care.

Thus, we can see that there exists neither a common vision nor a unitary definition of patients' rights at the European level; still, the regulation process is under way. Hence, on October 25, 2013, the EU introduced the *Directive on cross-border healthcare* that includes *three major changes focusing on patients' rights*: the right to choose and to have the expenses for the received treatment reimbursed, either in the public or in the private health care system, anywhere in the EU.

The law in Cyprus – *The Safeguarding and Protection of the Patients' Rights Law*, adopted in 2004, stipulates, in Part III - Control Mechanisms -, the duty of every state hospital to appoint a person named “Patients’ Rights Officer” to safeguard the patients' rights. This officer has specific duties; according to art. 22 (2).

2. Research on the extent to which Romanian patients are aware of their rights

Starting from the assumptions presented above and from the priority that is given in the EU to the quality of health care services, to the patients' safety and satisfaction and to involving them in the health care services they receive, we have considered it useful to carry out a research study aiming to establish the extent to which Romanian patients are aware of their rights. The current research starts from one of the conclusions put forward by the European Commission Report - “*Patient involvement*” (2012), which highlights the fact that „*very rarely the interviewed patients knew their right to be involved in the decision-making about their healthcare*”, the importance of patient involvement even in health-related policy-making being recognized by The European Commission (EC) in its White Paper “*Together for Health: A Strategic Approach for the EU 2008-2013*”.

2.1 Research methodology

The study was conducted as a pilot study; it was carried out in December 2015, through a statistical survey, by distributing questionnaires (100) to patients that were hospitalized in one emergency university hospital in Bucharest. This hospital was chosen so as to provide a good representation of patients suffering from various diseases, as a consequence of the great number of patients, including the emergencies, and also to make sure that the patients came from different social backgrounds, since university hospitals treat sick people from both the urban and the rural areas. No selection criteria were formulated for the persons included in the study. The patients were made aware of the importance of the study and, consequently, the questionnaires were accurately filled in, with no invalidations necessary. No discriminations were made in applying the questionnaire, with respect to health status, age, gender or residence, in order to ensure a high degree of representativeness.

The questionnaire comprised eleven questions. The main objective of the study consisted in identifying the extent to which patient rights are known and observed in the case of patients hospitalized in the emergency hospitals in Bucharest. Consequently, the following five working hypotheses have been formulated:

- *H1. The degree of awareness regarding the legal framework for patient rights is over 50%;*
- *H2. The level of awareness with respect to patient rights is directly influenced by the level of education;*
- *H3. The main source of information regarding patient rights is the written press and radio stations;*
- *H4. Patients consider that they know their rights;*
- *H5. Patients consider that their rights are observed in a proportion of over 50%*

2.2. Analysing and interpreting the research results

Pursuant to the data processing we have found that 69.5% of the respondents reside in the urban area and 30.5% in the rural area (the gender distribution indicates equality between women and men (31-31)).

Regarding the age distribution of patients – Figure no. 1 – we find an equal number of patients in the 26-35 and 36-45 age groups (14 patients each), together representing 45.16% of the total number of respondents, which is a worrisome fact from the point of view of the population’s health (patients aged up to 55 years representing 77.42% of the total number of patients questioned).

From the perspective of the level of education, the highest percentage is represented by high school graduates – 36.36%, followed by higher education graduates – 31.82% - Figure no. 2. It is worth emphasizing that the patients with a high level of education – university and doctoral studies – represent together 38.63% of the total number of respondents.

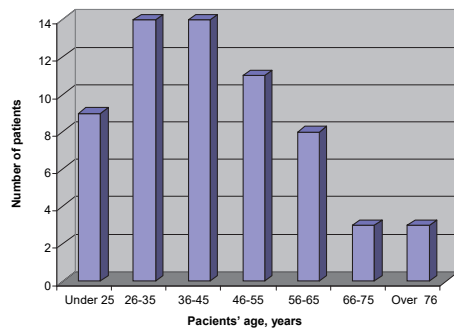


Figure no. 1: Age distribution of respondents

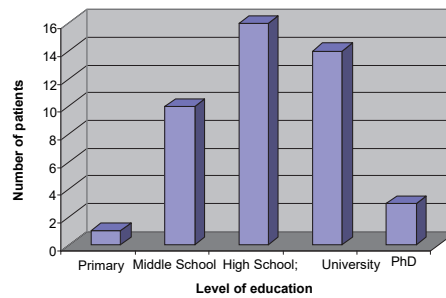


Figure no. 2: Distribution based on the respondents' level of education

66.13% of respondents have heard of the existence of some rights they have as patients, which has led to the validation of the first working hypothesis - *H1*.

Out of the total number of patients who had a high school diploma, 81.25% declared that they knew of the existence of some specific patient rights, while only 64.71% of the respondents who had higher education diplomas (university and doctorate) had heard of the existence of these rights (taking into account their percentage in the sample, 29.54% of respondents with high school diplomas gave positive answers compared to 25% of the ones who completed higher education) – Figure no. 3 – which has led to the invalidation of the second hypothesis, according to which the level of education influences the patients’ awareness regarding the existence of specific patient rights - *H2*.

When asked about the source of information on the existence of patient rights, 69,1% of respondents indicated a single source of information, the rest gathering information from multiple sources. The first position among the sources of information is occupied by the written press and television– 37.04%, followed by the explanations given by the specialty medical staff– 33.33%, and the internet – 18.52%; the last position, (11.11%), is occupied by the mandatory notices regarding these rights, which must be displayed in all health care centres in Romania – Figure no. 4; the facts above have led to the validation of the third working hypothesis - *H3*.

The conclusion is also supported by the Eurostat data, according to which 42% of Romanians have never used the internet, compared to 21%, which is the E.U. level (Business24, 2013), and also by the European Commission Report (Special Eurobarometer Patient Safety and Quality of Care, 2014), which shows that in Romania, the main source of information regarding the quality of ealth care services is television - 35%, compared to 19%, the European average.

Out of the total number of respondents, 55.74% consider that they know their rights as patients, which has led to the validation of the second-to-last hypothesis - *H4*. As there is a difference of -10.39% between the respondents who declared they had heard of the existence of such rights and the ones who consider that they know these rights.

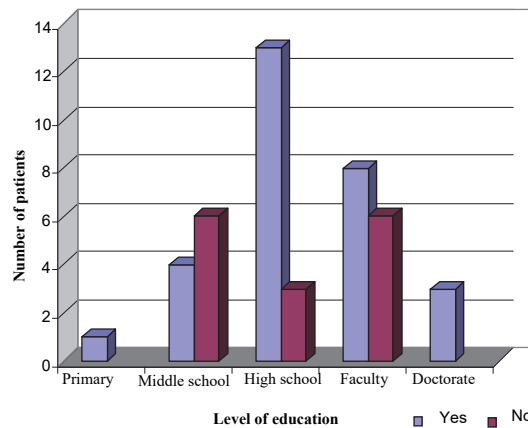


Figure no. 3: Distribution of awareness regarding patient rights based on level of education

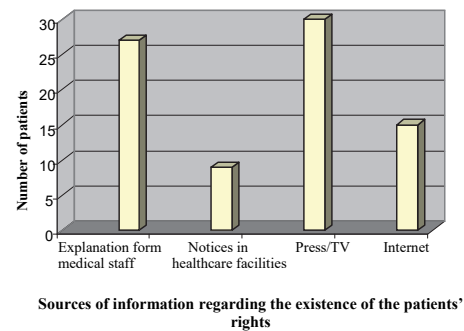


Figure no. 4: Distribution of the sources of information for patient rights

- Prior to testing the last hypothesis - *H5*. We have considered it important to identify the extent to which respondents are truly aware of their rights as patients; consequently, they were asked to name some of these. When asked this open question, 38.71% of the respondents were unable to mention any rights, and out of the ones who filled in the questionnaire, only 18.42% knew their rights (11.29% of the total number of respondents), most of them confusing patient rights with the rights of insured patients (the most frequent answers were related to the free or covered drugs or treatment cards). As a consequence of this low percentage of respondents who have a correct understanding of patient rights, we consider that the answers to the last question are not relevant and, therefore, the last working hypothesis has been cancelled. In spite of all this, we found that, although 44.26% of respondents stated that they did not know their

rights as patients, only 37.10% answered that they could not say whether their rights were respected or not; most respondents (33.87%) consider that their rights are respected to an extent of less than 50% - Figure no. 5.

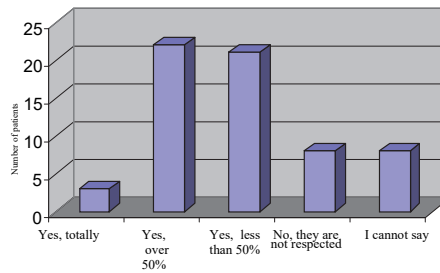


Figure no. 5: The perception of the extent to which patient rights are respected

Conclusions

Pursuant to the revision of the specialized literature in the legislation of EU member states, as well as to the study performed, we can state that there is no unitary approach either to the concept of patient or to their rights. Furthermore, in Romania, there is confusion between the patient and the insured, as well as regarding their rights.

Although 88,71% of Romanian patients are not aware of their rights, 46,77% believe they are not at all complied with or that the extent to which they are complied with is lower than 50%. Starting from the premise that the extent to which patients' rights are complied with is also reflected in the view they have of the quality of the health care services they benefit from, the results of our survey are also supported by the Patient Safety and Quality of Care Report (Special Eurobarometer, 2014). The conclusions of this research, conducted between November and December 2013 under the form of interviews taken on behalf of the European Commission, on a sample of 27,919 respondents with different social and demographic backgrounds (out of which 1,013 were Romanian) show that 73% of Romanians believe that, overall, the quality of health care services is poor, in contrast to the 25% European average, although only 17% of these patients or their families have suffered from side effects (hospital - acquired infections, wrong or delayed diagnoses, surgical errors etc), as against the 27% European average. Still, 78% of Romanians consider the quality of health care services provided in Romania to be poorer than in other EU countries. In this respect, we believe it is necessary to organise an intense national campaign to inform the public, following the example of the one carried out in the past by the National Authority for Consumer Protection, which registered very good results, a campaign that would explain the difference between patient and insured, as well as their rights.

Moreover, starting from the example of other countries and of best practices, Law 46/2003 ought to be amended, in that it should include not only patients' rights but also their responsibilities, as well as the administrative means of taking legal action through a Patients' Rights Officer, who is to provide assistance to patients and medical staff and also to ensure their rights are observed.

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HOUSEHOLD BUDGET SURVEY, A KEY ISSUE OF ALBANIAN STATISTICAL SYSTEM

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Abstract

Household Budget Survey, is one of the most important surveys held in a country. Considering its importance, especially in calculating the Consumer price Index and Domestic Product, the perspective of the paper is to catch the issue from the root Promoting a moderated public debate based on scientific research, which would help politics in undertaking an efficient socio-economic policy, it is needed a integrated and harmonised household budget survey. The aim of the paper is to study the existing methodology undertaken by Albanian Institute of Statistics and to compare it with the methodology used by Eurostat, in order to have a perfect statistical panorama for an Albanian household, which will help for a further efficient socio-economic policy incentive in the country. Establishing a Household budget survey comparable with the one in European Union, will help in establishing an integrated socio-economic orientation of Albania with other countries of European Union. First part of the paper presents the main findings of methodological issues followed by European countries. Second part of the paper presents the methodology generated by Albanian Institute of Statistics and the third part generates main results of Household budget survey 2014 for Albanian case. The finding of the paper will help on directives for improvement of the methodological aspects of Household budget Survey for Albania and will empirically prove the importance of a such survey in socio-economic development of the country.

Keywords

Household, Budget, Survey, Income, Expenditures, Data, Indicator

JEL Classification

R2, H31, O15, P4, J1,

Introduction

Household Budget Surveys (HBSs) are national surveys, almost organized yearly by each country in order to mainly measure the consumption expenditure and their primary aim is to

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calculate weights for the Consumer Price Index, as well as final consumption calculation of households are an important aggregate of Gross Domestic Product (GDP) (HBS, Albania, 2014) by the expenditure method. Even though there have been continuous efforts to harmonize the methodology, the questionnaire and the interpretation still there remains some difference among countries.

These survey programs cover all kind and amount of income and expenditures (for goods and services) of private households in great level of detail by means of household books (diaries). Some other aspects of a household daily life are considered, such as composition, participation in labor force, housing conditions, mobility, equipment with durable goods etc. as well as information on socio-economic status and demography.

Considering a general panorama of a household, the HBs offer a unique potential to investigate socio-economic inequality, especially in a comparative national perspective.

The surveys vary between countries in terms of frequency, timing, content or structure, even the methodology sometimes is not harmonized and it makes it difficult for comparison. Harmonizing the above mentioned items among countries in Europe is a challenge per each national statistical system.

The first part of the paper is focused on a detailed analyze of HBs in European countries, trying to identify the problems, the ways where there is a need for improvement and future challenges. While the second part of the paper is a short description of a situation of HBs in Albanian context, which are the main achievements and some challenges, this kind of statistics has to meet in the near future. The methodology is another issue considered in the paper and what has to be done so far to catch up with Eurostat (Eurostat, 2012) directives. A detailed statistical analyze of the latest HBs carried in Albania is conducted and some conclusions are framed within this perspective.

1. Main issues of household Budget Survey in European countries.

A Household Budget Survey is a sample survey of thousands of households that are asked to keep records of their expenditures on different kinds of consumer goods and services over a specified period of time. The size of the sample obviously depends on the resources available, but also on the extent to which it is desired to break down the survey results by region or type of household. An HBS may be taken at specified intervals of time, such as every five years, or it may be taken each year on a continuing basis. The HBs is administered by National Office of Statistics of a country.

All countries try to have qualitative HBs, and this is achieved considering 6 pillars:

1. **Relevance:** refers to the extent to which the HBS is useful to, and used by, users. It has to do with the fact that all statistics that are needed are produced and the extent to which concepts used (definitions, classifications etc.) reflect user needs. Data of HBs should be relevant for all users or group of users i.e. ministries, public administration, universities, researchers, private firms and consultants, general public, European Union (EU) institutions, etc.

2. **Accuracy:** refers to sampling process. Like in any sample survey, the statistics generated from the HBS data may be liable to errors which are inherent in the survey method used.

Design is an important issue. The surveys in most countries are based on probability sampling by design. The majority of the countries draw a sample of households in a way that the probability of a household being selected is known (technically known as a probability design). In this way, the results can be reliably projected from the sample to the

household reference population with known levels of precision, i.e. standard errors and confidence intervals for survey estimates can be constructed. On the other hand, non-probability schemes (e.g. Quota selection) are implemented in the Czech Republic and Germany. Generally this type of sampling is quicker and cheaper, but there is no assurance that the selection of households is not biased and is representative of the whole population.

When choosing the sample it has to be decided which will be the unit of sampling: the addresses (which means that all the private households currently residing at a selected address are eligible) or persons (which normally includes all members of the household the sampled person belongs to).

Moreover, many of the samples were stratified by *geographical dimensions*. This improves the representativity of the samples by ensuring a minimum adequate size by region.

The HBS data are *weighted* (sample weight to correct for imperfections among sample and reference population, and design weights refers to the inverse of probability of selection).

Non-response (some households, which are initially chosen, do not take part in the survey) decrease the accuracy of the HBs, and this is corrected by design weights, which refers to the household response probabilities.

A classical typology of survey errors makes the distinction between sampling and non-sampling errors.

2.1 Sampling errors: arise from estimating a population characteristic by looking at only one portion of the population rather than the entire population. The size of the sampling errors depends on the sample size: the higher the sample size, the higher the accuracy. The effective sample size can be even smaller as a result of the way the sample has been designed.

2.2 Non-sampling errors: encompass all the other types of errors (e.g. coverage errors, measurement errors ect. Coverage errors also come up at the sample selection stage; except for the Czech Republic and Germany (which resort to quota sampling) all the HBS samples were selected according to a probability sampling scheme. In probability designs should be a one-to-one relation between the units which are recorded in a sampling frame and the units of the target population. However, such an ideal situation rarely happens: there are usually units in the sampling frame which do not belong to the target population (*over-coverage*) and units in the target population which are not listed in the frame (*under-coverage*). Under coverage can cause bias in the estimates, especially if the units which are not covered have specific survey characteristics (e.g. specific consumption patterns).

The common feature of all the HBSs is that households are asked to maintain detailed diaries of expenditure over a fixed time period (two weeks in most countries). This is not very comfortable for the households, resulting in higher non-response rates reported for the HBS than for other surveys. Overall, the reasons for a household not to participate are quite diverse: the household may happen to be temporarily absent or may refuse to provide such sensitive data; the interviewee may be unable to participate due to illness, language problems, etc. Non-response is a source of bias in sample estimates, particularly if the non-respondents have specific characteristics. Besides, non-response makes the achieved sample size lower, thus making the data less accurate. The following table 1 presents the household response rates in some EU countries.

Table 1: Household response rate

Country	%
Austria	38.1
Belgium	5.6
Bulgaria	52.6
Croatia	62.7
Cyprus	76.4
Czech Republic	Unknown (*)
Denmark	42.3
Estonia	49.0
Finland	43.1
France	68.7
Germany	Unknown (*)
Greece	68.6
Hungary	45.5
Ireland	39.7
Italy	80.9

Source: Eurostat 2010

The HBS also includes household interviews which are generally conducted before and after the period of diary recording: they aim to collect basic information on the selected households and on their members.

Sometimes, the lack of uniformity in sampling methods and methodology has made the analysis of accuracy impossible at European level.

3. Timeliness and Punctuality: Timeline refers to the frequency and the year that the survey was carried out in the countries. In almost every country in EU the HBs is carried out annually, in Albania it is carried out once in a five year, but beginning in 2016, it will be in annual frequency. Punctuality refers to the period from the survey reference year to the date of publication of the HBS data, the shorter this period, the better it is. The HBS 2010 data tables were disseminated on Eurostat's website during September 2014 and Eurostat observes that some improvement could clearly be made to shorten the period between the reference year and the publication date many countries did not follow the transmission format requirements issued by Eurostat and this led to considerable delays in processing and publishing the data.

4. Accessibility and Clarity: has to do with the forms of gathering and dissemination of data from HBs. Eurostat gets the results (a prior list of definitions and variables has been transmitted to the national statistics offices) from each country HBs from their National Institute of Statistics via eDamis, Eurostat's secure network for transmission of data. Validation tests are carried out and a validation report generated. After being validated, the harmonized HBs micro-data is stored in a set of Oracle Tables within the data base of HBs of Eurostat which is used as the source used to build the Eurobase Tables, Anonymised Datasets for researchers and also for Ad-hoc requests.

5. Comparability: refers to the differences between the true values and the statistical characteristics. This can only be carried out under a premise of common concepts, definitions and classifications. Comparability between different data sets implies that the data measure the "same thing". Considering this as a measure of quality, comparability and

accuracy are different things, even though an ‘adequate’ level of accuracy is essential for comparability.

5.1 Definitions and basic concepts: refers to a common understanding on concepts used in each HBs country, in order for allowing them to be comparable. For example: The basic unit of data collection and analysis in an HBS is the *household*. The definition used in an HBS is more complex than a group of people who are living together “under the same roof”: a household is a social unit which meets one or more conditions of “living together” in addition to sharing a common accommodation. Countries differ in the exact rules applied for this purpose as well as the operational meaning given to the four criteria noted above. Many countries mention, though, as general criteria, that a potential member is included in the household if there are economic links between the person and the household. The concept of the “household reference person” is central in the EU HBS in the sense that it constitutes a socio-economic classification of households according to the profile of a member who is supposed to be “representative”.

“Final consumption expenditure” is the expenditure incurred by households on individual consumption goods and services. Household final consumption expenditure has a monetary and a non-monetary part. The actual final consumption of households is derived from their final consumption expenditure by adding the value of social transfers-in-kind received from the government (such as expenditures on Health & Education) and non-profit institutions serving households.

According to the European System of Accounts (ESA) , which is the reference for the HBS, the purchase of a dwelling as such is regarded primarily as capital formation (investment) and not consumption expenditure. However, the ownership of a dwelling is considered to produce a service – a shelter, which is actually consumed over time by the households. As a consequence, ESA requires the estimation of the price of the shelter, by imputation of a rent, since no monetary transaction is involved. This imputed rent is part of household consumption expenditure. Different methods can be used in order to estimate imputed rent. The choice of method generally depends on the size and the structure of the national rental housing market. Countries such as United Kingdom, the Czech Republic and the Former Yugoslav Republic of Macedonia have not imputed any rent for the use of owner-occupied dwellings as household main residence:

5.2 Other potential sources of non-comparability such as: different HBs reference years (which means that for countries which do not undertake it yearly, their respective household level price coefficients have to adjust expenditure and Income in order to make them comparable) and different survey instruments (there are some variations in the survey instruments: many countries use household diaries, while others complement household diaries with individual ones in order to get more accurate information. The recording period varies between the countries from one week to one month as Chez Republic, one week as France and Italy but two weeks being the most common

6. Coherence: refers to that characteristic of statistics, of being able to measure the adequacy of the data to be reliably combined in different ways and for various uses. Coherence means that different sources together lead to a consistent picture, with each making a contribution towards the development of the picture. In the case of the HBs, the most relevant sources for external comparison include the Weights used in the Harmonized Index of Consumer Prices (HICP), the Statistics on Income and Living Conditions (SILC), Labor Force Surveys (LFS), National Accounts (NA) and various administrative and other sources depending on the country. For example, lets refer to EU- SILC indicator: *Gini*

coefficient: This is the relationship between cumulative shares of the population arranged according to the level of income and the cumulative share of total income received by them. A Gini coefficient of 0% means perfect equality and of 100% shows a total inequality. It can be measured by equation 1: where R_i is the rank of i in the population arranged according to the level of income. If income data are collected from a sample s of the reference population, the Gini coefficient can be estimated by equation 2, where w_i is the sample weight of household i and W_i is the cumulated weight of i (in the population arranged according to the level of income):

$$1 + Gini = \frac{2 \sum_i R_i \cdot INC_i - \sum_i INC_i}{\left(\sum_i I \right) \cdot \left(\sum_i INC_i \right)} \quad (1)$$

$$1 + Gini = \frac{2 \cdot \sum_{i \in s} \left[\left(W_i - \frac{\omega_i - 1}{2} \right) - 1 \right] \cdot \omega_i \cdot INC_i}{\left(\sum_{i \in s} \omega_i \right) \cdot \left(\sum_{i \in s} \omega_i \cdot INC_i \right)} \quad (2)$$

In order to judge about the coherence of EU- HBs and EUSILC, than Gini coefficient can be calculated by two above mentioned formulas, substituting the values of 5 indicators from HBs micro data country tables and their respective SILC. In order to increase comparability, the EUSILC methodology can be used:

- The HBS database can be turned into an individual one by replicating the household records according to the household size (per capita)
- For each household, the household net monetary income can be divided by the “equivalised” household size and the result can be given to each household member as an estimate of the “personal” income.
- The indicators can be calculated at individual level using this “personal” income as well as the household sample weights.

Still, we have to keep in mind that these two surveys are from different samples with different sample sizes. There are inherent methodological differences between the two instruments: EU-SILC has been designed to be the reference source of income data at EU level, while HBs rather focuses on household consumption expenditures and provides less information on income, mainly for categorical purposes.

2. Methodology of Household Budget Survey in Albania

The first time when the HBs is conducted in Albania was in 1999-2000 (representative only for urban areas), followed by others in 2006-2007, 2008-2009, 2014 and hopefully it is going to be in annual periodicity. Since 2006-2007, the survey has covered all the Albanian territory (urban and rural area). In 2014, the sample of 7,836 households and in 2006-2007, the sample used to be of 5,600 household, with the households’ response rate (calculated as the ratio of the number of interviewed households with the number of selected households) of 83.8 percent and 94.4 percent respectively for the HBs of 2014 and 2006-2007. The sample selection follows a two-step procedure. During the first step, there have been identified and then selected the Census homogeneous areas (Census area has the

same characteristics of households' consumption expenditures and the size of each PSU has almost the same number of households or individuals) with a proportional probability to the size of the Census area. Going through a second step of sampling, which uses the method of systematic selection, due to which within each selected area in the first step, it is selected by with equal probability a fixed number of 12 households. The selection in both steps is done in a random way by providing a representation also at the prefecture level. The total households sample was divided into 4 sub-samples of three months which were geographically spread homogeneously throughout the year, to reflect the seasonal changes. Consequently, each month were interviewed about 547 households spread evenly in all selected areas so to ensure representativeness for each area each month of the year.

Two different ways of collection data are used: (1) A selected household has to fill a dairy for a period of 14 days. The diary consists of expenditures for purchasing products/services of consumption and when it was necessary filling a daily self-consumption dairy for 14 days, where are recorded only the products produced and consumed by the household itself during the same period (the values are estimated with the price that would be paid in the nearest shop/market) (2) Face to face interview. This is done through a questionnaire, divided in chapters according to specific topics, including: socio-demographic data of household as well as questions about expenditures.

Each survey conducted by INSTAT is based on a sample selection to draw conclusions about the population observed. Normally, this process is accompanied by statistical deviations. In this perspective, there are calculated the HBs 2014's standard deviations and coefficient of variation of the average monthly consumption expenditure by the 12 main groups of consumption and the average monthly consumption expenditure by prefecture.

The idea is , the lower the standard deviation , the higher is the level of accuracy of that estimate. The lowest standart deviation is for the "Communication" (34) (INSTAT, 2015) and the highest it is for the "Education" (282). The highest coefficient of variation is for "Education" (9.7% more heterogeneius) and the lowest is for "Food and non-alcoholic beverages" (0.8%- more homogeneius). Evaluation of stadart deviaation and the average helps to establish the interval of estimation for the value of population for the repective parametr. So, if the estimation obtained for the group is 30,745 ALL (Albanian currency: leke) then the standard deviation for this value is 261 ALL. Combining the estimation received from the survey for the expenses made for this group by the respective standard deviation it is correct to say that with a 95 percent of confidence interval that the estimation of expenditure for the group "Food and non-alcoholic beverages" is from 30,233 ALL to 31,257 ALL.

Under the above notations, the (absolute) standard error of the mean consumption expenditure \hat{Y} , is estimated by the square root of the estimated variance $V\hat{ar}(\hat{Y})$ the latter being given by:

$$V\hat{ar}(\hat{Y}) = \frac{1}{\hat{N}^2} \frac{1}{n(n-1)} \sum_{i \in S} \left(n\omega_i y_i - \sum_{k \in S} \omega_k y_k \right)^2 \tag{3}$$

Where n is the achieved household sample size and \hat{N} is the estimated size of the household population. The relative standard error (or Coefficient of Variation - CV) is estimated by:

$$CV(\hat{Y}) = 100 \times \frac{\sqrt{V\hat{ar}(\hat{Y})}}{\hat{Y}} \tag{4}$$

In order to obtain a confidence interval for the mean consumption expenditure, it is assumed the statistic follows a normal distribution. Under the same notations as above, a 95% confidence interval is given by:

$$CI(\bar{Y}) = \left[\hat{Y} - 1.96 \cdot \sqrt{\hat{V}ar(\hat{Y})}; \hat{Y} + 1.96 \cdot \sqrt{\hat{V}ar(\hat{Y})} \right] \quad (5)$$

3. Main findings of Albanian Household Budget Surveys (2006-2007-2014)

Going through a detailed analyze of HBs in Albanian case for the period of 2006, 2006, 2007, 2009 and 2014, we can find, that the estimated average monthly consumption expenditures of households in 2014 was 5.6 percent higher compared with 2009 (INSTAT, 2015), while the estimated average monthly consumption expenditures of households in 2009, compared with 2007 was 5.2 percent lower. According to the Consumer Price Index, the cumulative increase of prices, in the period 2009/ 2006, was 7.2 percent while for the period 2014/ 2008 was 15.5 percent.

Comparing of the average monthly consumption expenditure in 2014 and 2009 there is a decrease in the share of households budget for “Food and non-alcoholic beverages” of 5.3 percent. An even more significant decrease has had the share of “Alcoholic beverages and tobacco”, by 9.9 percent, while the group with the most significant decrease of the share of total expenditures is “Restaurants and hotels”, by 33.4 percent. The groups that have recorded the highest increase on the consumption expenditures are “Education” with 118.6 percent and "Health" by 85.2 percent. Other groups for which the consumption expenditures have increased are “Recreation and culture” by 43.2 percent, “Transport” by 25.5 percent, “Housing, water electricity, gas and other fuels” by 19.3 percent, “Furnishing, household equipment and routine maintenance of the dwelling” by 17.3 percent.

Comparing the average monthly consumption expenditure of households in 2009 with the one of 2007, it is 5.2 percent lower.

Referring to the HBs 2014, the average monthly consumption expenditures are estimated to be about 69 thousand ALL taking into account that a household is composed by 3.8 persons on average. In 2014, the total amount of monthly consumption expenditures of households from the survey is estimated at about 52, 6 billion ALL, where the number of Albanian households in the same year is estimated at about 758 thousand. Considering the per capita monthly consumption expenditures in the one year period of the survey, an individual in Albania spends on average about 18 thousand ALL, of which 8 thousand ALL are spend for food and 10 thousand for non-food consumption.

Referring to the HBs, 2007, we can find that the total monthly consumption expenditure for the total of households was about 52 billion ALL. In 2007, the number of households in Albania was estimated around 752 thousand. The average consumption expenditure of “Food and non-alcoholic beverages”, “Alcoholic beverages and tobacco” and “Restaurants and hotels” groups decreased also during the period 2007-2009 like in the previous one, with 1.6 percent, 9.0 percent and 4.8 percent respectively. But the amplitude of decrease is lower not only for “Food and non-alcoholic beverages” group but also for “Restaurants and hotels”. A considerable decrease during this period has had the expenditures for “Health” by 36.7 percent, “Recreation and culture” by 29.5 percent, “Furnishing, household equipment and routine maintenance of the dwelling” by 21.2 percent and “Clothing and footwear” by 17.3 percent. The groups for which the consumption expenditures have

increased are “Housing, water electricity, gas and other fuels” by 16.3 percent, “Communication” by 13.0 percent and “Education” by 11.4 percent.

If we take a look at the average consumption expenditures by prefectures we can notice that they vary over the years expressing different trends of their rank by the consumption expenditure amount. The prefecture of Tirane has the highest average consumption expenditure in 2014 as well as in 2007, but in 2009 it ranked third behind the prefecture of Gjirokastër and Fier. In 2014, the prefecture of Lezhe and Shkoder has the highest average consumption expenditure while in 2007, are the prefecture of Durres and Gjirokaster after the prefecture of Tirane that lead with the highest average consumption expenditure. When discussing about the prefectures with the lowest average consumption expenditure in years they also differ: while the prefecture of Berat, Kukes and Diber in the first two surveys ranked among the prefectures with the lowest average consumption expenditure, in 2014 they changed their position and were ranking higher, leaving the place to the prefecture of Elbasan and Vlore.

The average consumption expenditures measured by deciles show that in 2014, the average consumption expenditure has had a slightly increase compared with 2009, not only for the tenth deciles that represent the households with the highest consumption expenditures, but also for the 90 percent of the rest of the households. The deciles ratios for this indicator appear similar among the three surveys.

Conclusions

The main focus of a Household Budget survey is Consumption Expenditure, which is the activity in which persons; acting either individually or collectively, uses goods or services to satisfy their needs and wants. A household’s economic well-being can be expressed in terms of its access to goods and services. The more that can be consumed, the higher the level of economic wellbeing, though the relationship between the two is not a linear one. Measuring consumption expenditure might therefore be a way of measuring economic wellbeing. Studies of consumption investigate how and why society and individuals consume goods and services, and how this affects society and human relationships. This is why the HBs is very important in national context and a very good tool to make real comparisons among countries. Considering other EU countries experience in HBS, there is a room for improvements in accuracy and comparability. This means that harmonized and integrated HBs should be carried out. Efforts should be to increase the level of coherence among HBs, Living Standard Measurement Surveys, Labor Surveys, National Accounts ect. To conclude, Albanian statistical system, still have room to develop the adequate estimates of the entire population by extending the survey results on the weights assigned to all households of the sample inquired in the survey. The calculation of expansion coefficients should carefully involve the following steps: calculation of basic weights, non - response adjustment, sample recovery and the set of expansion coefficients

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STUDY OF THE IMPORTANCE OF SMES FOR THE GERMAN MARKET AND THEIR CURRENT CHALLENGES

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Abstract

This paper describes the changes of SMEs in Germany and their importance for the German and European market. The development of SMEs in Europe will be analysed and the current burdens and challenges will be defined. This paper will further describe the support of the German government and European Union for the SMEs. The objective aimed at was to describe the current situation and analyse the importance of SMEs for the German and European market. We analysed the available data of the European Commission and Institut für Mittelstandsforschung to compare the strength and weaknesses of German SMEs with the European average. The research showed, that the German SMEs are a big strength for the Germany economy, but have lost their leading role compared with the European average in supporting entrepreneurship and reducing the administrative burdens for the SMEs. The study highlights the past and current support of the European Union with the Small business act and the national support of the German government. A description of the planned further actions of the European Commission and the German government will be given at the end of this paper.

Keywords

SME, European Union, Small business act, German market

JEL Classification

L 22, L26, L53, M13

Introduction

The importance of small and medium sized enterprises in Germany has increased in the last years. Since the 1870s SMEs are a fixed asset of the German market with some ups and downs. In this article, the importance of SMEs for Europe and especially for Germany will be analyzed and the actions of the European Union and German government to support the SMEs in Europe will be explained.

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1. A Brief History of German SMEs

SMEs have a long tradition in Germany and were, for example, mentioned by Schmoller (1870) as an important factor for the German market and were responsible for innovations. During the industrialization they lost their good reputation and were seen as a burden for the German industry due to their limitation in production quantity and the low possibility of investment in innovations compared to bigger companies. Schumpeter (1942) stated that the bureaucratized industrial mass production companies [...] will consume the small and medium sized companies (Knorr, Lemper, Sell and Wohlmuth, 2006). Compared to large companies the SMEs are self-regulating and stabilizing system. Wilhelm Röpke (1948) saw further the high potential of innovations developed by the SMEs and their big advantage in flexibility compared to big companies.

2. Definition of SMEs

The recommendation of the European Commission of 6 May 2003 defined different types of Groups in the SMEs shown in Table no. 1.

Table no. 1 Definition of SMEs

Type size of company	Number of persons	and	Turnover per year Euros	or	Balance sheet total in Euros
Micro	Less than 10		Up to 2 million		Up to 2 million
Small	Less than 50		Up to 10 million		Up to 10 million
Medium	Less than 250		Up to 50 million		Up to 43 million
Large	More than 250				More than 50 million

Source: European Commission, 2016. Evaluation of the SME Definition, p. 8

Enterprises of the group “micro” have less than 10 employees and a turnover less than 2 million Euro per year. Alternatively they have less than 10 employees and a balance sheet total of maximum 2 million Euros. The second group is named “small” companies, which have less than 50 employees with a maximum turnover of 10 million Euros or a maximum balance sheet value of 10 million. Medium-sized enterprises are defined as less than 250 employees with a maximum turnover of 50 million Euros per year of a total balance sheet value of 43 million Euros.

3. Current Situation of SMEs in Germany

In the following chapter, the importance of the SMEs for the German market will be explained and compared with the importance of SMEs for other European members.

3.1 Importance for the German labor market

In 2012 the German small- and medium-sized enterprises have employed 62.5% of the German labor. The German SMEs have an employment under the average of the EU-28. But it should be taken into account that with ~16,500,600 jobs the German SMEs provided more than 18% of workspace in the EU-28 states. The *Statistisches Bundesamt, in Wiesbaden (2015)* published the labor statistic 2013 for the German market. 60% of the 26.4 million jobs are supplied by the small- and medium-sized companies in Germany. Due

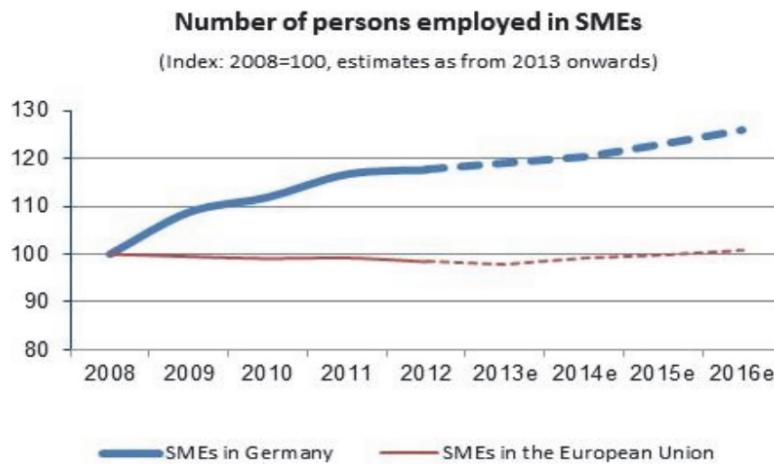
to the fact, that the statistic 2012 and the one from 2013 are made from two different institutions the result has be validated, but the percentage of jobs supplied by large enterprises has increased by 2.5% from 2012 to 2013 (IfM, 2016) - Graph no. 1.

Table no. 2 Employment by enterprises in the EU-28

	Total (thousands)	SMEs	Micro	Small	Medium	Large
EU-28	133,767	67.0	29.2	20.9	17.2	33.0
Germany	26,401	62.5	19.0	23.1	20.5	37.5

Source: Eurostat, 2015. Number of persons employed by enterprise size class, non-financial

In the SBA report of 2015 about Germany the European Union proved, that the employment in small- and medium-sized enterprises are above the average of the European Union. The forecasting is that the percentage of employment in the SMEs will increase in 2016, but in Germany the creating of jobs will continue to reach a level of nearly 130% compared with 2008.



Graph no. 1 Number of persons employed in German SMEs

Source: European Commission, 2016. N2015 SBA Fact Sheet Germany, p. 1

3.2 Value adding of SMEs

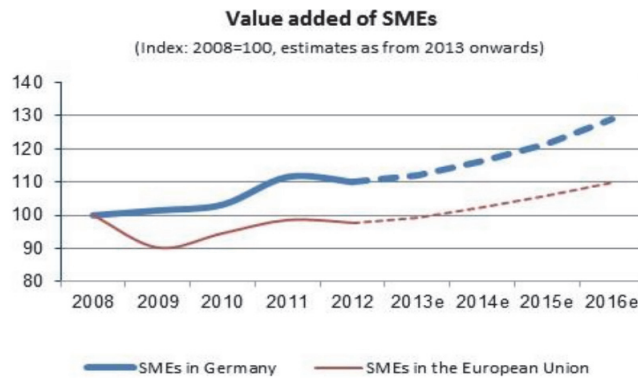
Analyzing the value adding of enterprises in the EU-28 – Table no. 3 - it is visible that German companies were able to add the most value in 2012, but the shares of SMEs were only 53.3%. Compared with the EU-28 this is 4.2% lower than average of 57.5%. Taking into account the total figures, the German small- and medium-sized enterprises have added a value of 738,472 million euro in 2012, which is more than 20% of the value added of all EU-28 SMEs and nearly 12% of the EU-28 total value added by all enterprises.

Table no. 3 Value added by enterprises of the EU-28

	Total (EUR million)	SMEs	Micro	Small	Medium	Large
EU-28	6,184,825	57.5	21.0	17.8	18.3	42.5
Germany	1,385,501	53.3	15.1	18.1	20.2	46.7

Source: Eurostat, 2015. Value added by enterprise size class, non-financial

The long time statistic of the European Union published in the SBA-report 2015 describes the change in value adding of SMEs in the EU compared with the changing of the German SMEs since 2008. The forecasting is that the SMEs in the European Union will show a value adding of nearly 110% in 2016 compared to 2008 - Graph no. 2. The German SMEs will reach a level of nearly 130% in 2016 compared to 2008.



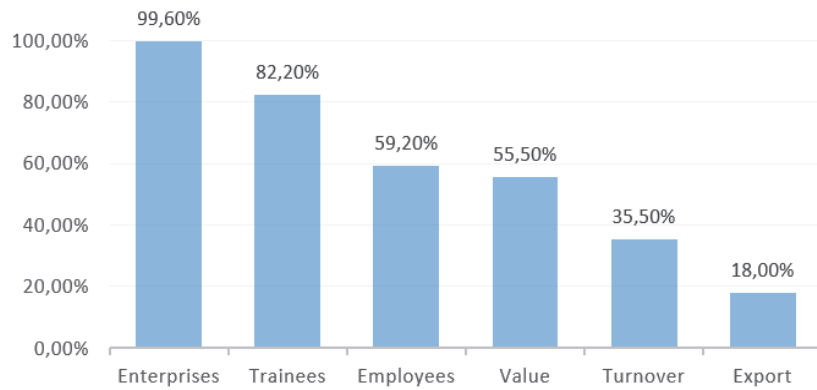
Graph no. 2 Value added of German SMEs

Source: European Commission, 2016. N2015 SBA Fact Sheet Germany, p. 1

In 2012 the small and medium sized enterprises have increased their turnover by 1% nevertheless the large enterprises were able to increase their turnover by 4%. (IfM Bonn: Mittelstand im Einzelnen, 2016).

3.3. Contribution of the German SMEs to the German market

The IfM (2016) in Bonn stated that in 2012 99.6% of German enterprises were categorized as SMEs. They employed nearly 60% of the total German labor and were able to add 56.5% of value - - Graph no. 3. The low percentage of shares of overall turnover shows, that 0.4% of the German companies are able to generate 63.2% of overall turnover. As a big part of the social responsibility the German SMEs are employing 82.2% of all trainees in 2013 (IfM Bonn, Mittelstand im Überblick, 2016). In 2013 the number of employed people by SMEs has increased to more than 60% to 26.5 million employees, but the in the same time the amount of SMEs has reduced by 0.3% to 99.3% of all companies in Germany.

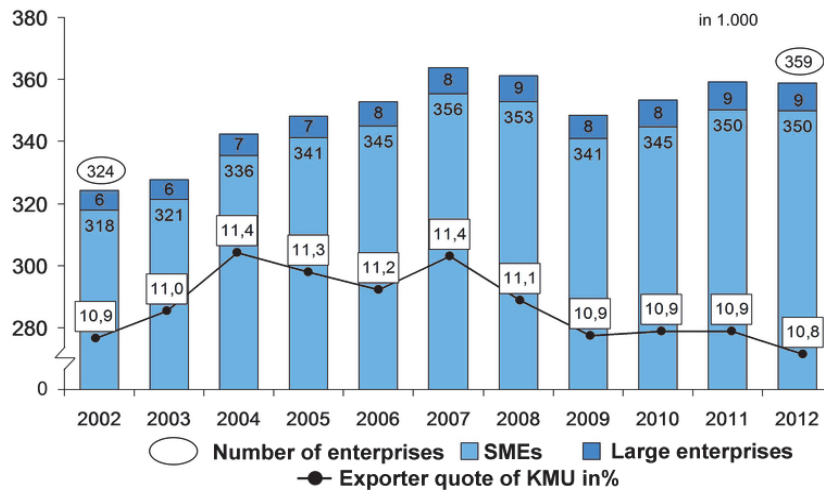


Graph no. 3 Shares of SMES in Germany

Source: IfM Bonn, 2016. *Mittelstand im Überblick*,

3.4 Importance of the SMEs for the German export

From 2002 to 2012 the numbers of companies which are exporting have increased from 324,000 to 359,000 with a small decreasing between 2007 and 2012 - Graph no. 4. The amount of large companies, which are exporting, has increased by 50% from 6,000 to 9,000 but the amount of SMEs which are exporting to other countries has increased from 318,000 to 350,000 which is nearly 10%. The quote of SMEs that are exporting has increased between 2002 and 2007 from 10.9% to 11.4% but during the last years, it continuously decreased to a level lower than 2002, 10.8%.



Graph no. 4 Exporting German companies between 2002 and 2012

Source: IfM Bonn, 2014. *Mittelstand im Einzelnen*, based on *Umsatzsteuerstatistik 2014* of the Statistisches Bundesamt

The IfM (2013) published the results of an empirical survey created with the results from 827 surveys. The interviewed companies stated that one problem is to overcome the bureaucratic burdens for starting to export in the European Union, like taxes and customs. Another big topic for European internal trade is the covering of financial risks for trading with companies and customers abroad and the difficulty to identify opportunities in distance markets. In emerging markets the legal certainty, corruption and unfair competition practices and political instability are higher risks. (Kranzusch and Holz, 2013).

4. The Small Business Act (SBA) for Europe

The European Commission considers SMEs and entrepreneurship as key to ensuring economic growth, innovation, job creation, and social integration in the EU and sees them as the backbone of Europe's economy (European Commission, Growth, 2016). Therefore the European Commission (2008) published the Small Business Act for Europe as a part of the Europe 2020 plan. The main targets of the Small Business Act are (European Commission, 2016):

- **Promoting entrepreneurship**

By educating young people about entrepreneurship for example with the Erasmus for Young Entrepreneurs started in 2009 from which more than 2,500 entrepreneurs have benefitted. The European Commission is increasing the attractiveness of start funding its own company. Further, the European Commission is highlighting the opportunities and reduced the administrative requirements and burdens for small and medium sizes enterprises;

- **Less regulatory burden** - for reaching the target of reducing regulatory burden in the European Union different groups are involved: European Parliament, European Council, European Commission, Member states. With the Regulatory Fitness and Performance Program, the European Commission is taking action to make EU law simpler and reduce regulatory costs. The program reduced complexity and costs in different areas like electronic VAT invoicing which saved business up to 18 billion euro a year or the REACH - Chemical Legislation that reduced registration fees for SMEs by 35% to 95%;

- **Access to finance** – Between 2007 and 2013 the CIP (Competitiveness and Innovation Framework Program) helped with a budget of over 1 billion euro over 340,000 SMEs to get access to loans and equity finance. One target of the Competitiveness of Enterprises and Small and Medium-Sized Enterprises (COSME) is to simplify the access to guarantees, loans and equity capital for small and medium-sized enterprises. The program is planned to run between 2014 and 2020 with a total budget of 2.3 billion euro;

- **Access to markets and internationalisation** - the fact that only 25% of the small and medium-sized enterprises in Europe are exporting to other countries and an even lower amount of companies are exporting abroad the European Union's border lead the European Commission to help SMEs to overcome the struggle of exporting. In November 2010 the EU opened the EU SME Centre in China to help European SMEs to access the Chinese market faster, but there is also a big potential in the BRIC countries which is covered by 7% - 10% by the EU SMEs (European Commission, 2011). The review in 2011 developed, that there has been an improvement, but that there is still a big potential;

- **Promotion of innovation and research with the HORIZON 2020 program** - the HORIZON 2020 program combines the FP7, which was the European Union's Research and Innovation funding program for 2007-2013, the Competitiveness and Innovation Framework Program (CIP) and the European Institute on Innovation & Technology (EIT). The program has three pillars and contains a total budget of 69 billion euro of which 20% should be used to stimulate the innovation and research in small- and medium-sized companies (Enterprise Europe Network, 2016).

4.1 SBA Profile of Germany

The SBA profile shows the strength and weaknesses of the German SMEs compared to the EU average. The German SMEs are competitive in nearly all areas except the Entrepreneurship and the responsive administration. The German SMEs politics is complying the EU regulations, but the following actions are currently discussed to improve the situation in the German SME market. As the SBA profile of Germany shows there are some areas in which an improvement is possible for the German small- and medium-sized enterprises. Therefore the German government is taking action to increase the competitiveness of the German SMEs in the global market. The policies and laws in Germany have been improved to also meet the desires of SMEs, but other member states were able to improve quicker and therefore take the lead in this area. The government adopted a list of 21 actions to contribute a better regulation and to simplify administrative procedures for SMEs in Germany. The administrative work for micro and small companies can be improved compared to other EU member states, which can be shown in the 2015 SBA Fact Sheet of the European Commission. The target is to reduce the administrative burdens for SMEs and especially for start-ups so that they are able to focus on their main work. This should be reached by raising thresholds accounting rules and implement online registration for companies. Cutting red tape and easing company interaction with the administration, should further reduce administrative burdens and was adopted in summer 2015 (European Commission, 2016). The performance in the area of entrepreneurship of Germany is in line with the EU average. One reason for a dramatic drop in supported start-ups from 146,500 in 2010 to 31,500 in 2014 was the cut back of the program which supported unemployed during the first month of their new business. To increase the funding of new enterprises the government implemented programs to bring the idea of starting an own business to the schools and bring successful CEOs to hold seminars at schools and universities. The financial background of the EXIT program has been tripled. The idea of this program is to financially support technology- and knowledge-based companies in the pre-start-up and start-up phase.

Conclusions

Due to the big contribution of the small- and medium-sized enterprises the German economy has a high dependency to them. This is based on the more than 59% of employment in Germany, the 35.5% of the total German turnover and the fact that more than 82% of the German trainees are employed by the SMEs. As the German government, the other EU member states are working on their policies, laws and regulations and are able to catch up with the suggestions of the European Commission. If the actions of the German government are enough to protect, support and stimulate the market for SMEs will be seen in the next years. It will be interesting to study the changes and developing of national and

international competition. In 2015 652 companies have been bought partly or completely by foreign investors (Spiegel Online, 2016).

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ECONOMIC IMPACT OF NEW TECHNOLOGIES ON THE AGRI-FOOD PRODUCTION

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Abstract

The emergent population of the globe and the resulted augmented need for food require the identification of some innovative strategies in the agri-food production, able to elevate the degree of global food security. The biotechnologies and the use of genetically modified plants might be a resource in avoiding a global food crisis despite the fact that, with regard to using them, there are certain reticent areas of the world. The countries with developing economies have adopted these modern methods of agriculture which ensure superior yields in comparison with the conventional crops, supplementary benefits for farmers and resolve severe malnutrition problems of the population. The present paper proposes an analysis of the evolution of the global transgenic crops phenomenon, establishing the concentration degree of the cultivated areas and of the GM plants authorised in various areas of the world using the Gini Struck method. The conducted research revealed the absence of correlation between the size of the cultivated land and the authorization of GM plant. There is a low degree of concentration of authorized GM products and a high concentration of transgenic cultivated areas worldwide. The paper has both academic and business applications, proving that from an economical point of view the cultivation of the GM plants is profitable and Romania would be able to obtain substantial benefits from such an innovative agro-food production technology.

Keywords

Agriculture, food, production, new technologies, GMO, concentration, Gini Struck.

JEL Classification

E21, O13, Q16, Q18,

Introduction

The global agro-food production is confronting now with the challenge of providing the food resources for a population of over 7 billion people in 2015 and for an allegedly increase of the population over 9 billion in 2050, and over 11 billion in 2100, respectively

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(United Nations UN, 2015). Under these circumstances, the Food and Agriculture Organization of the United Nation FAO (2009) forecasts an increase with more than 70% of the global food demand caused both by the demographic evolution and by the income growth of people. According to FAO experts, by 2050, the demand of cereals (destined for food or for animals) will probably reach an approximate value of 3 milliards tons and the meat consumption will reach the value of 470 million tons, which will require increases in the production of more than 1 milliard tons of cereal and 200 million tons for meat. At the same time, agriculture might experience a supplementary tension from the international market with regard to the production of biofuels, in relation with the prices for energy and the administrative policies. Under the action of some restrictive factors represented by the limited, in terms of surface, agricultural areas, by the limited resources of water and energy, by the production cycles, which cannot be reduced under certain limits or by the global climatic changes, the global need of foods leads to the identification of new solutions for the vegetal agricultural and zoo-technical production (Alexandratos and Bruinsma, 2012). Despite the fact that it promises a good protection of the environment and healthy and safe products, the ecological production cannot represent a viable solution to the food problems of mankind. According to the studies performed by Stanciu et al (2015), the cancellation of the food wastage, estimated to represent 20-40% of the global agricultural production, might represent an alternative in the reduction of the worldwide food deficit.

Research methodology

The information regarding the authorised (for commercialisation or cultivation) genetically modified plants, cultivated areas, agricultural operators registered in the transgenic agriculture were collected from official documents of European Union, United Nations, Food and Agriculture Organization of the United Nation, Internal Service for the Acquisition of Agri-Biotech Applications, GMO Compass. The data were statistically worked, being graphically represented. The Gini-Struck method was used to determine the concentration degree of the analysed variables. The results were compared with the data in the technical literature.

New directions in the development of agri-food production

Ensuring a worldwide reasonable and sustainable food security imposes the identification of some global strategies based on the reconsidering/innovation of technologies, the increase of the agricultural productivity of fields or the expansion of aquaculture (Godfray et al, 2010). Together with the strategies based on the production optimisation and the well management of the available resources, innovation in the agri-food production make use of the progress registered in the border research sectors of research such as nanotechnology or genetic engineering.

Nanotechnology is a technique derived from the medical and pharmaceutic fields with quite recent applications in the field of agriculture. According to Sekhon (2014), nanotechnology application in the agricultural production includes nanoformulations of agrochemicals for applying pesticides and fertilizers for crop improvement; the application of nanosensors/nanobiosensors in crop protection for the identification of diseases and residues of agrochemicals; nanodevices for the genetic manipulation of plants; plant disease diagnostics; animal health, animal breeding, poultry production; and postharvest management. Garcia, Forbe and Gonzales (2010) show that the research regarding the

impact of these techniques on the environment must be continued but the techniques based on nanotechnology and applied in the agri-food field might have significant benefits in agriculture (by increasing the yield of the crops, with a minimum impact on the soil and on the water consumption, reducing the nitrogen loss, increasing the degree of the long term nutrient incorporation of the soil microorganisms) or in the field of food industry (through a better management of food processing and commercialisation).

The practice of biotechnologies in the agri-food production is a resource in the reduction of famine and poverty, in the adaptation to the climatic changes and in the maintaining of the natural resources basis (FAO, 2016). Biotechnology provides viable alternatives for the synthetic foods and an advancement of plant cultivation conventional technologies. Combined with other advanced agricultural technologies, they are an interesting and responsible method for the environment to satisfy the consumers' need of durable agriculture. Among the available biotechnologies and the practical methods they can be applied, the genetic modification (GM) of crops might be the answer to famine, according to the UN experts (2009). Biotechnology provides possibilities for the developing countries. The use of high yield and pests resistant crops might have a positive impact in the improvement of food security, poverty reduction and protection of the environment. In some cases the transgenic crops can contribute to the reduction of the nutritional deficiencies, the most known example being the Golden Rice, created by researchers in Germany and Switzerland, rich in pro-vitamin A which can help an estimated 250,000 to 500,000 vitamin A deficient children (World Health Organisation, WHO 2016).

Worldwide embracing of transgenic crops

Although in some areas the genetically modified organisms (GMO) are reticently approached due to the partially unknown effects on the environment and on the human race, the transgenic crops were enthusiastically embraced by many states throughout the world. According to the data provided by the International Service for the Acquisition of Agri-Biotech Applications ISAAA (2016) in 20 years of biotech crops cultivation the following aspects can be emphasised the spectacular emergence of the areas allocated to the genetically modified crops and of the farmers who cultivate them. Globally, there are registered 29 transgenic plants, legally approved for using in 40 states and regions of the world, including EU, and which are made and commercialised by 57 developers, mainly private companies. Cumulated, in 2015, there were issued globally 1903 authorisations for commercialisation or cultivation of genetically modified plants, the highest numbers being registered in Japan (214), USA (192) and Canada (169). The concentration degree of the authorisations globally issued can be calculated using the Gini-Struck formula (Savoiu, Craciuneanu și Țaicu, 2010), being represented in table no.1.

$$GS = \sqrt{\frac{n \sum g_i^2 - 1}{n-1}} \quad (1),$$

where - n represents the number of terms of the series under study
 - g_i represents the weight factor of issued authorisations for the use of GM plants in the i state related to the total number of authorisations.

Table no. 1. The global concentration degree of the GM plant authorisations

Total number of states (n)	Total number of authorized GM	$\sum gi^2$	GS	Observations
40	1904	630.19	25.42	An average concentration degree

Source Authors, by using ISAAA data, 2016

In EU, there are authorised for commercialisation 86 transgenic plants, at present being admitted for cultivation only the genetically modified corn from Monsanto (European Commission EC, 2015). The main characteristics targeted by the mutations are the resistance to different agrotechnic treatments or pests, and the increase of the weight factor of some useful components. From 6 states to apply the transgenic cultures in 1996 (USA, Mexico, China, Canada, Australia, Argentina) it has come to 28 states in 2015, with over 17 million farmers to cultivate them, the areas dedicated summing more than 179.7 million ha. In total, throughout the 20 years of utilisation, there were cultivated approximately two billion hectares of Biotech crop. The state distribution of the cultivated surfaces with transgenic plants is uneven, USA, Brazil and Argentina having more than 75% from the total worldwide surface (figure no. 1).

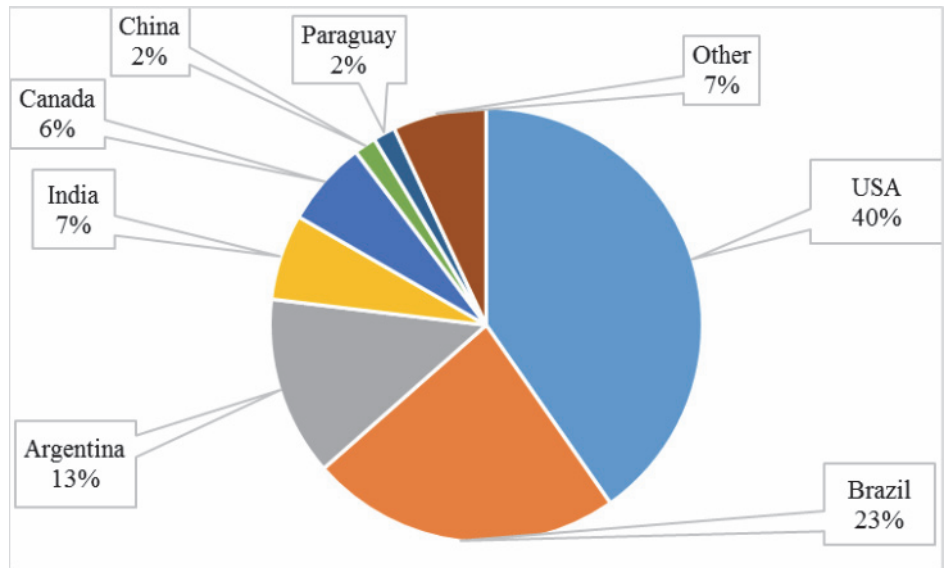


Figure no.1. The distribution of Biotech Crops, by Country

Source Authors, by using James data, 2015

The global concentration degree of the surfaces cultivated with GM plants is displayed in table no. 2. The analysis performed based on the Gini Struck coefficient shows a high degree of concentration of the agricultural surfaces distributed to GM, a normal aspect if taken into consideration the fact that 3 states cover more than 75% of the total globally assigned areas.

The list of the plants approved and of the countries that approve their utilisation is constantly updated on the ISAAA site. Spectacular progresses were registered in the cultivation of cotton, corn or transgenic soy.

Table no. 2. The concentration degree of the global authorizations for the GM plants

Total number of states (n)	Global area of Biotech crops (ha)	$\sum gi^2$	GS	Observations
28	181.5 mil. ha	2440,95	51,60	High concentration degree

Source Authors, by using ISAAA data, 2016

Globally, in 2016, there are registered 291 GM event from 29 plants (figure no. 2), unevenly distributed between the states of the world. As trends, stacked traits continued to be an important and growing feature of biotech crops. About 51 million hectares were stacked in 2014 and the steady and growing trend of more stacked traits continued last year, too.

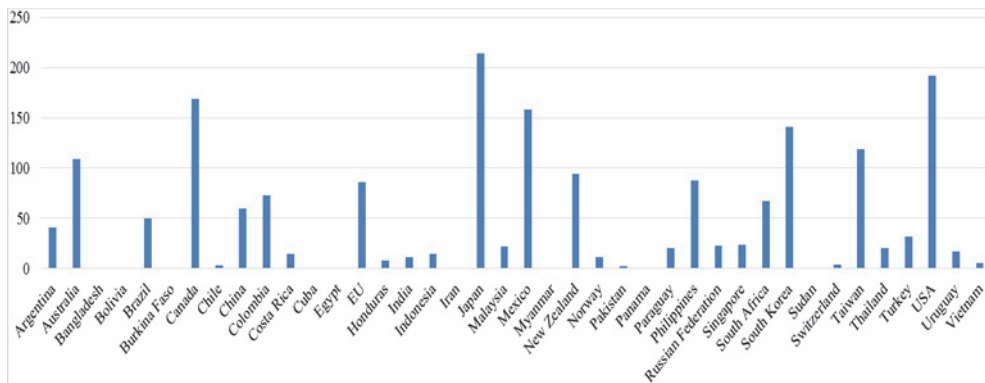


Figure no.2 Distribution of GM events by country

Source Authors, by using ISAAA data, 2016

Economic Data

In the 28 states, where there were cultivated GM plants in the year 2015, live almost 4 milliard people, which means more than half of the world population. With regard to their level, 20 states were developing (including the new biotech crop country Bangladesh) and only 8 were industrial countries, the areas cultivated being highly superior in the developing countries. With an average yearly growth medium of the sector of minimum 3-4%, the first 10 states in the hierarchy of the transgenic growers had an expansion of the cultivated areas in the last 20 years of at least one million hectares. A first calculation reveals that the transgenic crops provide important financial benefits to farmers (table no. 3). According to EC (2000) analysis, the profitability of GM crops should be analysed within a long-term timeframe, keeping in mind the annual fluctuations of crops and prices and the opinions of the request (inclined towards a more careful analysis of the transgenic production) and of the offer, respectively (continually growing as more and more farmers from the exporting countries access this type of production). At the same time, it must be mentioned that the developed countries that do not cultivate GM crops, especially in EU, are importers of cereals and soybean meal to feed animals or for biofuels. According to Stanciu and Sârbu (2015), the ceasing of soy GM production as a result of Romania's adherence to EU, led to annual losses for the Romanian farmers between 150-300 million euros, despite

the existence of a high potential for intern production and of the favourable notice from Romanian Academy.

EU is still careful and prudent with regard to GM plant as there are being applied strict rules regarding their authorization and commercialisation and the adequate labelling to fully inform citizens.

Table no. 3. Cost and yield comparison of GM vs conventional crops

Profitability criteria	GM Crop	Difference GM versus conventional		Source
		Min	Max	
Costs Seeds (Euro/ha)	HT Soybeans	13.5	15	Various, convergent Alexander, Goodhue
	Bt Corn	3	35	
	HT Canola	11	25	
Costs Weed control (Euro/ha)	HT Soybeans	-33	-36	Furman, Selz Duffy
	Bt Corn	6	6	
	HT Canola	-8	-54	
Yields (%)	HT Soybeans	12%	4%	Benbrook Gianessi, Carpenter
	Bt Corn	3%	9%	
	HT Canola	11%	79%	

Source EC, 2000

Only Monsanto corn is now authorized on a European level, but there still can be noticed a gradual reduction of the areas allocated to this type of crop as a response to public opinion request. The European consumer is constantly against Biotech crops and their direct human intake, and part of the state members have voluntarily given up cultivating transgenic plants. However, in order to cover the consumption needs, there are imported significant quantities of cereals/leguminous GM to feed animals. Thus, the annual average soy consumption on a European level, ranges between 30 and 36 million tons out of which 1 million tons is produced by the state members, the rest being imported mostly from South America (where GM production is dominant), and there are no perspectives of covering the demand with the help of internal production (GMO Compass, 2014). High imports are realized in the case of corn, too, the European market having an annual demand of supplementary quantities of 7-16 tons over the internal production, out of which a third comes from USA, Canada, Brazil or Argentina, traditional producers of GM Maize (EC, 2015b).

Environmental impact

The arguments of the GM seeds producers are based on the reduction with more than 500 million kilograms of the quantity of pesticides used in the last 17 years, a reduced environmental footprint associated with pesticide use by 18.7% or the significant drop of the greenhouse emissions (ISAAA, 2016). In addition, together with the diminishing of the pesticide use there were reduced the cases of farmer illnesses. Furthermore, the studies conducted in Philippines or Romania did not emphasise a significant impact on the environment in the cultivation of Maize or Soy GM. The research performed by the employees of the companies producing transgenic material show that, throughout the 20 years cultivation period, there were not found cases of illness or death in the case of the animals fed with genetically modified feed (ISAAA, 2016).

The researchers' reticence regarding the use of GM plants is mainly associated with the inconclusive relatively short testing period concerning the potential risks of translocation phenomena and modified DNA combination with the human one, animals or plants in the farms, the reduction of biodiversity or the development of some allergic responses of human consumers. Moreover, the elimination of a natural pest might lead to perturbations in the natural trophic chains. The studies performed in US revealed that there is possible for the pests to develop a high resistance to antibiotics or to specific treatments for the GM crops. Additionally, there were situations when there were created certain plants which were not economically profitable, with registered losses of more than 500 million USD (University of New Mexico, 2014).

Conclusions

The new agri-food production technologies are globally required despite the reticence of some areas or countries. The production of GM plants has been the most dynamic sector of agri-food production in the last years, the growing prognosis still being optimistic. The developing countries embrace frenetically the transgenic crops, which are perceived as a solution to stop famine, reduce farmers' poverty or resolve some nutritional problems of the poor population. Although EU remains prudent with regard to the cultivation of GM crops, the community market is dependent of the feed required in the zoo-technic sector which are mainly imported from the traditional producing GM food countries. Annually, Europe loses significant money because of feed imports but prefers to do so to increase the food security.

From an economic point of view, the transgenic crops bring important benefits to farmers via the reduced chemical treatments for pests and the use of some resistant plants to environmental conditions, characterised by high productivity which unfortunately lead to their dependence on big GM seeds-producing companies.

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ONLINE SHOPPING –MACRO-TRENDS AT THE LEVEL OF THE EU COUNTRIES

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Abstract

The main goal of the current manuscript is primarily to provide an overview of the online shopping phenomenon and of its main trends at the level of the economies of the European Union and secondly to identify some macro level characteristics of the EU member states that can be used as predictors of the development level of the studied phenomenon.

The study is conducted on macro level data downloaded from the online database of the Eurostat and from the online database of the World Bank and they cover the period 2004 – 2014 (annual data).

As important findings we can report that even though the development of the online activities is significant, during the analyzed period for all included economies, important disparities are constantly recorded.

The GDP/capita, the percentage of households with Internet access, and the frequency of the Internet access were identified as good predictors of the percentage of individuals purchasing online during the last 12 months.

Keywords

Online purchase, European Union, GIS representation.

JEL Classification: L81, L83, L86, L17, L22

Introduction

Worldwide, online shopping is no longer a simple activity, or form of commerce, but it became a very complex field where companies compete for winning new markets and meeting their required standards. Nowadays, e-commerce became an essential component of economic development policies promoted mostly by developed-industrialized countries. Notable is the fact that governments of the most important industrialized countries have promoted several measures with the clear purpose of establishing a regulated unique (in terms of conducting commercial transactions electronically) electronic global market, which becomes one of the most important components of the global market. However, in the same time, the availability of information technologies related to the

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Internet, their low cost and their relative independence, compared to traditional technologies, has fueled a rapid growth in the emerging economies as well.

The electronic commerce has two main effects, which will change forever the way commerce is perceived by the general public. The first effect is represented by the impact on "middle-men" and also by the changes that will occur in the entire production chain, starting with product design and ending with the final purchase action. The second effect concerns directly the structure of the markets. As it is often said, the Internet is perceived as the "great equalizer of values" in the sense that it allows small companies to compete on similar grounds with large firms, enhancing therefore the competition. This new e-commerce even allows developing countries to compete with the more powerful developed countries by mitigating the development gap.

General background and brief literature review

In the literature, the concept of online shopping has received important attention resulting in several definitions and interpretations which differ in principle, depending on the components taken in consideration by different authors and specialists. Online shopping drew attention through a large number of concepts, theoretical and practical phrases used in different forms and contexts. Noteworthy is the fact that important steps have been taken, by most authors interested in the topic, to develop appropriate definitions and terminology to describe the entire activity of online commerce. Most frequently the online shopping concepts are used by the great majority of users as adjacent concepts related to the entire world of the Internet.

A general approach of the online shopping concept includes all activities related to strategic and tactical online environment that transform business relationships, whether business-to-consumer, business-to-business, intra-business or consumer-to-consumer (David C. Parkes and David M. Pennock, 2009). However, it is important to note that online shopping activities are not confined to specific activities conducted online but also include activities conducted outside the Internet, which are considered as being support activities for those implemented online. Therefore, the online shopping should be considered an online business initiative focused on business transactions using the Internet as a medium of exchange, both in the business-to-business relations, and in the business-to-consumer ones. (Kariyawasam, Kanchana, 2008).

One of the most important attempts of describing the conceptual framework specific to the activity of these service providers (Saseanu et al. 2016) stresses the importance of the professional knowledge in the development of the entire e-commerce phenomenon.

Research goal and methodology

The main goal of the present manuscript is to present the main trend in what the online shopping is regarded, at the level of the European Union motivated by the fact that nowadays, this commerce method is growing rapidly becoming the preferred alternative both by companies and by costumers due to its important advantages compared to the classic commerce methods.

The data used in this analysis were downloaded from the online database of the Eurostat and from the online database of the World Bank and they cover the period 2004 – 2014 (annual data).

Table no. 1

Name of the indicator	Source	Missing Data	Time period	Variable
Last online purchase in 12 months (% individuals who used internet in the last year)	Eurostat	Yes	2004-2014	op_iu
GDP per capita, PPP (constant 2011 international \$)	World Bank	No	2004-2014	gdp_c
Gini coefficient of equalized disposable income	Eurostat	Yes	2004-2014	gini
Households with Internet access (% households)	Eurostat	Yes	2004-2014	hia
Last Internet use: in the last 12 months (% all individuals)	Eurostat	Yes	2004-2014	
Frequency of Internet access: once a week (including every day) (% all individuals)	Eurostat	Yes	2004-2014	fia
Last online purchase: in the 12 months (% all Individuals)	Eurostat	Yes	2004-2014	op_ti

Source: Authors' work

The analysis includes trend assessment using indices and rates and GIS graphical representations which are used in order to assess the evolution of the online shopping at the level of the member states of the European Union. Finally, an econometrical model is estimated in order to provide a quantitative explanation for the online shopping phenomenon using some Internet related characteristics of the EU member states and also the economic development level (proxied by the gross domestic product per capita). The general structure of the model is the following:

$$OP_{-}TI_{it} = \beta_0 + \beta_1 \cdot GDP_{-}C_{it} + \beta_2 \cdot HIA_{it} + \beta_3 \cdot FIA_{it} + \varepsilon_{it} \quad (1)$$

Empirical results

Purchasing online becomes more and more frequent nowadays when almost all products are available online. Moreover the customers have access to shops which might not be easily accessible due to their location (other cities, countries and even continents).

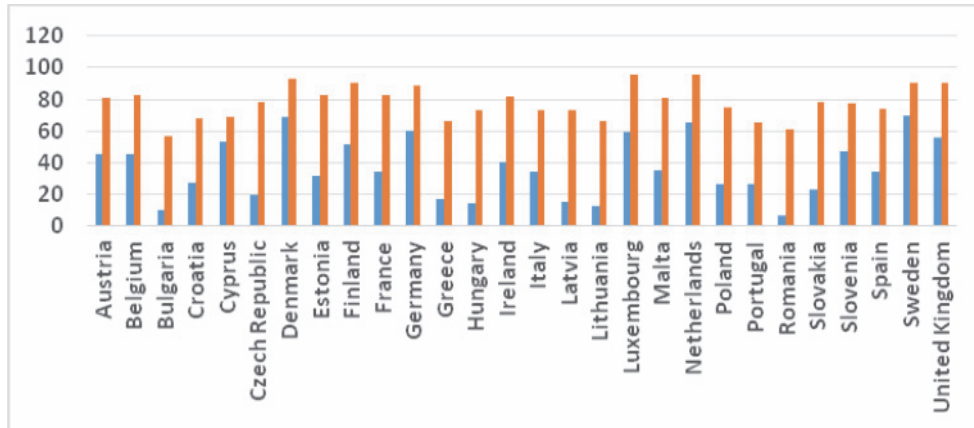


Fig. 1 Percentage of households with Internet access 2004/2014

Source: Authors' work

A very important precondition of buying online is being able to go online and as it is visible in the figure 1 the accessibility of the European households has increased significantly over the analyzed period. At the level of the year 2004 Bulgaria and Romania were with 10% and 6% the European countries (they were not EU members by then) with the lowest percentage of households connected to the Internet. They are still closing the rankings in 2014, but they have switched places with significantly higher percentages: Bulgaria 57% and Romania 61%. Netherlands with 65% and Denmark with 69% of the households connected to the Internet were in 2004 the countries with the highest percentage of *online* households. They have maintained their top positions reaching a 96% (Netherlands) and respectively a 93% (Denmark) in 2014.

Another important aspect that can be considered as having a direct impact on the online purchases done by individuals is represented by the percentage of population which uses the Internet frequently. At the level of the year 2004, the countries located on the northern flank of the European Union were among the ones with rates higher than 70%: Sweden 85%, Netherlands 79%, Denmark 81% and Finland 72%. In the same time, Romania was at 15%, Bulgaria at 18% and Greece at 21%. The evolution is significant for all 28 countries, Romania and Bulgaria with a 59% rate being on the last position in 2014. In the same time Luxembourg, Netherlands and Denmark are displaying rates around 95%.

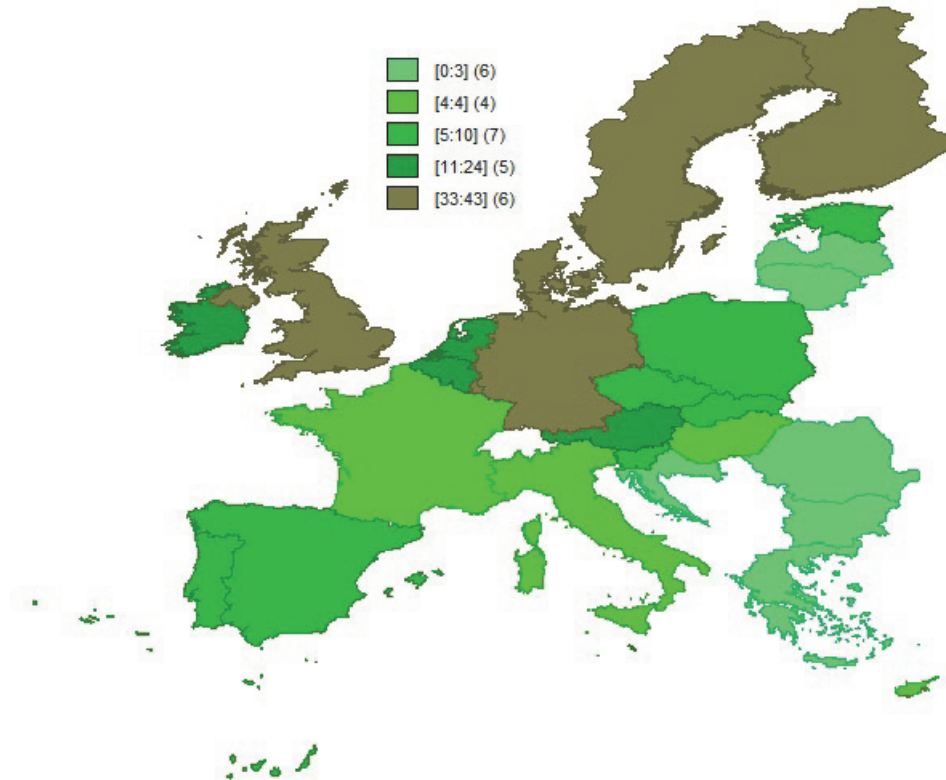


Fig 2 - Last online purchase: in the 12 months (% all Individuals) 2004

Source: Authors' work

The map of the last online purchase done in the last 12 months, at the level of the year 2004, clearly shows that we can identify a two speed Europe. The northern countries display rates of over 20% showing that online shopping was considered an alternative even though in 2004 the entire online shopping experience was significantly less developed than it is today. On the other hand the eastern and southern EU members display rates under 10% showing therefore that online shopping was not considered as a viable alternative to the classic shopping experience.

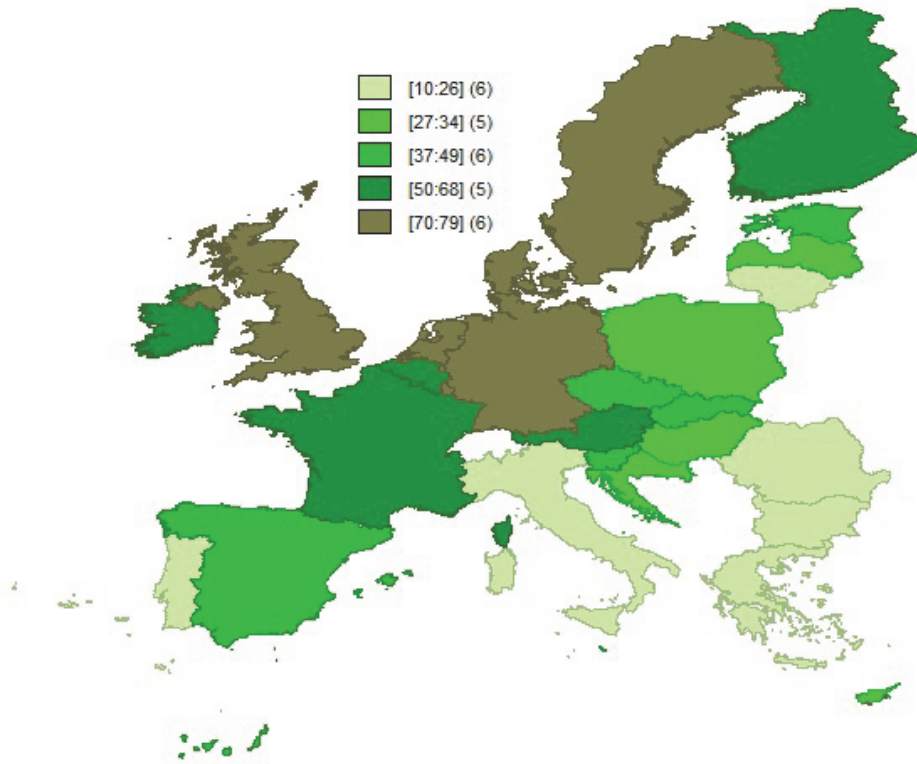


Fig. 3 - Last online purchase: in the 12 months (% all Individuals) 2014

Source: Authors' work

The figures have modified significantly during the analyzed period and the rates have reached values of over 50% for most developed markets from the northern and central part of the Union (those countries colored in darker shades). On the same time period the new member states and also the older members located on the southern flank still record significantly lower rates. Romania, Bulgaria, Greece, Portugal, Italy and Lithuania record rates lower than 30% being somewhere close to the rates recorded by the developed markets at the level of the year 2004.

Table no.2. Output estimation

Dependent variable: Last online purchase: in the 12 months (op _{ti})	
Time period: 2004 - 2014	
Cross – sections: 28	
	Model
Independent Variable	No effects (Period SUR)
GDP_C	0.000378*
HIA	0.180162*
FIA	0.589119*
C	-27.02424
R square	0.81
Adj R square	0.80
Durbin - Watson	1.94

Note:* represents statistical significance at 1% level, ** at 5% level and *** at 10% level.

Source: Authors' work

The estimate model clearly displays positive correlations between the percentage of individuals purchasing online, the GDP per capita, the percentage of households with an Internet access and the percentage of persons using the Internet at least once a week. As it was expected all these factors are a good predictor for the online shopping behavior of the population, taking in consideration their positive and statistically significant coefficient.

Conclusions

Even though in the current manuscript we have a brief analysis of the e-commerce activity at the level of the European Union, involving macro-economic variables, it is clear that the phenomenon is becoming part of the daily life of most EU members. Although, the development is significant in all EU member states we can still speak about important disparities between the European economies. As it is expected, the inhabitants of the northern and the western part of the European Union are more inclined to purchase online.

The estimated models link clearly the activity of online shopping with the socio-economic development level of the EU members. The coefficients of all three independent variables included in the model are positive and statistically significant for a 1% significance level. Therefore we can conclude that the brief research presented in this paper is a useful attempt in providing an overview of the e-commerce phenomenon and of its main trends, at the level of the European Union. Notable is also the fact that the paper identifies some macro-characteristics (related to the development level of an economy) of the EU economies which can be used as important indicators of the development level of the e-commerce activity at national level.

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LINKING INNOVATION TO BUSINESS MODELS: THE CASE OF LEGO

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Abstract: Innovation studies arose as a distinct scientific domain in the 1960s. Since then scholars and researchers worldwide have generated a vast body of literature on innovation as the topic has unceasingly gained in importance. It has been taken as axiomatic the fact that innovation has been a fundamental element of flourishing business models in the last decades because it constitutes one of the most important characteristic associated with success. The aims of our paper are to render in short some theoretical issues about the concepts of innovation and business model, and to illustrate their relationship within a Danish company. The research method was the literature review. Our paper demonstrates that innovation and business model are two tightly interlinked concepts because they are concerned with improving the ability of the organization to become successful in a changing environment. Innovation is integrated into the business model of a company from idea generation through its departments (e.g., research and development, sales). Only the business models driven by innovation allow companies to thrive in an increasingly disruptive world.

Keywords: innovation, business model, LEGO, company, strategic management

JEL Classification L10, O30

Introduction

Innovation represents an old phenomenon both in the history of humanity and in the economic world. Innovation is present in every aspect of our lives and, therefore, acquires a central place in today's society. In a world characterized by uncertainty and incessant change the "why" of innovation is obvious. On the one hand, innovation is the driver for change. On the other hand, change remains a key driver of innovation. People, organizations and societies have to continuously innovate in order to be prepared for change, to initiate and face change.

Governments worldwide are aware that innovation is important for them in order to cope with global challenges (e.g., sustainable development) and recognize that innovation acts as a growth engine in the current economy. These problems impose the need of "reforming the

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management and funding of public investment in science and research, as well as public support to innovative activity in the private sector” (OECD, 2007, p. 5). Furthermore, “new growth opportunities come from providing new products and services derived from technological breakthroughs, new processes and business models, non-technological innovation and innovation in the services sector, combined with and driven by creativity, flair and talent, or, in other words, from innovation in its broadest sense” (European Commission, 2014, p. 2).

Innovation studies arose as a distinct scientific domain in the 1960s. Since then scholars and researchers worldwide have generated a vast body of literature on innovation as the topic has unceasingly gained in importance. They have focused on various issues such as technological innovation (Chesbrough, 2006; Utterback, 1994), organizational innovation (Erbe, 2014; Poole and Van de Ven, 2004), management innovation (Birkinshaw, Hamel and Mol, 2008; Hamel and Breen, 2007), strategic innovation (Govindaranjan and Trimble, 2005; Hamel, 1998) or process innovation (Tidd, Bessant and Pavitt, 2005; Davenport, 1992). Also, innovation has become one of the most debated subjects in the literature on business models as a key facet of creating competitive advantage (Boons and Lüdeke-Freund, 2013).

The innovation imperative requires significant efforts to be made by companies from all over the world in order to keep the pace of competition. As innovation is a company-wide endeavour (de Jong, Marston and Roth, 2015) that increasingly matters in the business world, it has led to the appearance of different performances between enterprises of all sizes. It has been taken as axiomatic the fact that innovation has been a fundamental element of flourishing business models in the last decades because it constitutes one of the most important characteristic associated with success. In this respect, the speed of designing, developing and implementing new process technologies “increasingly shapes the overall cost, timeliness, and results of new products introductions, and the overall competitive success of the company” (Pisano, 1996, pp. 3-4).

Arising from the above discussion the following question emerges: is there a relationship between the concepts of innovation and business model? In order to obtain data for answering this question we used a methodological approach based on a literature review.

The aims of our paper are to render in short some theoretical issues about the concepts of innovation and business model, and to illustrate their relationship within a Danish company.

The paper is organized as follows. The second chapter of the paper presents the conceptual framework and the research methodology. The case of a toy company, LEGO, is analysed in the third chapter of the paper, which relates to the question that have driven our study. This is followed by conclusions.

Literature review

In order to show the diversity of the theoretical framework regarding the concepts of innovation and business model, we provide several examples of definitions. In the past decades, they have become two highly debated issues in the literature and an important topic of study for various disciplines such as business, strategic management or economics.

As the term “innovation” has been studied in many domains and analysed from different point of views, it has proved to be rather ambiguous and led to a lack of a common definition. However, innovation can be defined as:

- “a new product or process that can be exactly repeatable by anyone” (Howkins, 2013, p. 5).
- “the conversion of a new idea into revenues and profits” (Lafley and Charan, 2008, p. 21).
- “the development of new products or new ways of selling” (Collin, 2007, p. 208).
- “the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market driven products and services” (Plessis, 2007, p. 21).
- “a means of changing an organization, either as a response to changes in the external environment or as a pre-emptive action to influence the environment” (Damanpour, 1996, p. 694).

The notion of innovation is therefore described from different perspectives. In essence, it means the application of new ideas or concepts to the products, services or processes of an organization that lead to the increase of its value.

On its turn, the term “business model” has been interpreted in different ways that gave rise to a multitude of definitions. In spite of the ubiquity of the term, it can be defined as:

- “the clarification of how the organization fundamentally manages its core business activities” (Witcher and Chau, 2010, p. 316).
- “how a firm organises itself to create and distribute value in a profitable manner” (Baden-Fuller and Morgan, 2010, p. 157).
- “a tool for understanding the dynamic process through which actors seek to articulate how value might be extracted from highly uncertain and often ambiguous technologies ” (Perkmann and Spicer, 2010, p. 5).
- “a conceptual tool containing a set of objects, concepts and their relationships with the objective to express the business logic of a specific firm ” (Osterwalder, Pigneur and Tucci, 2005, p. 5).
- “a representation of a firm’s underlying core logic and strategic choices for creating and capturing value within a value network” (Shafer, Smith and Linder, 2005, p. 202).

Thus, the concept of business model has also various meanings for different authors. Being related to the strategic management of a company, the business model shows the business logic of a company, the way it creates and delivers value.

Research methodology

The research method was the literature review. A literature review represents “a systematic synthesis and evaluation of a body of information that can provide an efficient overview of the information on a particular topic” (Lapan and Quartaroli, 2009, p. 20). The purposes of our literature review were to define the concepts of innovation and business model, and to demonstrate their relationship.

Our literature review process comprised several successive steps. Firstly, we selected innovation and business model as the review topic. Secondly, we carried out a search within the business literature, by reviewing books, studies and articles published mostly after the year 2000. Thirdly, we gathered, read and analysed the data from the literature. Also, we established the conceptual framework, “a representation, either graphically or in

narrative form, of the main concepts or variables, and their presumed relationship with each other” (Punch, 2005, p. 53). Finally, we wrote the review and selected the references.

Results and discussion

Today, both theoreticians and practitioners accept the idea that innovation and business models are closely related at a micro level. Business organizations, especially multinational and transnational corporations, use innovation as a competitive tool. Thus, their management is forced by market factors to “support innovative activity systematically and substantially” (Baumol, 2004, p. ix) and to “invest in a wider range of intangible assets, such as data, software, patents, designs, new organizational processes and firm-specific skills” (OECD, 2013, p. 17). As a consequence, innovation management has emerged as a process of managing innovation in connection with the specific business model of a company. Management innovation is “anything that substantially alters the way in which the work of management is carried out, or significantly modifies customary organizational forms, and, by so doing, advances organizational goals” (Hamel and Breen, 2007, p. 19) or “the invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals” (Birkinshaw, Hamel and Mol, 2008, p. 825). This is why “the systematization of the management innovation process is an important challenge facing companies today” (Mol and Birkinshaw, 2008, p. 144).

In fact, “success in innovation appears to depend upon two key ingredients- resources (people, equipment, knowledge, money, etc.) and the capabilities in the organization to manage them” (Bessant and Tidd, 2007, p. 10). An innovation makes progress within a business organization by means of managerial decisions. Strategic management, in general, and business model, in particular, has therefore become central to innovation in any company. On the other hand, innovation plays a key role in creating the context for successfully managing the business organizations in a strategic manner. Innovation introduces novelty within a company, leads to structural changes of the business model, and explains the differences in performance between companies. This means that strategic management needs innovation.

The above discussion demonstrates that innovation and business model are two tightly interlinked concepts (Fig. no. 1) because they are concerned with improving the ability of the organization to become successful in a changing environment. It is obvious that “a firm does not innovate in isolation, but depends on extensive interaction with its environment” (Fagerberg, Mowery and Nelson, 2006, p. 20). Innovation is integrated into the business model of a company from idea generation through its departments (e.g., research and development, sales). In this respect, we have presented the case of LEGO in the next pages. A well-known company in the global business world, LEGO is a Danish toy manufacturer. Ole Kirk Christiansen, a master carpenter, founded the company in Billund (Denmark) in 1932. He launched his business by making wooden toys and expanded later to producing plastic toys. In the late 1940s, LEGO began manufacturing the interlocking bricks. In the mid 1950s, Godtfred, his son, thought that it would be better to create a LEGO system of play. He identified six features under the name of “Principles of Play” that might define a viable universal system and issued to every employee of the company (e.g., limited in size without setting limitations for imagination, affordable, for girls, for boys, fun for every age). Starting with the late 1950s, LEGO bricks have remained compatible with current ones. Today’s bricks still interlock with those made 55 years ago. In our times, LEGO

embodies “two distinct yet related underlying logics of material culture: atomism, which conceives of and treats objects as assemblages, and plasticity, a mythos of unbounded creativity and mastery over objects” (Lee, 2014, p. 96).

The name of the company can be interpreted as “I assemble” in Latin and represents a combination of two Danish words: “leg godt” or “play well”. The motto of the company is “det bedste er ikke for godt” or “only the best is good enough”, expressing its desire to obtain exceptional performance. Created by Christiansen, this motto inspires the employees to be innovative at their workplace and encourages them not to skimp on quality. Six fundamental principles have guided the company since its appearance (Table no. 1).

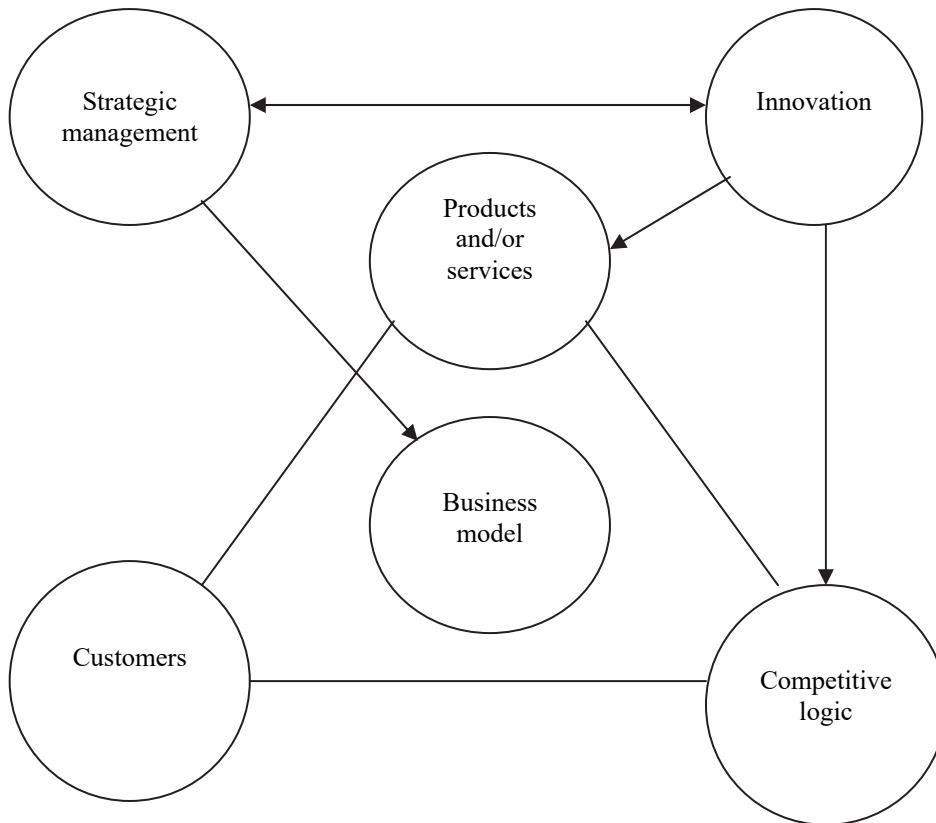


Fig. no. 1 The connection between innovation and business model

Researchers have showed that “the use of Lego bricks and minifigures as artefacts to facilitate knowledge and ideas generation channels individual and collective strategic thinking and creativity” (Hadida, 2013, p. 3). As strategic thinking and creativity give rise to innovation through the combination of its resources (e.g., ideas, processes, products), the management of the Danish company has made significant efforts to boost innovation.

Why did LEGO put innovation on the top of its strategic management agenda? The main reason was the fact that at the end of the 1990s its business model did not work anymore. In 1998, the company reported the first loss in its business history. In order to face the challenges of a media-driven entertainment society LEGO has embraced the innovation

imperative. Therefore, the company designed and implemented a new business model, driven by innovation.

Table no. 1 The founding principles at LEGO

No.	Principle	Summary
1.	Values are priceless.	Every company, at its beginning, has a purpose and a set of values that emanate from the founder. LEGO makes no exception.
2.	Relentless experimentation begets breakthrough innovation.	Game-changing comes from persistent experimentation.
3.	Not a product, but a system.	The LEGO universe expands gradually with the launch of each new toy.
4.	Tighter focus leads to more profitable innovation.	“Less is more” is a principle that companies must not forget.
5.	Make it authentic.	LEGO always continued to make its toys very close to the real live.
6.	First the store, then the kids.	The stores rank first among LEGO’s priorities.

Source: Robertson and Breen, 2013

By embarking on that ambitious initiative LEGO oriented its efforts around the so-called ‘seven truths of innovation’ (Fig. no. 2). In this respect, the new business model was built on an innovation organizational culture. That is why its culture valued and celebrated creativity as the most important thing. Firstly, LEGO understood the need to recruit creative people and attract talents from all over the world.

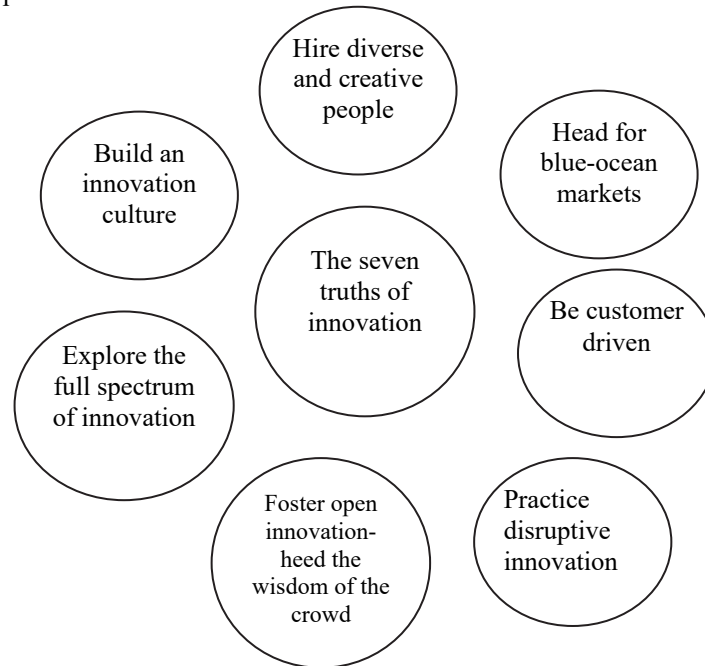


Fig. no. 2 The seven truths of innovation at LEGO

Secondly, LEGO took a decisive turn by putting the kid's point of view and imagination on the first place. Thirdly, the company hired software specialists in order to create a computerized LEGO construction system and transform bricks into bits. For example, the success of LEGO's Bionicle has been explained by the fact that "turning a toy into a story greatly increased emotional bonding to the product" (Fonnesbaek and Andersen, 2005, p. 31). By introducing a story-telling element and developing a new visual universe LEGO changed its business model in order to compete against rivals from computer games to film industry and sports. Bionicle greatly outperformed other toys and games especially due to the innovative approach of the company: marketing a toy as a movie.

Conclusions

Academics and researchers have devoted significant amounts of time to provide the theoretical framework for the concepts of innovation and business model. Moreover, they have found that innovation represents a key element of an effective strategic management of a company. Today the turbulent environmental conditions exert a great pressure on business organizations. A ferocious race among companies in order to better face the challenges of a hypercompetitive business environment has imposed innovation both as an imperative and a useful tool. Innovation has proved to constitute a fundamental factor that separate successful companies from the rest of the companies. That is why they have implemented innovation into their business models.

Our paper shows that innovation and business model are two interconnected concepts that are of interest to both theoreticians and practitioners across a range of various business domains. Only the business models driven by innovation allow companies to thrive in an increasingly disruptive world.

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AGILE MANAGEMENT BASED ON MODULARIZATION OF PRODUCTS AND PROCESSES

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Abstract

Currently, to withstand on the market and especially to make profits, companies must be able to modify their production strategies in order to respond quickly, with quality products at minimal costs. The company's management should be innovative and agile. Modularization is a key strategic option in order to enable production to integrate new consumer demands quickly and efficiently. Considering these issues and succeeding to create an interdisciplinary collaboration between economic and engineering fields, we made an analysis to verify if the modularization can be widely adopted, at convenient cost and offering a high technical precision. With this paper we consider that we done a step forward to find optimal solution so that modularization become a successful response in an agile environment.

Keywords

agile management, modularization of products and processes, modular design, economic efficiency.

JEL Classification

L15, L23, M11, O14, O32.

Introduction

Open and honest orientation towards solving customer problems is the key that opens the door to management success. In business, there are two main ways to create and sustain superior long-term performance: exceptional customer care and constant innovation.

A company that adopts the concept of agile management as a philosophy sees the principal driving force behind its work, considering that the business can survive only if it manages to satisfy the customers' needs. In a modern economy, buyers can choose what, when and where to buy or whether to buy a product or not.

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Thus, to be successful in attracting consumers, the logical starting point for the company is to identify what customers want and then try to meet these requirements in a more efficient manner than the competition. In order to do that, the *company's management should be innovative and agile*. Market dynamics determined organizations to develop a new approach called *Agile Performance Management* combined with agile manufacturing and based on the skills, attitude and the ability of the employees to innovate and drive changes. These skills should be built over time and performance management that is successful will be focused on constantly developing.

Agile management, or agile process management, or simply agile refer to an iterative, incremental method of managing the design and build activities for engineering, information technology, and other business areas that aims to provide new product or service development in a highly flexible and interactive manner (Moran, A, 2015, p.254).

In 2001, Jim Highsmith set up the basic principles of agile management included in his Agile Manifesto. According to his view, there are 12 principles, as can be seen in figure 1.

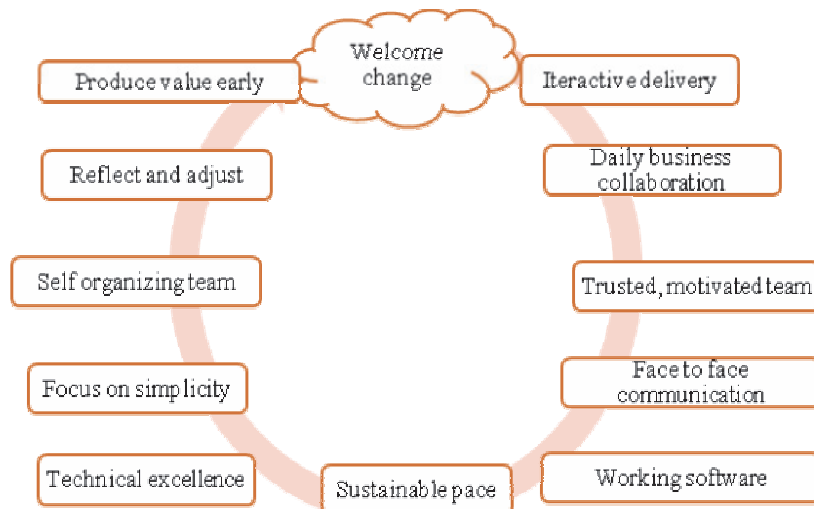


Fig. no. 1. The main principles of agile management

In the knowledge-based economy, 21st century organizations learn how to adapt their human resources, products and manufacturing processes to the rapid changes occurring in consumer demand. Thus, it appeared and developed the concept of *agile manufacturing based on the modularization of products and processes*.

Agile Management based on modularization of product and processes are designed for the new world of work, it shifts the focus from annual evaluation and rankings to continuous feedback and development. It is more collaborative, social and faster moving.

The importance of customer satisfaction became a main focus when competing with other products as only the companies that consistently satisfy customers survive in the competitive market. In such a situation, competitive companies not only segment customers to several groups, but also they provide customized products for each customer as well. In such context, *modularization of products and processes is an appropriate operational strategic option*.

The basic principles of agile management are: flexibility to the customer requirements; cooperation with the customers and internal collaboration; business values (cost, quality, parameters); teamwork; simplicity and speed of production.

The most effective practices included in agile processes are: innovative products and processes; modularization; new design and architecture; creative technologies; continuous adaptation.

The key elements mentioned above are integrated within a *methodology of agile management and manufacturing* and need an interdisciplinary approach.

Damien Power, Amrik Sohal and Shams-Ur Rahman divided the Australian organizations

involved in their survey in "more agile" and "less agile" organizations. They provided some interesting insights into factors differentiating "more agile" organizations from "less agile" organizations.

In accordance with these aspects, we have developed an *interdisciplinary approach of agile management and agile manufacturing based on products and processes modularisation*.

However, since modularization, when implemented, is so situation specific and every project differs each time, the roles and the structure of the modularization project is very important to allow influence from all functions in a firm. The approach and adaptation of each function can be described in order to obtain *maximum synergy effects of modularization at minimal costs in resources*.

Mikkola (2003) also describes modularization quite thoroughly in her aptly named article: *Managing Modularity of Product Architectures: Toward an Integrated Theory*. Mikkola derives at a very scientific and concise mathematical formula of how and to what extent to modularize, which is supported by two case studies.

Later on, a structural model incorporating modular design was theorized and tested by a group of researchers from Seoul (Hwang and Choi, 2011, p.791-796). Sang-Chul Hwang and Young Choi explained why modular design methodology is a very important design methodology that allows production of the maximal types of products with the minimal types of components and extending the components' compatibility to different types of products in order to satisfy a variety of customers.

In our view, *modularization is a key strategic option that needs interdisciplinary approach in order to enables production to integrate new consumer demands quickly and efficiently*.

In the next section of our paper we propose a specific way of approaching agile management based on modularization of products and processes.

2. Research methodology

In this article we analyzed the efficiency and also some technical and economic restrictions imposed by modular architecture products.

From an economic perspective, we done a study on the level of flexibility that companies can afford, depending on the overall cost and also, depending on amortisation period of time.

From engineering perspective, was analyzed the modular structure in terms of causes that can lead to errors. It has been shown that if the modules contact surfaces are not designed in order to avoid the clearances between modules, this aspect can lead to errors. Taking care

about this sensitive point for modular structures, we proposed a solution designed to reduce these specific errors.

This solution is based on an invention developed in University Politehnica of Bucharest (Sturzu and Popescu, 1997), and applied on modular devices.

We also argued our approach using visual properties of a Porter diagram for a qualitative analysis, based on previous research carried by authors, in which clearly highlights both the benefits and restrictions of modularisation of products and processes.

3. Studies one efficiency in modularisation- economic and engineering perspectives

3.1 Economic perspective

As shown in previous researches (Valter, Duca and Enache, 2015) in the circumstances of Agile Manufacturing, the shortening of the response time limits to the beneficiaries' requirements can be met by promoting the modular construction inside the production systems. But the modular structure has a sensitive point that should be taken into account to remain in the area of economic efficiency: the correct determination of maximum efficiency in use.

In figure 2 is emphasized area of maximum efficiency for a modular device used to control multiple pieces of types and sizes.

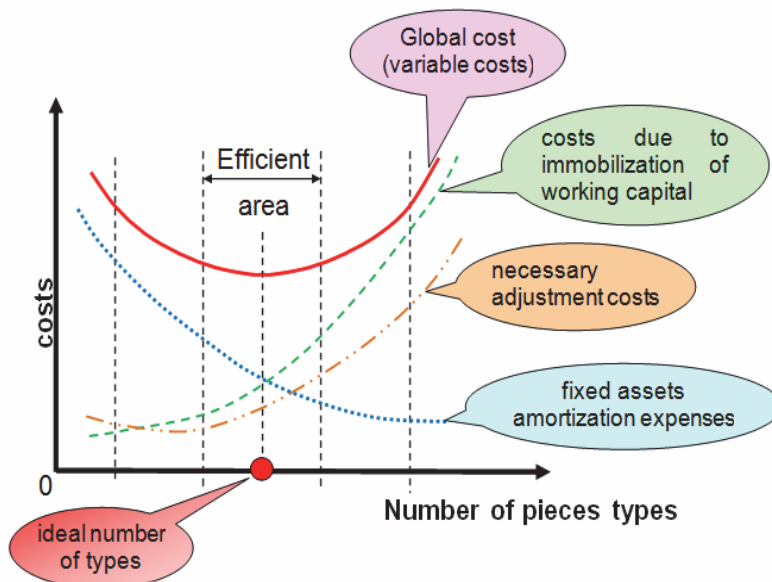


Fig. No. 2 Correct determination of maximum efficiency for modular design due to global costs and due to number of various pieces types

Source: Sturzu and Popescu, 2006

In this case study the flexibility of the system is measured by a higher or lower number of different types and sizes - named in Figure 2 "ideal number of types", that the modular system can serve (can process or control).

Thus, if desired to serve a large number of various types and sizes, aimed to compensate very fast the specific expenses, *can fall into a dangerous area, increasing the complexity of modular construction*. This complexity produces an unhealthy growth of necessary adjustment costs. This is a bad influence for entire global costs.

On the other hand, as is shown in Figure 2, if the flexible system with modular structure is not designed to serve an ideal number of types and sizes, *the expenses related to this process are no longer accordingly amortized*.

Extrapolating the calculation of the efficiency done already for modular control devices (Sturzu and Popescu, 2006), we can write the formula for the efficiency of a modular architecture, by reporting to an optimal amortization period:

$$E_{ec} = C_i - C_{mod} \quad (1)$$

$$P_{am} = \frac{I_{mod} - I_i}{E_{ec} / year} = \frac{I_{mod} - I_i}{NE_{ec} / piece}, \quad (2)$$

where: C_i - cost of the process that use specialized devices - without flexible structure

C_{mod} - cost of the process that use modular devices

I_i - investments due to process by means of specialised devices- without flexible structure

I_{mod} - investments by means of modular devices;

N - annual production program, pieces/year;

E_{ec} - economic efficiency per year in ROL or in currency.

We affirm that it better to adopt a modular construction only if this relation is fulfilled:

$$P_{am} \leq P_{am_{ad}} \quad (3)$$

where $P_{am_{ad}}$ is the acceptable amortisation period, which in the case of modular control devices, for exemplification is equal to ≈ 10 years (Sturzu and Popescu, 2006).

In conclusion, we can consider efficiency for a modular architecture, with high flexibility, versus a specialized architecture, without flexibility, only if the amortization period will be found in the $P_{am_{ad}}$ accepted limits.

3.2 Engineering perspective

The products with modular structure and especially modular devices serving technological processes and control processes have a sensitive point that often is ignored. This have a sensitive point is named *specific error* and it is found in scientific literature noted with ΔM (Sturzu and Popescu, 2006).

It is known that modular structure is specially designed to enable repeated assembly and disassembly and for this reason this specific error appears due to solutions applied for mounting the modules together. In this case, often occur orientation (ϵ_o) and fastening errors (ϵ_p). At these errors is added also the error due to wear (ϵ_w), that occurs during entire lifetime of the analysed modular product.

The error (ϵ_c) that occur due to the clearances between the contact surfaces, represent the main component of ΔM and is very dangerous because may increase all may increase other errors that compose specific error ΔM . So, in case of fixed or mobile units (modules) with repeated assembling and disassembling, the specific error ΔM can be written:

$$(4)$$

$$\Delta M = f(\varepsilon_o, \varepsilon_c, \varepsilon_w, \varepsilon_p)$$

where: ε_o - the orientation error; ε_c - the error due to clearances; ε_w - error due to wear; ε_p - error due to the lack of precision of reciprocal position.

Ignoring this sensitive issue can have a bad influence in the entire process that using modular devices, by entering a critical parameter uncertainty within the serviced process.

3.3 Engineering solutions- proposal

The main task for the researchers is to find out some precise orientation and fastening methods of modular parts, in order to reduce or even eliminate the specific error ΔM .

Moving from practical studies on modular construction devices (Sturzu and Popescu, 1997) in this paper we propose to use an innovative solution of combining modules, whenever possible. In this way, the experiment proposes to use where is necessary, for orientation and fastening the modular parts the innovation called: "the Secure Assembling principle" – SA. The SA principle (Sturzu and Popescu, 1997) consists in the *one direction taking over of clearance* (figure 3b), by using a clamping force, both in fixed and mobile mechanisms as well. Thus, the *errors due to clearances will be totally eliminated*. Concomitantly, the errors of assembling, reciprocal position and wear will be also substantially reduced, as shown in some case studies performed. To better understand the phenomenon described above, figure 3a, shows the simplified sketch in which is observed the occurrence of the specific error ΔM in the case of classical assembly to the modules. We observed the existence of clearance that leads to other phenomenon- the wear, under the action of contact forces between modules, in case of repeated assembly and disassembly.

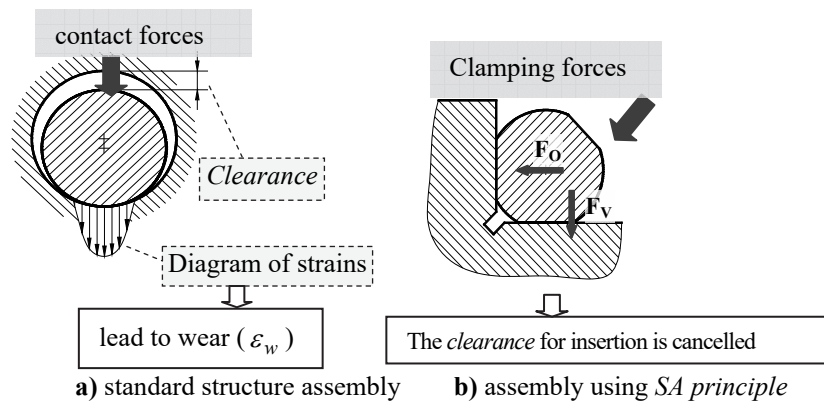


Fig. no. 3 Draft of drawings for the assembly principle between a shaft and a bore
 Source: adapted based on Sturzu and Popescu, 1997

Table no 1 Strengths and advantages of modular devices with SA principle included

1	Precision and productivity advantageous elevated to perform control operations
2	Simplicity, rigidity and hightechnological construction
3	Excellent maneuverability (operation, orientation and fixing in required position of the module is in about 3-10 seconds) and safety in use.
4	Elevated flexibility and universability in use: in about 5-10 minutes may be switched from the control of one type of part to another without affecting the control precision; no high qualification needed
5	Reducing the consumption of raws and reducing the storage space of about 50-60%
6	Execution, maintenance and easy services
7	Reliability and long term usage
8	Are suitable to be total standardized or typification (at company level) and produced cost-effectively and to a high quality
9	Allow computer drawing based on certain strategies and patterns established control technology. This is based on the ability to create databases with standardized elements or typification.
10	Shortening cycle research - design - production - implementation and service, with about 60%.
11	Adaptability. Can be equipped with measuring and control devices manufactured in the country or imported.
12	High level of ergonomicity
13	Profitability 100% for small production series and prototypes; with minor adaptations can be used effectively in mass production.
14	Very large application field - in all engineering firms in for small production series and prototypes

In figure 3b, it schematically presents the *SA principle*, applied to the surfaces that serve to joining the modules. *SA* solution transforms contact surfaces in small flat areas, and the secret consists in applying a clamping force that will be decomposed in two perpendicular directions on these plane surfaces. In this ingenious way the clearance between modules is cancelled. Research done before demonstrates that the principle *SA* used for the design of mating surfaces of the modules, confers rigidity and high precision for entire modular ensemble.

Table 1 shows the main features, both technical and economic, modular control devices, from which we started our research.

These devices have been designed so that the modules joint surfaces to be designed and built according to the Secure Assembling principle (*SA*), where needed, to guide and fixed the modules with a specific error ΔM as small, even zero.

Based on Table 1 we elaborated a Porter diagram, in which has been made a comparative study between two devices; one modular and another, specialized one.

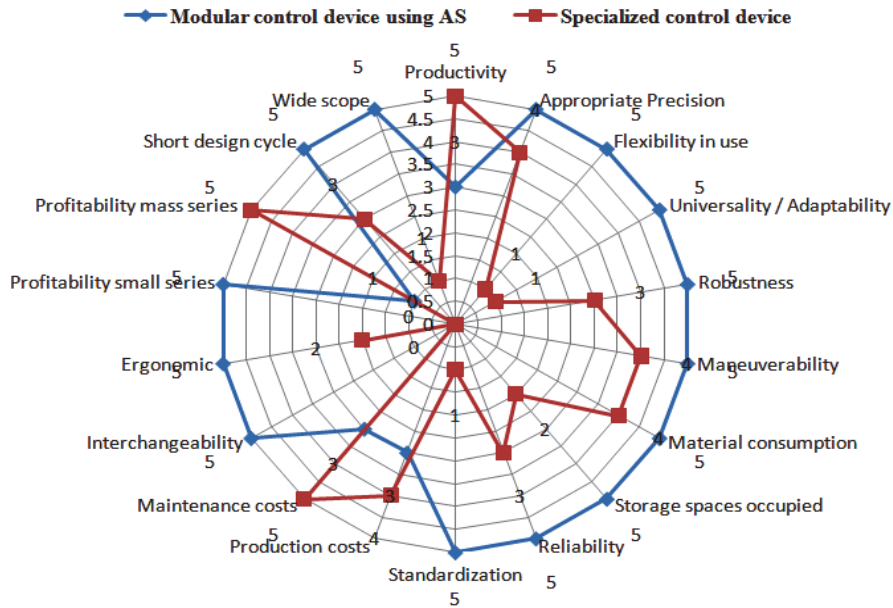


Fig. No. 4 Comparative study between two different control devices serving the same purpose

This diagram mapping clearly the advantages and disadvantages of modularization and this approach provides an important lever in agile development. This qualitative analysis using visual properties of Porter diagram, can become a practical tool in the hands of managers in order to determine if is appropriate to move towards the agile management.

Conclusions

The companies who want to give a quick answer on specific markets have to embraces the modularization of products and processes, in order to be agile. This paper argues in this sense. We have done the study on two different directions, both in economic and engineering terms, to find a solution that combine economic efficiency with precision, in the field of modular products.

We argued the efficiency of modular architecture depending on amortization period. The modular architecture is justified to be adopted *only if the amortization period* of modular product will be found in the accepted limits. For example, in case of modular control devices, this limit is under ten years. Companies intending to use modular devices in order to increase their agility are recommended to keep in mind this aspect that we argued in this paper.

From the engineering perspective we provided a solution that will bring tangible benefits in eliminating errors that appear inherently in combining modules.

The proposed engineering solution is simple and very effective. This solution has already proven in the case of control devices. This engineering solution brought economic and technical benefits where it was used already.

Due to these arguments we want to promote this solution to be used on various types of modular products, in order to get quality and fast response to customer demands, with reasonable costs.

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APPROACHES REGARDING THE RETURN POLICY OF ONLINE RETAILERS

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Abstract

As consumers become increasingly aware of the conveniences of online shopping, their purchasing behavior becomes more complex as well. Online shoppers not only compare prices or delivery times, but also consider additional factors such as the retailers' return policies. Taking into consideration the inability of online customer to touch or feel the physical product, the retailers may use this policy in order to protect consumers against the possibility of product misfit. Thus, online retailer's return policy plays an important role in consumer purchase behavior.

In this context, the purpose of this paper is twofold. The first goal is to analyze various theoretical approaches related to return policy of online retailers (e-tailers) and, secondly, this paper aims to present the findings of a research among undergraduate and master students from The Bucharest University of Economic Studies. The objectives of the survey were to identify the attitude of the young educated people regarding different aspects of the return policy of the e-tailers. The results outline that free of charge returning and availability of multiple options for returning an item bought online are the most important characteristics of return policy that count for online customers and, generally, they are satisfied with the return policies of the online stores.

Keywords: e-commerce, e-tailer, return policies, reverse logistics, consumer purchase behavior.

JEL Classification: L81.

Introduction

As customer expectations grow higher and competition fiercer, retailers are seeking to simultaneously cut costs and enhance the customer experience. In today's competitive business environment, retailers are turning their attention to opportunities offered by reverse logistics, both to address customer needs in the context of the omni-channel shopping behavior and to extract more value from their returned goods (Terry, 2014). An effective reverse logistics solution is quickly becoming a key competency and competitive differentiator.

In the case of e-commerce, being in the impossibility to use all the senses, consumers may not know whether a particular item will fit their needs or match their tastes and returns

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policies help to stimulate demand by protecting consumers against the possibility of product misfit (Su, 2009). Consumers have to sacrifice the benefit of physical inspection of the product, which increases the likelihood of dissatisfaction, with the purchase and the returns (Mukhopadhyay and Setaputra, 2007). Thus, especially in the online environment, consumers face valuation uncertainty regarding products and firms may wish to offer some possibilities to compensate them for bearing risk (Dana and Petrucci, 2001; Xie and Shugan, 2001). Thus, return policy, as a part of reverse logistics strategy, is a crucial ingredient of the B2C (Business-to-Consumer) e-commerce business model.

The central issue for many online retailers (or e-tailers – electronic retailers) is the challenge of transforming reverse logistics from a cost center to a profit-making activity, especially because the true cost of returns is not only the logistics and product cost, but also the damage to the customer-experience. To succeed not to alter this experience, but even for improving it, the trader must hold information about the importance given by the customer to different aspects of the return policy. In the context of such concerns is our paper framed, by presenting, first of all, a series of theoretical approaches related to the importance of the return policy of e-tailers and, secondly, the results of a survey among young Romanians - customers of online stores, regarding the degree of importance and satisfaction on various aspects of return policies of online stores.

1. Literature review

Activities involving reverse logistics are often reactive in nature instead of proactive which means it is often a result of a consumer or downstream channel member action and not a result of a planning decision of an organization (Tibben-Lembke and Rogers, 2002). However, organizations can behave proactively to avoid or to handle reverse flow. As mentioned by Langley et al. (2008), proactive management of reverse flow can have positive impact on the financial position of an organization.

For retailers, returns demand a good deal of strategic planning in order to minimize costs, maximize trust and convenience for the customer and make the whole project feasible in the light of profitability. How efficient an organization handles their reverse flow in the supply chain will have a powerful impact not just on costs, but also on revenue and customer goodwill. The way firms behave when handling customer returns is a significant issue in the formation of relationships of the customer with organizations.

For customers, the product returns offer the possibility to see if the customer orientation professed during the sale matches the orientation at the time of the return (Moore et al., 2014). This is a chance for customer to see how the firm interacts in a situation when product moves back to the retailer. Research by Mermelstein and Abu-Shalback (2006) shows that if the return management of products is convenient for customers, then they are more likely to shop, and if the return management is troublesome, they are not likely to shop there again. Also, return and reimbursement policies are among factors that contribute to a positive experience related to an online acquisition from an e-shop, among comfort, products' availability and diversity, handling and payment conditions (Ramanathan, 2010). In this context, return policies and processes continue to grow more important to online shoppers. Consumers are considering the ease of use of the return policy and process as key decision points on their path to purchase. Companies that succeed in meeting these expectations have significant competitive advantages and a business model that is best positioned for long-term success.

The rise of e-commerce has meant an overall increase in return rates, particularly for apparel, home goods, furniture, and other items best experienced in-person (Terry, 2014). Some customers buy several similar items with the intention of keeping only the one they like best. One way to overcome the negative effects of the return rate is to attract more customers. Thus, the return policy of e-tailers become a strategy to attract more customers, as mentioned by Pei, Paswan, and Yan (2014).

Online retailers realize that buyers will be uncertain about many aspects of the Internet shopping experience. Not only buyers are unable to inspect the goods before buying, but they are worried about security of the transaction and they are concerned about delivery time (Bonifield, Cole and Schultz, 2010). In this case, the role of an appropriate return policy is to help the internauts to overtake these risks.

While returns will always be a part of business, this don't have to be a liability for business. Effective reverse logistics processes can make it a competitive advantage, increasing the efficiency, retaining customers and fostering growth for the business. By improving the consumer experience and bringing policy and procedure more closely in line with consumer expectations, it's possible to turn what can be a problem for retailers into an advantage. As indicated by Kirmani and Rao (2000), return policy may underlie a competitive advantage.

While offering free shipping is already fairly common among online retailers, offering free and no-hassle returns has never been a widely-accepted practice among online sellers. On this line, these attributes can play the role of a key differentiator between e-tailers. A return policy, like a product warranty, is a special type of signal (default contingent-cost risking) that can be used by online retailers to alert buyers about their competitive advantage. In order to attract consumers and to reveal the quality of their web site, high quality e-tailers will set lenient return policies, as evidenced by Bonifield, Cole and Schultz (2010). Also, Moorthy and Srinivasan (1995) indicate that generous returns policies help to signal high quality for consumer.

The fact that returns are one way for retailers to differentiate themselves results also from recent research findings (UPS, 2015) which indicate that lost sales may result from inflexible returns policies. Consumers have the highest intent to purchase when they can return to store for free or ship back to retailer for free using pre-paid label. Thus, it follows that cost and convenience are the top returns factors influencing purchase decisions.

2. Research objectives and methodology

Starting from the literature review hypothesis we made an exploratory research on the some students from undergraduate and master level in business administration. The purpose of the research was to identify the attitude of the young educated people regarded to the return policy of the e-commerce retailers.

Some of the main objective was:

- Emphasizing of the importance given by the consumers to the opportunities of returning the products purchased from e-commerce shops;
- The knowing of the degree of satisfaction of individuals from our research sample to the return policies of companies that operate in the online environment.

Hypotheses followed in this research were developed in line with the goal and objectives above. Thus, these hypotheses are:

1. Most of the people investigated consider that it is very important to have multiple possibility of returning an item bought;

2. Free of charge returning policy is the most important characteristic related to the return policy, from those investigated;
3. Time and ways in which a customer receive money for a returned item are not so important that receive all the money back;
4. The respondents are satisfied with the possibilities offered by online shops regarding returning methods.

The research was conducted during January-March 2016 and was based on a structured questionnaire about the behavior of the young educated people regarded to the e-commerce, which contained 11 questions - 8 of content and 3 of identification. From these questions in this paper we will analyze only to that questions which are related with return policy of the e-commerce shops. Content questions were both closed and open. Closed questions were with unique responses, with multiple choices, simple questions, but also matrix. The questions related to the return policy were also matrix. The questionnaire was posted on the website isondaje.ro and student participation was voluntary. Therefore, the questionnaire was self-administered.

The sample studied was chosen at random, based on the voluntary choice of the students to participate in research. Even if it is not representative, the sample is relevant from the perspective of people active in online trading, with higher education and which have knowledge of e-commerce. Totally, at research participated 328 students, from family with average income, mostly women (70 % women and 30 % men).

3. Results and discussions

According to the data acquired, the most of the respondents prefer to make the online acquisition of the products using Romanian e-commerce shops (51.8% of all interviewed people). In the same time, a significant proportion of sample, 43% of them, states that used to make purchases on Romanian and foreign online shops.

Regarding to the preferences in the online shopping, the most frequently listed types of products bought are: IT & C, electronics/appliances - 210 respondents (17.7% of the total options provided), clothing/footwear - 207 respondents (17.4% of total options provided), followed tied by the other three product categories - jewelry and accessories, cosmetics and personal care and tickets to events, shows, etc. each with 125 responses, representing 10.5% of choices provided. The structure of products purchased largely reflects the status of the persons from sample, respectively educated youth, with knowledge of e-commerce, living alone or in the same households with parents

The main reasons given by respondents for online purchases refers to the time savings, lower prices compared to traditional stores and speed of delivery at home. This reflects either the reduced availability of time spent for purchase items, or allocation of this in other purposes, a lot of students already having a permanent job.

In order to identify the opinion of the young consumers we asked the Romanian students referring to the importance of possibility of returning an item bought and the level of satisfaction related to the return policy. We considered in our research, to find their opinion related to several matters about subjects in discussion like:

- Available options for returning an item bought;
- Multiple choices for money refund;
- Reimbursement term of the amounts paid;
- Information about returning policy;

- The ease of the process of returning the goods;
- Free of charge returning;
- If it is possible to change an item bought.

The first direction of our research was to know how important are all this when they want to buy a product from an e-commerce shop and how are they influenced when choose from which seller will buy. For each characteristics response options were divided into 6 levels of importance, from very important to not important, as is shown in the figure no. 1.

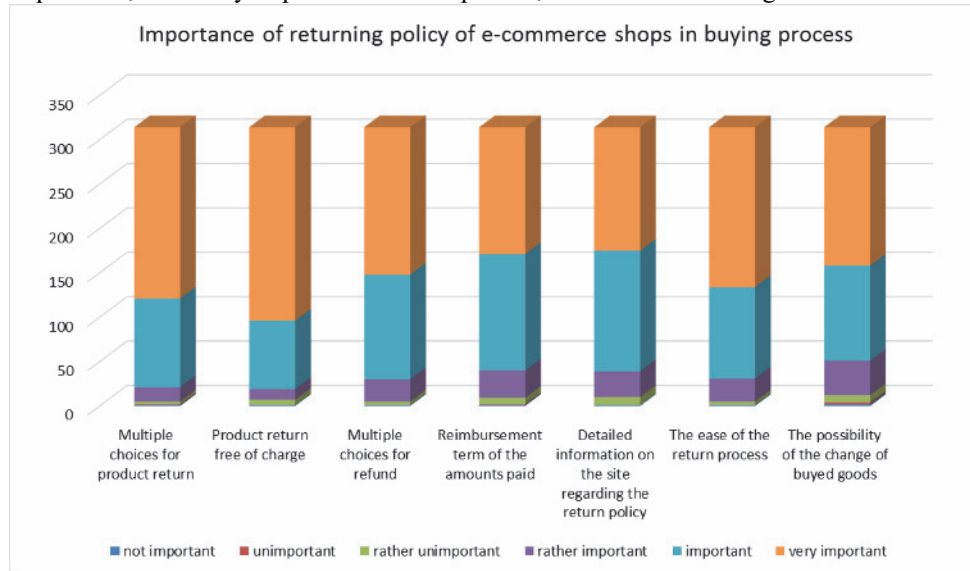


Figure no. 1: Importance of the returning policies of e-commerce shops in the buying process

Related to the possibility of returning an item bought, Romanian buyer can do that by mail, using a delivery services company and directly to the retailer office. The people asked give a very much importance to the fact that they have multiple choice alternatives and they will buy from that shop which give them more alternatives. Only 7% of respondents hasn't chose the options important or very important and almost two-thirds consider that it is very important to have many possibility of returning, which *confirms the hypothesis no. 1* and reveals that online retailers must offer as many ways to receive unwanted or damaged product.

The most important policy for our respondents is free of charge returning, which *certifies hypothesis no.2*. It is noteworthy that amplexness researches (UPS, 2015) showed results similar to those recorded by our study, indicating that free shipping is the top aspect leading to a positive returns experience. But digging deeper, it becomes clear that online consumers want this process to be conducted quickly and efficiently. Even though it is highly desired policy, for the retailers is a very expensive one. If we take in consideration that "for example, in 2014, returns cost retailers across the USA a total of \$280 million" (Dhal, 2016), we can appreciate that though offering this possibility to the costumer, retailers will increase their revenue, but in the same time they may have higher costs.

The percentage of those who consider that it is important to have many possibilities to receive the money for the product returned approaching by those who consider that is very important, which shows that is not very relevant how they get the money, but is matter to get it back. If we take in consideration responses related to the question about how long is the term for the returning the money, we have *the confirmation of the hypothesis no. 3*.

The correlation coefficient between the two sets of data, multiple choices for the returning the money and the term for the returning the money, is 0.55 fact which confirms that it is a strong correlation between them.

A clear and reachable return policy can increase the sales, especially if the returning process is easy and the costumer does not have to make a big effort. In a survey conducted in USA in 2012 revealed that 63% of consumers checking out a web retailer’s returns policy before making an online purchase (Demery, 2012) and around for 40% abandon their online shopping if the delivery process is too expensive or too long.

An interesting thing is that the number those who think that it is important that online shops must have detailed information about return policy is equal with those which think is very important, but the sum of both options are more than 85% of respondents. This results show us that as against survey presented above, our costumers are more interested by this kind of information.

In the same time, many of retailers have stipulated in their return policy the possibility of changing the product bought to another. Almost all of our respondents are very interested or interested by this option which reveals that both, the consumer and the seller gain a profit from this policy. The consumer can make a better choice, purchasing an item more desired, even more expensive, and the seller that can, maybe, increase their selling and gaining a satisfied costumer which will came again to buy something in the future.

The second direction of our research was to find the degree of satisfaction of individuals about the return policies of companies that operate in the online environment. For each characteristics response options were divided into 6 levels of satisfaction, from very satisfied to not satisfy and the distribution of responses are presented in the figure no. 2.

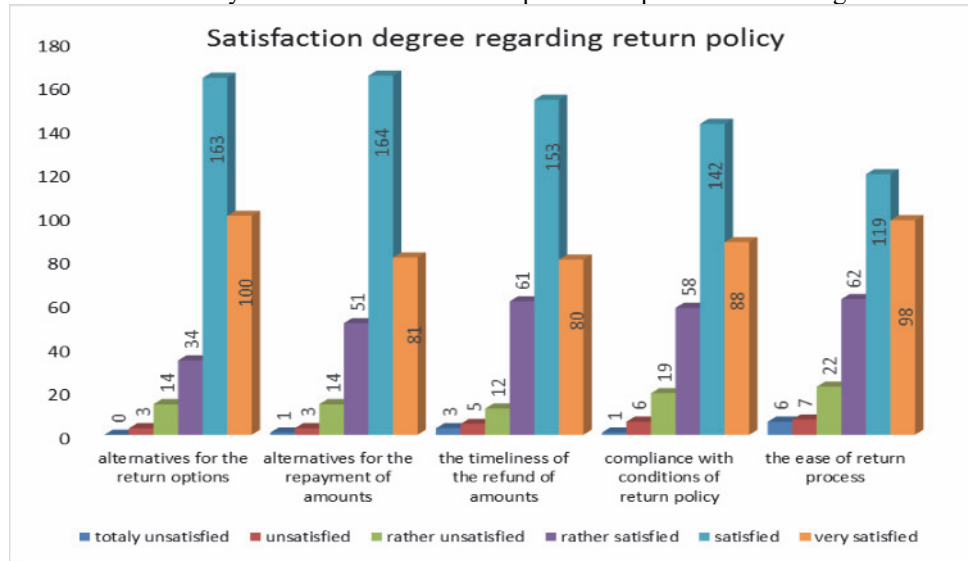


Figure no. 2: Satisfaction degree regarding return policy

The number of persons who are rather unsatisfied (the fourth degree of satisfaction) is double that of who answered that are rather important (the fourth degree of importance).

All this values show us that though people have greater expectations when bought online, the level of importance is higher, the buying experiences of our students are different.

In contrast to the responses from the previous direction of research, where at all the subjects in discussion the number of persons which answered have chosen the most important degree of importance (very important) was greater than the following one (important), here the situation is reverse. Thus, the larger number of respondents have chosen the second degree of satisfaction (satisfy), followed by very satisfied, rather satisfied, rather unsatisfied and unsatisfied. The number of persons who are not satisfy is insignificant, tends to or is zero.

The respondents are satisfied by the possibilities offered by e-tailers in terms of both ways of returning the goods and refund of amounts, which *confirms the hypothesis no. 4*. Also, they consider satisfactory the ease of return, the conditions of return policy and the timeliness of the refund of amounts.

Another thing to note is that for all subjects in discussion the percent of respondents who have chosen rather satisfied is almost 20%, only for the “available options for returning an item bought” is closer to 10%. In this way responses are better distributed between first three variants.

Conclusions

The return experience is an important part of the impression the retailer makes on the buyer and is even more important for online shoppers, we can even say that the return policy is a vital success factor for online retailing, taking into consideration the risks associated with purchasing products via the Internet.

Considering the degree of importance given by the respondents of our survey to different elements of the return policy, the online retailers must take into consideration that, when it comes to returns, online shoppers want: affordability - to keep customers happy, is important that e-tailers eliminate or minimize the cost of return shipping that devolve upon customer; convenience and flexibility - there's a reason why people gravitate toward online shopping: it's convenient. They don't have to deal with crowded malls or long lines. The same concept should apply to a returns process and this can be achieved through an easy return process, flexible terms and by providing more options for returning products. Nobody wants to deal with the pressure of meeting a tight return deadline. By offering a flexible window of time for returns, a company shows that it values its customers; clarity - a positive returns experience starts with clear communication and for this reason online retailers should make their return policies simple to understand, clear, concise, customer-centric and easy to find on their websites. A good policy outlines what can be returned, whether customers will be granted a full refund or store credit, how long they have to make a return and if return shipping is free. Taking the time to clearly spell out these details will show customers that the business is one they can trust.

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ARGUMENTS SUPPORTING THE INTRODUCTION OF EDIBLE INSECTS IN EUROPEAN FOOD CONSUMPTION

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Abstract

Entomophagy (the consumption of insects) has been part of the human diet since the dawn of humanity, being influenced by cultural and religious practices. But despite its long tradition among at least half of the world's peoples, in most Western countries entomophagy is viewed with disgust and associated with primitive behavior. One reason could be that after Europe became agrarian and adopted a sedentary lifestyles, insects were seen as destroyers of crops rather than a source of food. In the scientific literature, the edible insects are described as the food of the future. And this not only because of their nutritional value, but also for their sustainability. Edible insects are an excellent alternative to the traditional meat production, especially because their breeding has little impact on the environment. Even though the subject of entomophagy has started to capture the public attention in developed countries, the consumption of edible insects in Europe is just at the beginning. The main aim of our paper is to demonstrate, through a secondary data research and through a calculation of nutritional value, that edible insects are really an alternative source for some foods of animal origin. Our paper do not advocate the inclusion of edible insects in the daily shopping list of the European consumers. By giving numerous arguments on the high nutritional value and sustainability of edible insects, our goal is to arouse the consumers' interests for the subject of entomophagy.

Key-words: entomophagy, edible insects, novel food, nutritional value, sustainability

JEL Classification: I12, O13, Z10

Introduction

Entomophagy (the consumption of insects) has been part of the human diet since the dawn of humanity, being influenced by cultural and religious practices. The use of insects as a source of food are mentioned in the Bible (Leviticus 11:21: “but from all winged insects that walk on four legs, eat only those that have longer hind legs...”) (Meyer-Rochow, 2010).

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Also from Antiquity comes many historical references about the relationship between insects and human civilization. For example, in Antic Rome and Greece, people loved to eat cicadas and beetle larvae (Johnson, 2010).

Nowadays, as FAO reports, about 1900 species of insects are commonly consumed as a food source in many regions of the world. More than 2 billion people across the world are eating insects, as parts of numerous traditional dishes, especially in Africa, South-East Asia and South-America.

The edible insect industry was founded on the harvesting of wild species from forest areas around villages. Nowadays, edible insect species are obtained from both wild harvesting and the farming of a few species.

Edible insects provide a wide range of important nutrients: highly digestible proteins, fiber, unsaturated fatty acids, vitamins and minerals. But, edible insects are considered the food of the future not only because of their nutritional value, but also for their sustainability (their breeding has little impact on the environment).

But despite its valence of highly nutritious and sustainable source of food and its long tradition among at least half of the world's peoples, in most Western countries entomophagy was viewed with disgust and even associated with primitive behavior (Huis et al., 2013). One reason could be that after Europe became agrarian and adopted a sedentary lifestyles, insects were seen as destroyers of crops rather than a source of food.

Moreover, Western attitudes toward food can be characterized by the rejection of certain food sources for psychological reason rather than the logical one (Belluco et al., 2013).

Even though the subject of entomophagy has started to capture the public attention in developed countries, the consumption of edible insects in Europe is just at the beginning.

Lately, on the European market, snacks, snack bars and protein powders are the top application areas of interest for edible insects. Also the insects' powder are used in burgers, sausages, shakes etc.

Starting with 2015, in European Union, edible insects are considered novel foods and their status is regulated by the new Regulation 2015/2283 on novel foods, which have entered into force through its publication in the Official Journal of the EU and will be applicable two years later.

The paper, structured into many sections for a better understanding of the subject, starts with a literature review in order to identify the most relevant aspects regarding the nutritional benefits and farming efficiency of edible insects. In the second section are presented some evidence on the use and the perception of edible insects as "novel food" sources on the EU market. Next section of the paper presents the research objectives and specific methodology, followed by a comparative analyses of the nutritional value of two menus, one which includes only traditional ingredients (meat, cheese and vegetables) and the other one where the ingredients of animal origin have been replaced by edible insects. In the final part, we highlight the conclusions and implications of the research results.

1. Literature review regarding the nutritional benefits and farming efficiency of edible insects

Globally, the most commonly consumed species of insects are beetles (31%), caterpillars (18%). These two species are followed by bees, wasps and ants (14%), grasshoppers, locusts and crickets (13%), cicadas, leafhoppers, planthoppers, scale insects and true bugs (10%). With a smaller share in global consumption are termites (3%), dragonflies (3%), flies (2%) and others (5%) (Harrison – Dunn, 2015a).

Because edible insects have great nutritional values, they are considered by FAO a credible food alternative.

Edible insects are an *excellent source of highly digestible proteins* (35 % to over 60%), containing all the amino acids necessary for the body, that can completely replace meat consumption (Rumpold and Schluter, 2013).

Insects represent *a source of fiber*, because of their high content of chitin, a carbohydrate found in invertebrate exoskeletons (about 10% of the whole dried insect) (Belluco et al., 2013).

Most of insects' fatty acids are unsaturated, generally comparable to those of poultry and fish. They are also *low in saturated fats* (Harrison – Dunn, 2015a).

Edible insects also have *high content of vitamins* (especially from B group) and *provide many minerals* (iron, magnesium, zinc, phosphorous, selenium, copper). It was demonstrated that the content of vitamins and minerals in edible insects can be controlled through the feed (Pennino, Dierenfeld and Behler, 1991; Rumpold and Schluter, 2013).

Thus, insects can be compared to other foods of animal origin, such as crustaceans, fish, and meat, which form the Western diet (Belluco et al., 2013).

Edible insects can be cooked for all kinds of dishes, from appetizers to desserts. Insects are also processed into powder, granular or paste forms, which can be used to make pastries, shakes etc. Before processing, insects pass through a dehydration process which makes them clean and hygienic and also keeps intact most of their nutritional value.

As for taste, most of them don't have a weird taste. Some taste like almonds or nuts (crickets), other more like bacon (silkworms) or smoked bacon (beetles), other like grilled corn (bamboo worms) or baked potatoes (grasshoppers).

Apart from the numerous attributes listed above, that make them an attractive sources of highly nutritious food, edible insects are equally a sustainable source of food, especially because their breeding has little impact on the environment.

The most important *advantages of edible insects breeding* are as follows:

- The insects cost less and also pollute less than traditional breeding, as they use very little space and require fewer resources (insects use much less water than farm animals, as they hydrate directly from the food); moreover, unlike cattle, insects don't produce gases causing global warming (Dossey, 2013);
- The insects' growth rates are high, they are very prolific (they reproduce at a much faster rate than farmed animals: for example, crickets are twice as efficient to rear as chickens, 4 times more efficient than pigs and 12 times more than cattle) (Watson, 2015);
- The insects are much more efficient in converting biomass to protein; compared to cattle production, insect farming is much more efficient: 100 kilograms of feed produces 10 kilograms of beef, while the same amount of feed produces 45 kilograms of cricket (National Geographic News, 2010);
- The edible insects are easy to process and they work well in many kinds of food products (pasta, baked goods, snack bars, protein shakes, hamburgers etc.).

For all these benefits, it is predicted that the edible insect industry has much potential for providing protein sources in the future and for income generation.

In European Union, edible insects are analysed not only through their benefits – a highly nutritious and sustainable source of food – but also by their risks in household consumption.

Regarding the possible risks, the views are different. Having as argument the great diversity of edible insects (FAO estimates that there are more than 1900 species currently consumed by people), one consider them being more safe than vertebrate animals such as cattle, chickens or fish, which are increasingly susceptible to many disease (Dossey, 2013).

Other scientists consider that toxic, allergenic or antinutrient substances, which are considered intrinsic factors of risk, could be incorporated in insects. For example, American scientists (University of Nebraska-Lincoln) have proved that the insects protein could cause allergy (especially to those who are also allergic to seafood), they suggest to producers to label their foods containing insect protein as being not suitable for shellfish allergics (Watson, 2015).

But, the extrinsic factors must be considered as well. Rumpold and Schluter (2013) noted that it was reported many cases of botulism, parasitoses and food poisoning caused by aflatoxins contamination of edible insects. In addition, some species of edible insects can synthesize toxins via feed, as a chemical defense mechanism against predators (insectivores). Their consumption can lead to digestive or visual disorders.

It was also reported that insects harvested in the wild could contain pesticides if they have fed in pesticide-treated areas. From this point of view, it is preferable to consume farm insects, whose controlled feeding eliminates the risk of pesticide contamination (Schabel, 2010).

Starting with 2015, in European Union, edible insects are considered novel foods and their status is regulated by the new Regulation 2015/2283 on novel foods, which have entered into force through its publication in the Official Journal of the EU and will be applicable two years later.

According to the Article 3 (Definitions) of this Regulation, through the “novel food” we have to understand any food that has not been consumed to a significant degree by humans in the EU prior to 1997 (when the first Regulation on novel food came into force). In the Novel Foods class are included newly developed foods, innovative foods (foods produced using new technologies and production processes) and also the traditionally foods eaten outside of the EU (European Commission, 2016).

The regulation confirms that insects are unauthorised Novel Food sources in Europe if they were not consumed before 1997. It also states that the producers of insects for human consumption that intend to sell their products on the EU market shall obtain an authorisation from the European Commission. This gives to companies that already sell edible insects on the EU market two years to submit a dossier for authorisation (Harrison-Dunn, 2015b).

In order to help the edible insect industry prosper in Europe and worldwide, it was created The International Platform of Insects for Food and Feed (IPIFF), a non-profit organization, located in Brussels. The IPIFF vision is that the European insect industry to be composed of a collaborative network of local partner companies that will share sustainability as a common value and promote insect industry as an eco-industry (International Platform of Insects for Food and Feed, 2014).

Representing the interests of the insect sector, IPIFF is advocating the potential of insects for human food towards the European Commission and the European Food Safety Authority (EFSA). Simultaneously, IPIFF guides and advices its members on how to authorise their products.

2. Objectives and research methodology

The main aim of our paper is to demonstrate, through a secondary data research and through a calculation of nutritional value, that edible insects are really an alternative for some foods of animal origin. In this respect, we have chosen two menus for calculating the nutritional value, one which includes only traditional ingredients (meat, cheese and vegetables) and the other one where the ingredients of animal origin have been replaced by edible insects.

By giving numerous arguments on the high nutritional value and sustainability of edible insects, another aim of our paper is to arouse the interests of European consumers for this subject; we do not advocate the inclusion of edible insects in the daily shopping list, we only want that European consumers have an open mind about entomophagy.

The calculation of the caloric intake and the degrees of covering the recommended daily energy and nutrients are based on the following formulae (Dima et al., 2006):

$$Q = 4,1xP + 4,1*GI + 9,3xL \quad \text{where:}$$

Q – energy value of the product (kcal); P, GI, L – amounts of proteins, carbohydrates, lipids (g).

$$G = Q/N \times 100 \quad \text{where:}$$

G – degree of coverage of recommended daily energy intake (%); Q - energy value (kcal); N - the recommended daily energy intake (kcal).

$$G_p = P/N_p \times 100$$

$$G_{GI} = GI/N_{GI} \times 100$$

$$G_L = L/N_L \times 100$$

where:
 G_p, G_{GI}, G_L – degrees of coverage of the recommended daily intake of proteins, carbohydrates, lipids (%); P, GI, L – amounts of protein, carbohydrates, lipids (g); N_p, N_{GI}, N_L – daily recommended intake of proteins, carbohydrates and lipids (g).

The calculation of the covering degrees was based on the daily intakes of calories and nutrients recommended in the dietary guidelines of Romania for females with the age between 20-45 years old, who undertake a physical activity of weak intensity (2500 kcal, 90 g proteins, 340 g carbohydrates, 80 g lipids).

3. Results and discussions

Table 1 and Table 2 show the results obtained following the application of “Covering degree method”.

Table 1. The traditional menu – chemical composition and covering degrees

Ingredients		Quantities	Chemical composition and covering degrees					
			P (g)	Gl (g)	L (g)	Q (kcal)	Ca (mg)	Fe (mg)
Salad	Lettuce	250 g	4.75	7.25	0.75	56.18	62.50	2.50
	Cucumber	50 g	0.65	1.45	0.10	9.54	11.50	0.50
	Onion	20 g	0.20	0.70	0.04	4.06	27.00	0.20
	Cheese	40 g	7.76	0.40	8.16	109.34	198.40	0.00
	Olive oil	15 g			15.00	139.50		
Grilled Turkey with rice and vegetables	Turkey meat	200 g	39.20		13.60	287.20	17.00	5.27
	Rice	100 g	7.29	67.95	1.08	318.53	27.00	1.17
	Peas	20 g	1.44	2.52	0.09	17.07	4.68	0.27
	Bell pepper	20 g	0.23	1.38	0.07	7.25	0.00	0.14
TOTAL			61.52	81.65	38.89	948.67	348.08	10.05
Recommended intake			47.50	180	45	1350	400	9
Covering degree of recommended intake (%)			129.52	45.36	86.42	70.27	87.02	111.67

Table 2. The edible insects menu – chemical composition and covering degrees

Ingredients		Quantities	Chemical composition and covering degrees					
			P (g)	Gl (g)	L (g)	Q (kcal)	Ca (mg)	Fe (mg)
Salad	Lettuce	250 g	4.75	7.25	0.75	56.17	62.5	2.5
	Cucumber	50 g	0.65	1.45	0.1	9.54	11.5	0.5
	Onion	20 g	0.2	0.7	0.04	4.06	27	0.2
	Mealworms	20 g	11.08	3.08	3.82	93.64	0.16	0.01
	Olive oil	15 g			15	139.5		
Crickets with rice and vegetables	Crickets	100 g	58.51	8.4	24	497.53	1.1	0.025
	Rice	100 g	7.29	67.95	1.08	318.53	27	1.17
	Peas	20 g	1.44	2.52	0.09	17.073	4.68	0.27
	Bell pepper	20 g	0.23	1.38	0.07	7.252	0	0.14
TOTAL			84.16	92.73	44.96	1143.31	133.94	4.82
Recommended intake			47.50	180	45	1350	400	9
Covering degree of recommended intake (%)			177.17	51.52	99.90	84.69	33.49	53.50

Comparing the results presented in Table 1 and Table 2 it can be observed that the covering degrees of recommended daily intakes of macronutrients and energy calculated for a lunch meal are higher in case of the alternative menu based on edible insects. This was possible even in the conditions that the quantities of edible insects included in the alternative menu represented a half of the quantity of ingredients of animal origin from traditional menu. So, the statement regarding the high nutritional value of edible insects has been demonstrated.

But, if the high nutritional value and the sustainability are sufficient to pique consumer interest in insects, this is not enough to ensure that the insect will become a daily consumed item.

As the pieces of research of Michail (2015a and 2015b) and Tan et al. (2015) have been showing, the acceptance of insects as food source in Europe requires from the food manufacturers to develop appropriate products that will taste good and will align ethical motivations with sensory expectations of consumers.

Conclusions

Between the most frequently motives cited in the scientific literature to sustain entomophagy are included: nutritional benefits, poverty reduction through food security, the potential for income generation, pesticide avoidance and conservation of biodiversity and cultural traditions (Meyer-Rochow, 2010).

The strongest argument in favour of edible insects as food, also emphasized by our paper, is their nutritional value that support a balanced diet for improving health.

Edible insects are a new food for the European diet. Although challenging, the introduction of new food items to the human diet is not without precedence.

Insects are important elements of other food culture and as a proof of the respect for these foreign culture, entomophagy should not be regarded with disgust and considered a barbarian or a primitive eating habit. Otherwise there is a risk that the human who make such judgments become a barbarian himself. The negative impressions and the disgust associated with edible insects can be overcome through an effort of changing the ethnocentric mentality, which is possible through consumer education.

We consider that our paper could be a valuable instrument for consumer education on the subject of entomophagy.

We also want to emphasize the need to make known the nutritional profile of edible insects among the public. A widespread promotion of this new sector would be beneficial to create demand and raise interest among consumers. Although edible insects are consumed by many people in their origin countries, their market is still relatively small.

As Hanboonsong and al. (2013) have showed, there is great potential to increase consumption demand not only in the origin countries of edible insects, but all over the world, through marketing campaigns. Some processing methods of edible insects and product development are obviously needed in the near future, but if undertaken along with clever advertising, this could attract young consumers and middle class consumers.

There is also a need to raise awareness of the growth potential of this industry sector amongst policy-makers from the countries of origin of edible insects so that they promote and guide future development and funding into key areas of the research, such as: best management practices, food safety issues, promotion and international trade.

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CUSTOMER ORIENTATION BY COMBINED CRM AND ENTREPRENEURIAL MARKETING AT SMEs

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Abstract

The following investigation tries to develop a guide to customer orientation for new companies. This customer orientation is often supported by customer relationship management systems in established companies. At the same time, customer orientation is also important for entrepreneurs in order to form a marketable architecture of a company. Establishing both measures in the same time seems difficult, but it proves to be cost-effective and feasible. The study is based on a specialist literature review on traditional measures aimed at customer orientation in customer relationship management and customer loyalty phases in the entrepreneurial marketing. Finding solution to serve both measures it requires a development of opportunities combined which reflect all relevant components of a Customer Relationship Management and the special characteristic challenges of a small and medium-sized enterprise in the start-up phase related to Entrepreneurial Marketing.

Keywords

Entrepreneurship, Customer orientation, Customer Relationship Management, Small and medium-sized enterprise, Entrepreneurial Marketing

JEL Classification

M13, M30, M31

Introduction

In order to implement the developed entrepreneurial ideas and to satisfy assumed market needs, a young Small and medium-sized enterprise must promote its market entry by entrepreneurial marketing, marketing of services and management as well as reaction to customer and market needs, by using a Customer Relationship Management system in order to better satisfy customer needs and for obtaining the customer loyalty. Global markets are dominated by many suppliers of the same product and in this case we cannot provide a clear differentiation of innovation in services by the client. By a strong substitutability of providers, beneficiaries must have the feeling that they are able to obtain an additional benefit rather than just the actual required original service from the business

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relationship (Brendel, 2002). The providers are therefore forced to identify faster the potential customers and to reach them (Brendel, 2003).

In this paper will be presented some concepts in the form of abbreviation, therefore we consider necessary their explanation: CRM - Customer Relationship Management, EM - Entrepreneurial Marketing, EU - European Union, GDP - Gross domestic product, SME - Small and medium-sized enterprise, OECD - Organisation for Economic Cooperation and Development.

1. Why is an orientation for Small and medium-sized enterprises useful?

Small and medium-sized enterprises shape the economic structure of both industrialized and developing countries. Given their numbers, they constitute more than 99% of the total number of companies in the EU. If someone examines their number in the OECD countries, it is obvious that about 95% of all economic operators are Small and medium-sized enterprises. In Germany, they generated about 55% of GDP in 2013 and represented even 60% of the total number of jobs in 2014 (Federal Ministry, May 2014), and therefore represent a significant factor for economic and social stability. At the same time, they form a strong counterpoint for influential, globally interconnected large enterprises (OECD, 2002 a), and are a major driver of innovation.

Although they differ considerably, there exist general similarities in their foundation, regardless of their industries and markets served. Networking market players and the greater direct influence of the economic situation of a country, force Small and medium-sized enterprises to increasingly address to global markets. The resulting complexity within global markets brings great challenges. To cope with these challenges, verification and proper selection of marketing tools necessary for market entry are critical for communication and retaining potential customers (Ehret, 2008). Small and medium-sized enterprises have the advantage of a shorter reaction time, however, start-up companies in general usually lack a separate department which exclusively deals with marketing work and analysis.

2. Research methodology

The approach in this study is based on a literature review of statistics and literature which are related to the subject areas Entrepreneurial Marketing in Small and medium-sized enterprises, customer orientation and customer relationship management. Furthermore, this work provides answers to the following four questions:

- Which kinds of challenges have young companies?
- What benefit offers a Customer Relationship Management system?
- What is the meaning of Entrepreneurial Marketing?
- How can young companies have nearly the same benefits experienced as a Customer Relationship Management system by using Entrepreneurial Marketing?

This paper is based on the research paper *-Aufbau von CRM im Rahmen des EntrepreneurialMarketing-* (Wiesener, 2011).

3. Research results regarding the influence on customer attitudes and customer behaviour

A direct influence on customer attitudes and thus behaviour requires customer loyalty strategies which have to be distinguished between hard and soft retention (Bliemel and Eggert, 1998; Bruhn, 2009). Hard retentions are characterized by a subjectively negative perception of the retention from the part of the customer. They result from a legal, technological or situational form of dependency. Although this means more planning security for the provider, it however reduces with the customer's motivation in terms of re-election after expiry of the hard retention in case of possible negative experience and at the same time recommendation by the customer (Bliemel and Eggert, 1998). Soft customer retention, however, can only be achieved by the positive result of a comparison made by customer between its performance expectations and its subjectively perceived service fulfilment. They can usually help to persuade customers to buy on a voluntary basis and so are more promising in terms of profit (Bliemel and Eggert, 1998). The perception of the customer within this retention process represents the chain reaction of customer loyalty according to Bruhn and Homburg as follows.



Fig. no. 1 Chain reaction of customer retention
Source: Bruhn and Homburg, 2003, pp. 9 ff.

3.1 Research results regarding the customer orientation by CRM in the framework of entrepreneurial marketing

An entrepreneur pursues the objective to position its SME on the market by customer orientation and to establish it on a lasting basis. The entrepreneur uses a relevant CRM system to achieve this customer orientation using knowledge about the customer needs. The knowledge about the customer's needs provides the future concepts of the young company required for customer orientation, which are used to clearly define an orientation guideline for the internal and external organisation of the SME. Then, the objective is to view the current and potential service user, i.e. the customer, according to their current and potential value in the future. This is done both in terms of monetary as well as non-monetary benefits. The monetary benefit is measured by current and future transactions, the non-monetary benefits reflect the value of the customer relationship, which result from a possible recommendation behaviour and the provision of market information etc. (Günter and Helm, 2006). This market information represents an additional benefit for the continuous architecture of the SME aside from direct recommendations. The structure of a CRM process is represented by the 4 phases of the CRM chain of effects according to Wilde.

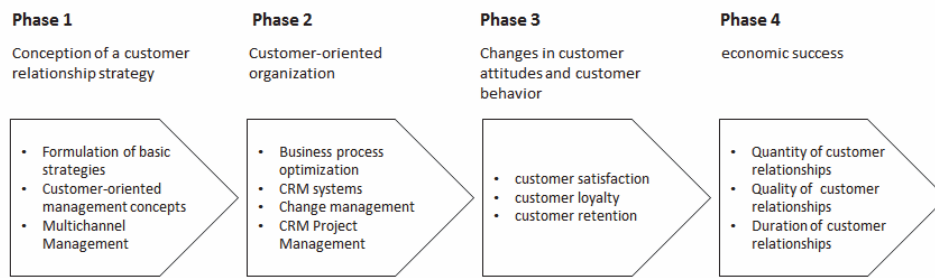


Fig. no. 2 CRM chain of effects

Source: Hippner, H., 2007, p.22

3.2. Research results regarding the possibilities on the specific use of CRM in entrepreneurial marketing

SMEs and entrepreneurs can identify and focus on potentially strong customers in their markets, based on market segmentation using a CRM system.

In the following there will be presented the 4 phases of the customer relationship management.

CRM Phase 1: Design of a customer relationship strategy

Early identification of market needs can help an SME to identify niches even during its start-up phase and correspondingly align itself. The strategic direction can be established by identifying and satisfying latent market needs or satisfying market needs by external restructuring e.g. new EU directives and regulations, infrastructure events etc. (Kollmann and Kuckertz, 2008). If the entrepreneur selects a niche orientation, for example, by a high degree of innovation and a focus on new customer needs, barriers to market entry usually do not represent an insurmountable obstacle (Benkenstein and Stenglin, 2008). Early internal orientation towards market needs across all hierarchical levels of the young company facilitates efficient market orientation (Claas, 2006). The focus of the entrepreneur during the foundation phase is the market strategic orientation of the company.

Such market orientation is often, however, a major difficulty for entrepreneurs due to limited resources (Kollmann and Kuckertz, 2008). Furthermore, the resources for intensive market research are very limited (Adler and Klein, 2008). In addition, the founder often experiences an information overload due to an increasing range of information and a lack of data evaluation (Herrmann and Homburg, 2000).

CRM Phase 2: Customer-oriented organisation

Entrepreneurs in the SME sector have the advantage that they can set up a customer-oriented business policy due to their flexibility and a more flexible internal structure from the outset in order to establish or improve a business relationship. The young management is flexible at this stage, independent and free with regards to its decisions (Gruber, 2004). This allows for quick and easy adjustment of the services offered to meet the customer's needs (Brinkmann, 2008). However, an SME cannot base only on a customer and innovation-oriented business policy. Internal organisation of the operating structure is just a

crucial for successful market development and establishment. They can indeed focus more strongly on the profitable parts of the company due to their size and need to spend less time dealing with unprofitable administrative activities (Bergmann, 2008); similarly, young SMEs must also aim for the consolidation of such a structure with the advantages of a flexible corporate structure that can be adaptable to the customer.

Young SMEs often pursue the wrong path, as they are usually represented by one or a few persons in their management who are influenced by their own ideas, and who lose focus on a realistic and effective implementation. They are therefore limited with regards to the objectification of the decision-making processes. The information systems required for the objective, strategic architecture of the management and the organisation therefore represent an essential function in the young SME (Hinterhuber and Matzler, 2009).

CRM Phase 3: Impact on customer attitudes and customer behaviour

An entrepreneur can create customer loyalty via a customised range of services and the unique selling point that results (Brinkmann, 2008). This can be done both by a high degree of innovation as well as by build-up product and additional services (Rode, 2004). If continuous interaction with the customer takes place in the course of the customisation of the range of services, the positive effects set off an emotional bond because the customer feels valued. The corporate philosophy and strategy formation result from an often high level of innovation orientation of a young SME. The communication of this special orientation by marketing activities is aligned with performance differentiation (Brinkmann, 2008). Suggestions for improvement from the customer and market indications concerning the services offered may be instrumental to the architecture of the entrepreneur. These suggestions, obtained by the informal interaction between supplier and consumer, can be quickly checked using short communication channels of the SMEs. The essential flexibility obtained represents a great competitive advantage for young SMEs over large companies.

In the course of EM, entrepreneurs can often only use emotional and technological loyalty by customer proximity and orientation as well as innovative thinking. This innovative way of thinking must be communicated internally and externally. Also, framework conditions must be congruent with the objectives and feasible, and should be met the required expertise of the provider. The positive purchasing experience of the customer, resulting from a target congruency, and associated soft and thus voluntary bond must be placed centre stage (Brinkmann, 2008). Hard retention strategies should be avoided as there is still no basis of trust with the customer and thus uncertainty is generated (Laker, Pohl and Dalhoff., 2000). A soft retention automatically leads to voluntary service communication on the part of the customer. Their influence in private networks is a decisive marketing factor for entrepreneurs. However, these can then develop into a dependency on the customer as an opinion leader, as well as their enthusiasm and their communication intentions. Opinion leaders can influence people at the second stage with their decision-making. The entrepreneur must continue to be innovative with regards to any recommendations made by customer and possess positive features in order to keep or to be able to improve its market position (Schwarz, Krajger and Dummer, 2008). The lack of experience and limited resources among entrepreneurs harbour an increased risk of failure due to information leakage during the exchange of information on innovation (Brinkmann, 2008).

CRM Phase 4: Economic success

Young SMEs are closer to customers due to intensive interaction, can faster absorb and process suggestions and derive the measures that can be learned from them. An initial, subjectively perceived over fulfilment of the services offered in terms of customer expectations can be used by the provider. This subjectively perceived extra benefit may influence the customers in terms of higher interaction usage. . This builds trust and a soft customer loyalty arises in the long-term. At the same time, young SMEs can achieve a positive public representation due to a high degree of personal interaction with the customer (Winkelmann, 2010). In the design process of the young SME, the strong interaction can lead to optimal coordination of the business to meet the requirements of the customer without having to undergo a major restructuring process, as, for example, large competitors would have to go by (Brinkmann, 2008). This way the entrepreneur gets ahead of its competitors and strengthens its position. Furthermore, a customer bond can be considered as an economic success due to the so-called "Lock-in Effect." Here, the customer is rigidly bound to the seller by the economically feasible orientation of the business (Plinke, 1997). As long as this bond is the result of a high level of expertise, this can be perceived as non-contractual, voluntary and thus a soft retention.

Profound economic measurements both by monetary and non-monetary successes are mostly designed for extended periods of time and are generally not available with young entrepreneurs at the beginning. Alongside the sales figures, the important assessment criteria that result from the activities of the customer which cultivate closer relationships must also be determined by the SMEs at an early stage. Also, it is recommended to systematically break down the customer value according to performance indicators, to measure **transaction potentials**, which include base volumes, growth and a potential cost reduction, which young entrepreneurs are definitely capable of, as well as **relational potentials** needed to expand their success; i.e. reference, information and a potential cooperation. The relational potentials, however, let young SMEs easily reach their capacity limits due to the high efforts of interaction.

The economic value of change barriers by hard retention should be less important; rather soft retention should be strengthened. In case of hard retention, the supplier may achieve a certain economic planning security, but in this way must be quickly replaced in competition. In contrast, soft retention should be strengthened as soon as possible, although the staffing costs associated with this can often cause a problem (Winkelmann, 2010).

A proper assessment of the customer relationship to design possible measures to prevention customer migration is risky due to technical shortcomings of assessed powers and an often subjective perception, and it may have a negative effect (Koch, J., 2004).

Conclusions

In EM, entrepreneurs face big problems in designing a customer-oriented enterprise architecture due to limited resources, compared to large established companies. However, by a high level of interaction and thus efficient customer orientation, they can serve the concepts of a CRM system. EM provides the tools for a strategic approach to the potential beneficiary and an adapted orientation of their corporate communication at the customer touch point. The market-specific attainment of information occurs by the interaction of people in a company. This gathering of information by an exchange of information with customers and EM enable the efficient architecture of the entrepreneur even in the foundation phase. Young SME can dispense on classical expensive CRM software if the

loading of the actors is higher, through with a reducing of the financial investment. Success and long-term growth are thus significantly dependent on the actor's ability to interact and communicate and not on the CRM software. A cost-intensive IT solution in the traditional sense is not essential for a framework for action in the foundation phase of an enterprise.

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NEW APPROACHES REGARDING INDICATORS AT GLOBAL LEVEL

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Abstract

This paper is trying to present the most important indicators at a global perspective. We have use data from 45 countries, studying 19 indicators form European Union an other European states, the North American Free Trade Agreement (Canada, Mexico, US), the Eurasian Economic Union , Austalia, other states in the world(Japan, China, India, Brazil, North Korea, South Korea).

The methodology that we used quantitative method of research, data analysis. The conclusions are presenting the most important elements that are relevant for each region. We have used a multidimensional approach taking into consideration the fact that 88 indicators from the World Bank database were grouped in 11 dimensions(Military, Demography, Communications, Health, Land, Public Sector, Environment & Energy, Social, Agriculture, Transport) and used for each country/region analysis.

Keywords

Indicators, globalization, policy, global economy.

JEL Classification

E6

Introduction

Nowadays, indicators are an important part of our lives and usually they determine how and which public policies will come forward in a present situation. USAID tells us, as we may be aware, that in different contexts we have different meanings of this word and sometimes this can lead to great confusions especially if we think at indicators like some sort of statistical data or parts of a standard index. USAID defines indicators “as variables whose purpose is to measure change in a given phenomenon or process.” (USAID, 1989, p.4).

One of the best definitions for this term is provided by OECD which tells us that an indicator is a “quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connected to an intervention, or to help assess the performance of a development actor. An indicator can also be a measure of an aspect or dimension of change that is unrelated to any particular policy, programme, or project. Governments use social and economic indicators to monitor national

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developments, and international organizations use indicators in the same way to monitor change regionally and globally.” (OECD, 2007, p. 20)

Globalization is one of the most used words in our century, one that has a great number of definitions but is still vague and complex. Some people see it like a good thing for the humanity, some are afraid of that this will lead to the fall national identity and this will create a standardized world.

The word that best highlights what is globalization is interdependence and when we speak about this term we don't refer only to interdependence between states but also between the different dimensions of the globalization. We have to see that “Globalization has emerged as a result of political, economic, social and cultural processes which have become global problems that the state cannot solve alone.” (Ciurcanu, p. 86, 2004).

We have selected the following indicators (Table no. 1)

Table no. 1: Global Indicators

<i>Indicators</i>	<i>Year</i>
Expense (% of GDP)	2012
Foreign direct investment, net inflows (% of GDP)	2013
Cash surplus/deficit (% of GDP)	2012
Central government debt, total (% of GDP)	2012
General government final consumption expenditure (% of GDP)	2013
General government final consumption expenditure (current US\$)	2013
Government expenditure on education, total (% of GDP)	2012
Government expenditure on education, total (% of government expenditure)	2012
Social contributions (% of revenue)	2012
Military expenditure (% of central government expenditure)	2012
Military expenditure (% of GDP)	2012
Health expenditure per capita (current US\$)	2012
Health expenditure, total (% of GDP)	2012
Labor tax and contributions (% of commercial profits)	2014
Tax revenue (% of GDP)	2012
Taxes on goods and services (% of revenue)	2012
Taxes on goods and services (% value added of industry and services)	2012
Taxes on income, profits and capital gains (% of revenue)	2012
Taxes on income, profits and capital gains (% of total taxes)	2012
Taxes on international trade (% of revenue)	2012

Source: own processing of data from Eurostat, World Bank

1. Methodology

In the analysis we will use data from 45 countries, which will provide us a maximum of 19 indicators for each one of them. The large majority of countries were chosen because they are part of an international economic organization like the European Union (28 countries which were filtered using geographic criteria as those used by the United Nations Statistics Division, and then after some common characteristics that will be explained later), the North American Free Trade Agreement (Canada, Mexico, US), the Eurasian Economic Union (Kazakhstan, Belarus, Armenia, Russia, without Kyrgyzstan because they only ratified in May 2015 the accession treaty and their full membership is expected to take place at the end of the summer). We used quantitative research method, data analysis.

For the rest of the countries we used data from well developed countries like Japan, or developing countries like China, India or Brazil. North Korea and South Korea were chosen to make a short parallel between capitalism and communism, but as you will see the data wasn't so helpful in this regard.

Ukraine appears here because we wanted to compare a non-EU member with the states from Eastern Europe and Norway and Switzerland were selected because they are OECD members and also they aren't members of the EU.

Australia takes part of this research in order to have a more global view of the countries all around the world. No African state was analyzed especially because they aren't so developed like the others and just a few are making progress towards development.

Data analysis, comparisons and observations will follow us in the next pages where we will use the data from World Bank as a mean to generate an economic global overview. We must mention that at the time of the selection of data we had some limitations like the fact that we used data from 2012 and 2013 especially because those were the last available, not all the countries reported the data for all indicators in these years with North Korea as the leader with the most missing data.

2. Results

Eastern Europe. All the states have big costs regarding imports and exports with the exception of Hungary and Poland. In all the cases the percentage of foreign direct investments as percentage of GDP increased with the same exceptions from above. There is a deficit in all the seven countries analyzed. Speaking about employment we have to emphasize on the fact that surprisingly Ukraine has the lowest long term unemployment rate. Bulgaria and Romania have the lowest rate of social contributions and if we look at the small wages from these states we can say that the pressure on the social system is high. As the percentage of GDP annual growth, Romania has the best performance

Northern Europe. One aspect that has to be definitively highlighted is the value of the foreign investments in Ireland which is huge compared with every other country, as a direct consequence of their relaxed fiscal policy which determined a scandal with the European Commission not a long time ago. In the Scandinavian states very low percentage of money coming from foreign investments as part of their GDP. Denmark has very small rate of social contribution, Norway is the singular case where we can find a serious surplus and in Sweden we encounter a deflation phenomenon. In all the Scandinavian countries the Internet is available for almost every person, in some of them the internet is seen as a right and it is free. Combustible renewable and waste as percent of total energy are high in this

part of Europe, with the exception of Norway which uses their oil reserves from the North Sea a lot.

Southern Europe. The economic crisis affected this part of Europe and we all know which the impact on the Euro zone was because of this situation. Even now after Spain and Italy are doing better, we have the case of Greece that still is a problem for the European economy and maybe even for the global one. All the Southern countries have deficit, but the most accentuated ones are in Greece, Portugal and Cyprus. Another aspect that has to be mention here is the value of the debt from this states which is very high, especially in Greece. Long-unemployment as percent of unemployment is a problem everywhere in the world and in this part of Europe it seems to be more accentuated. Density is very big in Malta compared with the other seven states that were analyzed.

Western Europe. Luxembourg seems to be the Heaven for foreign investors and this may be a consequence of the fact that some EU institutions are there and also of the openness of the economy. All the countries have a high GDP, with Germany and France coming in front and also registered a growth with the exception of Netherlands. Belgium is the most urbanized state from Europe which acts as a consequence for the low number of people employed in agriculture. In the military field France has the biggest army and Luxembourg the smallest, even the one from Malta is greater. Regarding surplus or deficit we have to say that only Germany and Switzerland registered a surplus, all the other have a deficit.

The North American Free Trade Agreement-NAFTA. The states aren't comparable in terms of GDP because US GDP is the biggest from the world if we don't sum up all the GDPs from the European Union. Only Canada has a surplus, all the other states have a deficit which is high in net numbers if we look at US because it represents 5% of its GDP. All three states are very interested in education so they spend more 10% of their GDP in this direction. US has one of the biggest armies from the world which seems to be almost the size of the entire population of Bucharest for example or bigger than other states like Estonia or Cyprus. Medicare or Medicaid health programs are very important in US and besides that they cost a lot of money and we can see that US spends 17% of its GDP in this direction which is an enormous amount.

Eurasian Economic Union. In this part of the Globe the cheap working force is attractive for the foreign investors so we can see in all the states a serious net inflow of money going to the GDP as part of foreign investments. We all know that Russia and even Kazakhstan are some of the biggest exporters of natural resources including fuel which is primordial for their economy and merchandise. All the states registered a growth in terms of GDP, all have an alarming inflation and with the exception of Armenia, all have a surplus which seems a good thing for their economies. In the case of the army the Russians stay were good in terms of men power and also in investment in that area, it seems that they prepared their future actions in advance and we can see nowadays why they do that. Adolescent fertility rate is big in all the states because of the lack of education and development but also because of the relatively young population.

Australia. Foreign investors are attracted by well developed countries which have a stable economy so we can observe that the high rate of foreign investments from this states isn't a coincidence. Inflation is low and we may add normal for such a developed country, but what is also interesting is the fact that the number of patent applications made by nonresidents is nine times higher than those coming from the residents. As the vast majority of the states, Australia has a deficit which seems to be a trend at the global level and also the debt of this country isn't very high. Education is an important sector and a good part of

the GDP is redirected in this direction by the Australian government. The army is small because this state has a natural defense that is coming from the sea and it doesn't have any neighbor that could invade the country unexpected but we must say that the people are well equipped.

Other states in the world. In this section we had some severe limitations in terms of data accessibility because the North Korean communist regime didn't reported many of the indicators that were selected. China, Brazil and India seem to be very attractive for the foreign investors maybe because of their cheap working force. India has the lowest GDP per capita from all the 45 states that were analyzed until now. As we can see in figure no.1 Japan is a very interesting case as they don't have almost no resources and have a low surface but they have a GDP that is more than half of the one from China. In terms of inflation India and Brazil have the highest value, China a normal one like one of the developed states from Europe and the lowest values can be encountered in Japan and South Korea. We all know that China, Japan, and South Korea are investing in research and technology and the data shows us that they use a good part of their GDP in this direction. Japan has an alarming deficit and a debt that is almost double than its GDP. The biggest army from the world comes from the most populated states but we can see that the army of North Korea is almost the same size as the one from US. India and North Korea have some problems regarding communications, especially if we look at the Internet spread.

When we speak about the globalization and the global economy we have to take into consideration lots of dimensions and indicators in order to have a better overview of the current situation of a country, a group of country or the entire world.

Indicators can be a good mean to assess such things and to discover some pattern of development or other interesting facts that are around us, but we need to use data in order to conceptualize and understand what is really happening.

Looking at all the 45 countries that were analyzed we cannot ignore the fact that almost 80% of them have a deficit and we can assume that this percentage can be higher because we don't have data for this indicator for all the states. Only 6 states have a very small surplus and one of them that is Norway has a good percentage in terms of surplus.

If we look also at the debts of these states we can see that some of the very developed countries from the World has a debt that is almost double than its GDP, this is the case of Japan, but we also have very high values for Greece, Ireland, US, UK, Portugal, Cyprus or France. The situation regarding GDP per capita, in presented in the following graph:

Greece situation may start a long series of negative events that will affect at first the European Union and the entire global market. But this isn't all, we have the Ukrainian crisis or the ISIS threat that can generate lots of damage and also other economies that can fall, Japan can be in any moment the next US for example, which can lead to another economic crisis.

One of our objectives was to observe some patterns that come in front from this indicators used at a worldwide scale we might say. In terms of population density the Western side of the continent has the best values from Europe that are above 100 people per square kilometer in any of the states analyzed, and as another observation it seems that also we have high population densities in the Southern part of Asia usually if we look at India, South Korea, Japan, China or North Korea.

In terms of foreign investments growth as a percentage of the GDP we must observe the fact that the values aren't very high even if they go into a positive or a negative way, but the cases of Ireland, Luxembourg are out of the order because they have 21.53% and 50%

of their GDP generated from foreign investments. Another situation that is worth mentioning is the one from Malta where we have a very serious decrease that accounts almost 20% of their previous year GDP.

Another pattern shows up in terms of energy consumption per capita where the Scandinavian states are some of the greatest consumers, alongside with Canada, US, Australia and South Korea.

Moving forward to the age dependency ratio we observed the fact that in almost all the situations poorer countries have a lower age dependency ratio, a bigger difference between genders in the case of life expectancy at birth and also between survival rates of the genders.

Romania is still the leader in the case of the incidence of tuberculosis from entire the European Union, our country could fit perfectly in the ex-soviet states from EAEU which have the same problem. In this situation is also Ukraine, but we register high values in Asia, even in developed states like South Korea. Their neighbors, North Korea have the greatest incidence from all the 45 countries should be very alarming for this country.

Only five states encounter a deflation phenomenon (Ukraine, Sweden, Cyprus, Greece and Switzerland) so we can observe that it doesn't really matter how well developed a state is because it can fall anytime on the path of deflation. Belarus has the biggest inflation of all which is 18.31% so we can say that the buying power of these people is very low.

China has an extremely high number of patent applications which is bigger than all that we saw until now even if US, Japan or South Korea have their generous numbers. Also we have to mention the fact that there are only a few states in the world where the nonresidents registered more patents than the residents. These countries are Cyprus which is the single state from EU in this situation (they also have a very low appetite for innovation so their total number of patents consists of 8 coming from nonresidents and 4 from residents which aren't some great numbers at all), then we have Canada, Australia, Brazil and India with very big differences.

Data shows us a known fact that in terms of GDP per capita the states from the Northern and Western parts of Europe have the highest values from the world so this is why they are very attractive for emigrants.

States from the European Union have to pay the biggest prices for fuel from all the world, in some cases the number are almost double because of the different taxes that have to be paid to the state especially.

The other objective was to see if there is a correlation between different indicators used from the World Bank database, which was achieved in the previous chapter as a mean to test different observations made in the times of writing this research.

Globalization is a process that won't stop and this tightens the links between the countries but even so the equilibrium is fragile in the economic field as we stated in the first part of the conclusions. As a consequence if one of the states gets in collapse the domino effect will affect all the countries worldwide so people, governments, companies have to think about solutions to reduce such a risk because the effects are on a long term and can be disastrous.

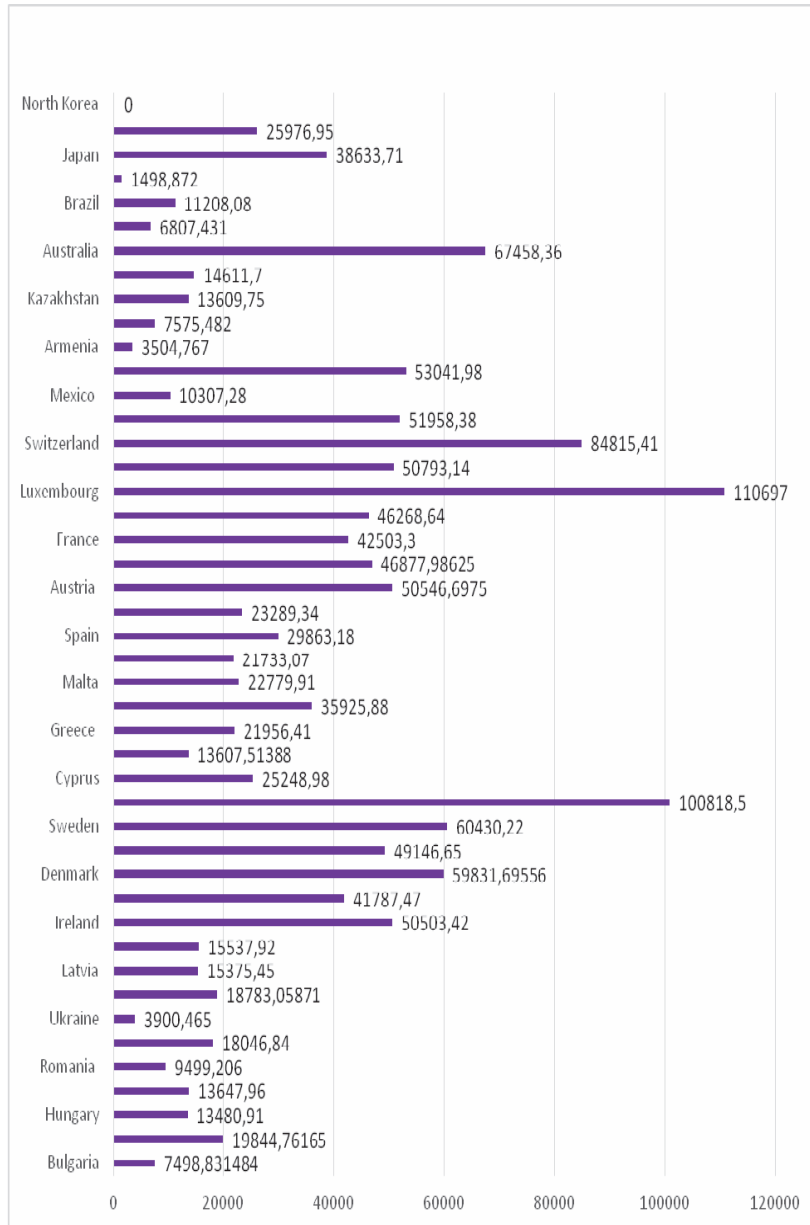


Figure no. 1: GDP/capita at global level (current US\$)

Source: own processing of data from Eurostat, World Bank

Conclusions

Even if different regions have different characteristics, the instability from any state can influence the welfare from another. Globalization is a good thing but only if the states can become more interdependent than they are now. Dependence on other states or international creditors can't provide a good, free and adaptive global market, as it should have been from a long time ago. As a conclusion of the paper, a worldwide analysis can provide a great amount of information and can help researchers to understand better the influence and the regional profile of a country and also integrate it more easily in a broader plan.

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HOW INTERNET OF THINGS TECHNOLOGY CAN HELP THE RETAIL INDUSTRY IN DRIVING BUSINESS PROCESS INNOVATION

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Abstract

Technology continues to evolve at an accelerated rate and it brings forth new technology paradigms that aim to disrupt existing business models. The Internet of Things (IoT) is a new technology paradigm that aims to innovate the Information and Communications Technology (ICT) infrastructure by leveraging communications protocols to interconnect smart physical devices. Organizations seek to deploy physical agents that have the capability to connect to other devices (machine-to-machine), as well as establish connections to a centralized platform that extracts data from smart devices, allowing businesses to augment the value generated by their data.

The retail industry is one of the most dynamic business ecosystems and it faces noteworthy challenges when it comes to seamlessly managing in-store operations. Starting from a brief presentation of the current state of the Internet of Things, we explore the intricacies of this technology paradigm and its applications across various domains. The paper then focuses on how the Internet of Things can disrupt traditional models by innovating the retail industry. Thus, we introduce an IoT driven concept that holds the potential of automating retail workflows and operational processes through the integration of smart devices in operations management IT solutions.

Keywords

Internet of Things, Innovation, Process Automation, Business Process Optimization, Retail Industry, Technology Integration

JEL Classification

O31, O32, M15

Introduction

With the rapid advancement of technology, there have been significant efforts in trying to break the boundary between the actual physical components of technology and the channels available for interacting with them. At a quick glance, it might appear that Internet of Things (IoT) technologies aim to directly link material agents (“*Things*”) through the power provided by the Internet as a linking mechanism. However, the core purpose of IoT

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technology is to create a mechanism that can leverage the information produced by "Things" and interconnect them through the Internet in order to allow the seamless extraction of data and information to further augment it and create value (Huang & Li, 2010).

By leveraging IoT technology, businesses can further optimize their activity and drive innovation from within, thus improving resource usage and productivity. Organizations have the opportunity to extract more value from the ubiquitous residual data by automating business processes and providing a potential better framework for managing all functions of a business.

The primary objective of this paper is to provide the reader with the opportunity of grasping the state of the currently available IoT technologies and how they can be leveraged to drive innovation within companies in the retail industry. In the following section we will present the scope of Internet of Things in the general business context and some of its use cases across industries. Afterwards, we will focus on the retail industry and how IoT technologies can drive innovation and automate all the supply chain components that the retail ecosystem comprises.

1. Scope and Applications

The Internet of Things is rapidly evolving as it represents a core research subject that has the potential of disrupting the traditional technological model. As a consequence, many research groups are actively involved in consolidating existing knowledge and experimenting with emerging applications of IoT technology. In its initial phases, the Internet of Things term was pioneered by The Auto-ID Labs* which are currently one of the key research organizations in this area. Their research is based on networked Radio-Frequency Identification (RFID) and sensory technology, as well as next generation Internet of Things. In collaboration with GS1†. The Auto-ID Labs are trying to expand current technological boundaries and drive innovation on a global scale through various projects, such as the Electronic Product Code™ (EPC)§. Such initiatives focus on accurately defining smart object properties and making them visible to external systems in order to standardize information and leverage it for increased performance. Gluhak and Presser (2009) share the aforementioned vision, as they consider RFID technology to be widely accepted in the business community. Furthermore, they also highlight the advantage that it brings from a total cost of ownership perspective, due to its maturity. Apart from RFID, the forthcoming of emerging technologies such as Wireless Sensor and Actuator Networks (WSANs) are shaping the evolution of Internet of Things by allowing industries to better manage the complexity of available IoT infrastructure. By breaking down processes and distributing activities across multiple nodes, WSANs can help businesses in automating tasks and increase responsiveness to contextual variables (Atzori, Iera & Morabito, 2010).

The members of the CASAGRAS Partnership are also supporting the advancement of Internet of Things through RFID mechanisms. The foundation of their research lies upon the establishment of a bidirectional binding between real-world physical items and processing units that can leverage existing data and extract context information in order to

* Auto-ID Labs - http://autoidlabs.org/wordpress_website/

† GS1 – The Global Language of Business - <http://www.gs1.org/>

§ EPC Information – EPC-RFID/EPC-RFID – <http://www.epic-rfid.info/>

aggregate it and provide value for businesses. The main objective the CASAGRAS project is to develop a fully inclusive model consisting of both a framework, as well as a migration path for legacy technology and associated business processes. As the Internet of Things is still in its infancy, it is a promising technology paradigm that can potentially lead to a virtual object space where objects are represented in electronic visual and representational media. Such an environment would empower businesses and foster innovation through real-time analytics and improved process management. Furthermore, it encourages businesses to adopt a data-driven model which can lead to better decision making, business process automation, as well as resource usage optimization (CASAGRAS Partnership, 2009). For example, companies would be able to leverage the aforementioned virtual object space by implementing a business intelligence platform to extract data, aggregate it and analyze it in order to gain new insights on their endeavors. In this case, smart devices serve as data gateways that can automatically collect information as per the provided configuration and feed it over the network to the interested business functions. Fig. 1 illustrates a potential solution to integrating IoT technologies in business infrastructure and process workflows.

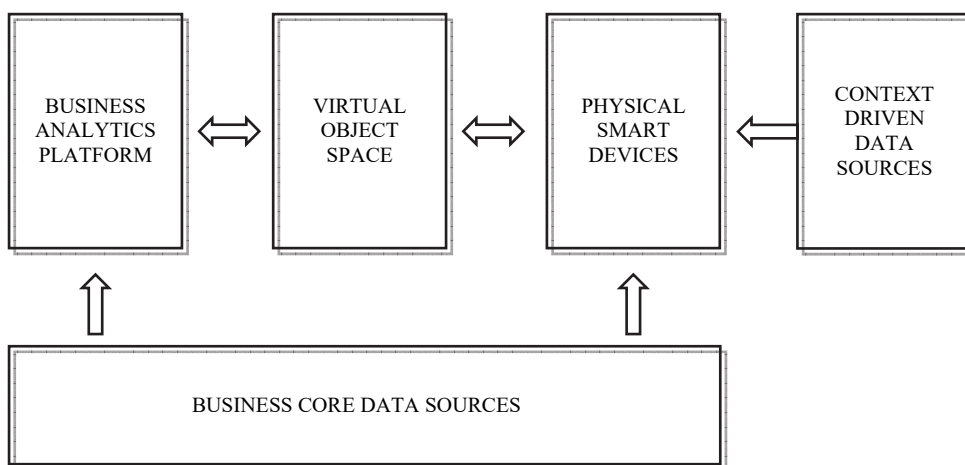


Fig. 1: IoT Driven Business Analytics Concept Leveraging the Virtual Object Space

As devices continue to advance both in terms of storage capacity, as well as processing power, new opportunities continue to arise for leveraging the Internet of Things in real-world applications. Not just from a business point of view, but from a consumer perspective alike, there is an increasing shift from PCs and laptops towards mobile devices. Moreover, mobile devices are continuously incorporating new features that aim to increment their sensory and computation capabilities, thus granting an incentive for organizations and their customers when it comes to investing in IoT technology expansion and intelligent devices (Coetzee & Eksteen, 2011). Fleisch (2010) identified seven key value drivers that render the Internet of Things relevant across every value chain, regardless of industry. According to him, these drivers deliver value from two core perspectives: machine to machine communications and user integration within the IoT ecosystem. The seven factors identified by Fleisch are driving existing real-world Internet of Things applications and can be grouped in one of the two aforementioned areas:

I. Machine to Machine Communication Value Drivers

- a. *Simplified manual proximity trigger.* One of the most common implementation of this element is through RFID components or devices that expose themselves to external triggers and can be used to pass data or read it in order to perform a validation or generate an action (e.g.: access cards to secured rooms, payment authorization, manually triggered data exchange operations etc.)
- b. *Automatic proximity trigger.* Compared to the manual proximity triggers, the automatic proximity triggers automatically perform a transaction when the physical distance between the communicating devices is within the perimeter allowed by the involved technologies. For example, production lines can implement automatic proximity triggers in various steps of the assembly process that can self-activate machines and perform certain tasks, thus reducing cost and better managing errors by eliminating manual processing of components.
- c. *Automatic sensor triggering.* If the previous two drivers had a limited set of data that they could use to trigger actions based on proximity factors, automatic sensor triggering allows smart devices to continuously collect data from their context and update their state. By implementing sensory elements, physical devices can greatly benefit businesses by incorporating configuration parameters to monitor, extract and process data in real-time and perform predefined actions when certain conditions are met. More and more companies from the agriculture industry are implementing Precision Agriculture (Lee, Hwang & Yoe, 2013) due to its benefits throughout the entire life cycle of products.
- d. *Automatic product security.* Through the implementation of validation rules and security checkpoints, smart devices can be configured to automatically check the integrity of data flows and other interconnected devices. In order to ensure product security, smart devices incorporate advanced cryptographic technology which often require a significant amount of resources and powerful processing units. However, securing physical agents is done only for critical business areas, as companies try to decrease costs by adhering to a data security model for non-critical business functions.

II. Integration of Users Value Drivers

- a. *Simple and direct user feedback.* Smart devices can be configured so that they provide feedback to the users who are interacting with them. Usually, the most common types of basic feedback are audible (i.e.: producing a simple beep whenever an RFID enabled device goes through a gateway) and visual, when the IoT device has LED lights capable of providing validation to the user that a certain event has occurred.
- b. *Extensive user feedback.* Data collected by smart devices can be uploaded in a centralized repository through a pre-configured gateway that uses built-in services to process the data and extend it before forwarding it to the user. For example, a retailer might use RFID technology to implement real time inventory tracking across his facilities and set up an aggregation gateway that collects data from each location. All the collected information could then be processed through built-in services and then used to cross-reference the

resulting data set with organizational objectives in order to generate comprehensive analyses for the user who requested it. Also, due to machine-to-machine communication capabilities, the receiver of the analysis could also be another IoT device that scans the results and sends notifications to business users, should a certain result reach a predefined threshold.

- c. *Mind-changing feedback*. This value driver aims to produce a behavioral change in users interacting with smart devices, which can be configured so that they continuously collect information about the user and identify patterns. These patterns can then be used to consolidate existing knowledge and make recommendations that would benefit the end user and determine a change in their actions. As a result of such complex interactions, users can thoroughly understand the current context in which they operate and can make better decisions for the future.

To better leverage the capabilities of the Internet of Things, businesses can use cloud computing technologies to build an ecosystem that integrates smart devices in their operations. There are three core components that serve as the base layer for implementing an IoT driven cloud architecture: *storage facilities* (in the form of cloud data centers, capable of storing all the data received from physical smart devices for further processing), *services middleware* (organized in complex computational modules that plug in to the cloud data repository and extract information in order to process it in accordance with the business needs) and *access layer* (by implementing a security protocol, user permissions can be better managed in order to prevent system intrusions and protect critical business resources). Companies usually adopt a Service Oriented Architecture (SOA) to address the complexity of individual services. The SOA model promotes the development of application components that expose functionality through services which handle individual units of business logic. If a service module is too complex, it will be split in multiple containers which are then linked through a communications protocol. Thus, businesses can manage their technological infrastructure and avoid system-wide errors that would temporarily cripple their activity (Rui & Danpeng, 2015).

The current state of the Internet of Things can contribute to advancing the business innovation capabilities within any given industry. This is most evident in B2C industries, such as the retail industry, where consumers need to be actively engaged and assisted in their decision making process so that they understand the true benefits of the products they are interested in. Furthermore, retailers can also implement IoT technology to gain a deeper insight on their business environment and better manage their operations in order to remain relevant and disrupt existing trends.

2. Retail Industry Disruptive Innovation

Existing IoT solutions in the retail industry tend to approach individual steps of business processes or enhance customer experience. Whether it is RFID technology used to track items and monitor in-store operations or sensors that detect when a returning customer enters the store, these implementations are aimed at performing simple tasks that are meant to be an extra step within a bigger process, and not act upon the overall process automation and disruptive innovation through smart devices. To truly tap into the potential of the Internet of Things, retailers have the possibility of disrupting their business model through an IoT driven approach to managing their resources and business processes. However, in order for this concept to be successfully implemented, a common framework should be

developed and established across the retail industry ecosystem in order to align every party involved across the supply chain, from the very first step of the production process. There should also be a set of technological standards governing the smart devices and technology stacks implemented across the industry in order to ensure compatibility between business partners and their suppliers alike. Furthermore, interconnectivity of environments and smart devices is imperative when deploying an Internet of Things driven solution to improve process management and foster innovation. Thus, all the components of the integrated solution should be carefully designed and implemented in a controlled environment across all the core business functions and then linked to external systems through Application Programmatic Interfaces (API) that address both incoming as well as outgoing information (Wirtz, R  th, Serror, Zimmerman & Wehrle, 2015). By sharing a common set of interaction methods and patterns, business units and their collaborators can build their own IoT module that is compatible with their underlying IT infrastructure, whilst not being required to upgrade their entire infrastructure due to containerization of business application logic within the IoT application module.

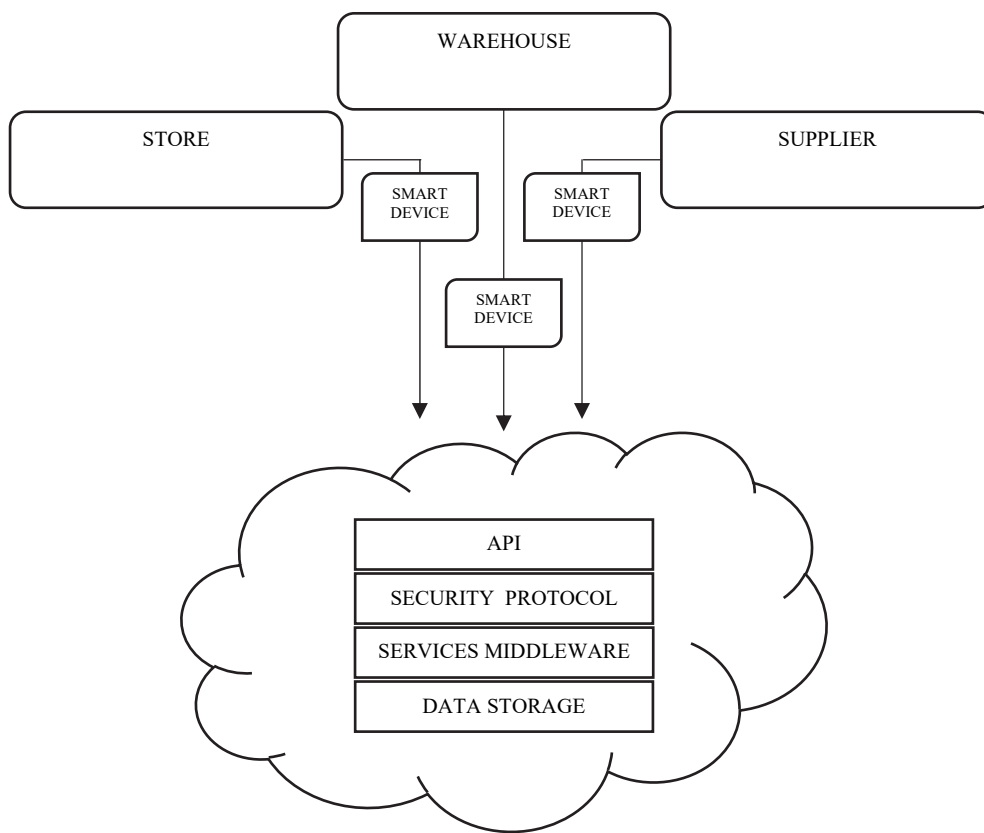


Fig. 2: Concept of a Potential IoT Solution to Warehouse Management in Retail

Fig. 2 describes a cloud based concept that leverages Internet of Things technology and has the potential of innovating and automating business processes across the entire supply chain. This solution concept aims to innovate the retail store stock replenishment process and fully automatize it, thus also limiting the impact of human errors. At its core, the environment employs a hybrid cloud solution that acts as the process controller for incoming data and application requests. The purpose of the cloud platform is to aggregate data from all the units involved through smart devices that behave like information gateways and accurately keep track of current item quantities and individual item availability through the supply chain. From the moment an item exits the production line, it will be uniquely identified through an RFID tag that also stores all the characteristics of the item. As soon as an item is ready to be shipped from the supplier to the retailer's warehouse, it will be scanned through a smart device enabled gateway at the supplier's location. This action will trigger an automatic update through the cloud API and it will update the cloud repository with availability data. Afterwards, the application controller will route the information and automatically push it to the other units' systems, making it available in real-time. From a supplier point of view, the automation of the ordering process can lead to the improvement of production lines performance and delivery speed. At the same time, when an item is delivered by the supplier and enters the retailer's warehouse, it goes through a smart device enabled gateway that will update the state of the processed item and push any updates in the cloud. Individual store locations can automatize their inventory replenishment process through smart devices by scanning sold items with a smart device that collects information through the attached RFID tag and updates the local item quantities in real-time. Then, based on user predefined quotas and thresholds, the physical gateway agent can place orders and post them to the cloud platform, making them available to the warehouse smart device listener or the supplier one, should there not be sufficient items available in the retailer's storage facility. The services middleware component of the cloud computing platform can be fully customized in order to increase the value delivered to both customers and the business through predictive analytics that crunch through the data in real-time and identify consumption patterns. Thus, retail companies can better address customer needs and quickly act upon on their inventory product base diversity to isolate local demand and quantify the impact of local trends on the overall strategic business objectives. The main advantage of the proposed concept lies within the agility and optimization capabilities that it grants to the business, making it possible for companies to efficiently manage their inventory and build custom services in accordance with their needs. Moreover, by implementing a modular approach to business process logic, organizations have the possibility to scale their operations without impacting existing workflows or affecting the overall process performance.

Conclusions

The Internet of Things has yet to reveal the true potential that it holds from a business innovation point of view. Companies are continuously experimenting with new approaches to efficiently integrate smart devices in their business operations and process workflows. However, despite its accelerate advancement, there are still several areas that need to be addressed in order to make the Internet of Things technology ready to be deployed in production environments. Security is currently one of the most challenging aspects of smart devices due to the dynamic nature of IoT driven business operations. Moreover, researchers

and early adopters are further investigating the infrastructure exposure to vulnerabilities caused by a fully automated and machine driven model.

The concept presented in this paper requires all units across the supply chain to adhere to a common standards framework that would ensure compatibility between smart devices, as well as cross-functional alignment. Still, existing IoT technology allows for the containerization of process workflow steps in pre-configured smart devices that can lead to better business performance, while also contributing to the overall customer experience. As the Internet of Things will continue to swiftly evolve and converge into the realm of stable and secure technologies, the IoT driven technological model presented in this paper will give organizations the opportunity to thoroughly check the validity of its technology stack and eventually deploy it as part of their core business model.

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E-LABOUR PLATFORMS STREAMLINING THE PROCESS *Right Person For Right Job*

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Abstract

On E- labour platforms enterprises, companies, organizations and employees can tailor their interactions to their needs.

On the other hand, "E-labour platforms- key new technologies" is both about tools for a battle to find a good job and tools to retain the empowered worker. It is about performers, when they understand their own value.

But it is not enough to find the right people for the right job. Companies in innovative industries need mechanisms that support ongoing, self-directed, and virtual learning. Training platforms enable employees to create online learning programs.

Keywords

E-labour platforms, Careerbuilder, Onboarding and training, Digital war for talent

JEL Classification

M54

Introduction

According to a study published by Eurostat on February 2016, the employment situation of people, aged 55-64, in the 28 EU countries, in the interval [2010-2014] was (Fig.nr.1)

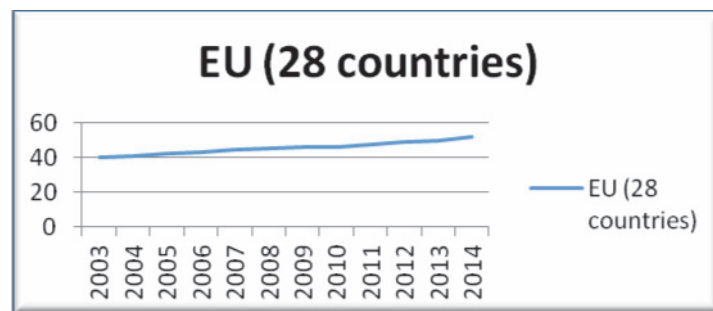


Fig.nr. 1 Old employment rate, age group 51-64

Source: Zeca D.E., Eurostat, 2016

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between 39,9% in 2003 and 51.8% in 2014. According to the same study, the employment situation of people aged between 20-29 years old, on the European continent in the range [2010-2014] was (Fig.nr. 2) between a minimum of 36.7%, recorded in Greece in 2013 and a maximum of 78.7% registered in the Netherlands in 2010.

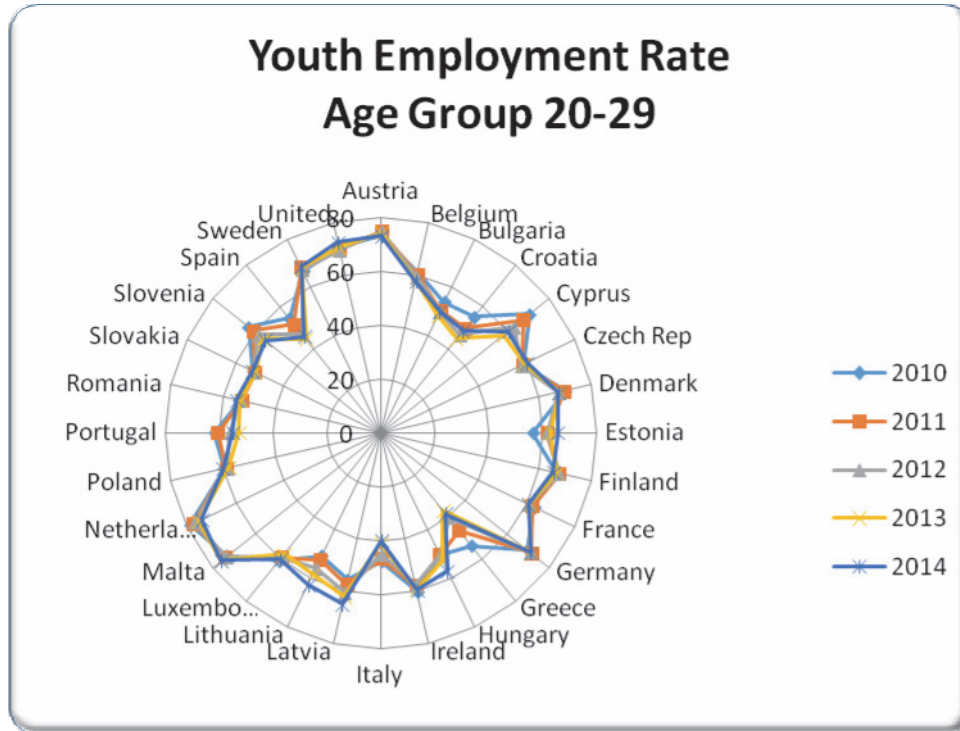


Fig.nr. 2 Youth employment rate, age group 20-29

Source: Zeca D.E., Eurostat, 2016

1. Position along value chain - how more value on knowledge transmission chain can be brought to increase employability.

A better connection along chain may be realised by introducing new instruments in university curriculum, which must be centered on the employer's needs, to strengthen and adapt the theoretical /practical knowledge. A modality of strengthening ties companies could be, as a tool, student volunteering in spin-offs innovative, volunteer-based on contract and job description. (Fig.nr. 3) .

SWOT volunteering in spin-off:

Strengths- Spin off appendix university research centres is a high level field that equips students with practical and theoretical skills, acquired in real time, acquired simultaneously with market dynamics.

Threats- subordination of scientific activity ideology contractor or desire of gain.

Opportunities- Funds for European Strategy for Smart, Sustainable and Inclusive.

Universities, having a collaborative approach in addition to traditional forms of training, but also as a manifestation of their sustainable development and adapted to contemporary trends in the economy and labour market with a dynamic and high demands, will create besides university research centers flexible innovative spin-offs, adaptable to market demands.



Fig.nr. 3 Position along value chain

Source: Zeca D.E., *INTED2015 Proceedings*(browse), Pages: 3448-3457

Weaknesses-Reinforce informal hierarchies , researchers can be attracted by the earning opportunities of entrepreneurial, and subordinate their activities to short-sighted economic commercialization.

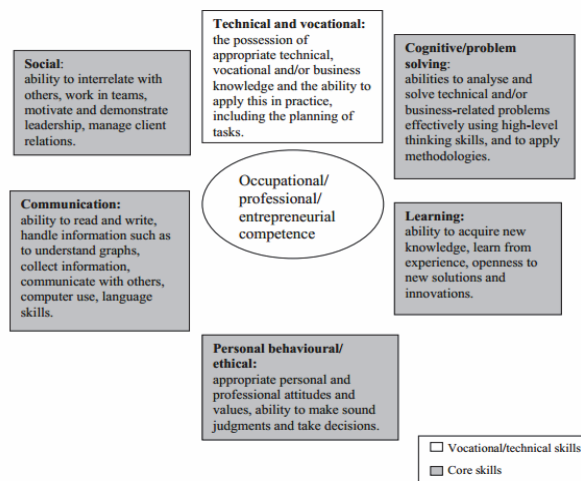


Fig. nr. 4 Core skills and technical skills, defining professional competences

Source: ILO 207i

„Q/A are about of how institutional and organisational conditions for the production of knowledge relate to each other and what characteristics this knowledge has.(Fig. nr. 4)

Different institutional arrangements produce different forms of knowledge and this can lead to respective differences in the capacities of knowledge products.

The analysis aims at assessing the forms of interaction between spin-offs, their parent institutions, curriculum, society and, students working as volunteers under contract in this innovative spin off.”

2. Matching labor supply and demand

An external source which fundamented the gains achieved with e- labor platforms have come through , for example, LinkedIn. „But to realize the full potential of the digital approach, it will also be necessary to use internally oriented platforms more effectively, so that employees can tailor their interactions and the information they share to their unique needs.”

On the other side, speaking about performers, when they understand their own value, it is a great battle to retain the empowered worker.

„Digital labor platforms make it easy for competitors to pick off the best people inside. companies—and enable employees to be more empowered and to announce themselves to the world in previously unimagined ways. E-platforms are such as labour markets, ,...for employers to improve the way they assess and deploy their employees and, by doing so, to differentiate themselves as employers.”

E-labour platforms must be what B2B sites are for customers and providers, but not only.

In fact, e-labor markets are already useful for much more than just recruiting.

Beyond the hiring process, entrepreneurs, but not only, use e-tools to develop a base of employees with a great variety skills.

Table nr. 1 E-labour platforms

LinkedIn	https://www.linkedin.com/uas/login
Careerbuilder	http://www.careerbuilder.com/?sc_cmp2
Monster.com	http://www.monster.com/geo/siteselection https://www.youtube.com/watch?v=b3QZppcxTAE&nohtml5=False
Freelancer.com	https://www.freelancer.com/?utm_expid https://www.youtube.com/watch?v=l-6pnPOG9is&nohtml5=False
Toptal	https://www.toptal.com/?adnetwork https://www.youtube.com/watch?v=t4R-WCfJl8E&nohtml5=False
Upwork	https://www.upwork.com/? https://www.youtube.com/watch?v=Pk_96LDtwmA&nohtml5=False
Glassdoor	https://www.glassdoor.com/index.htm https://www.youtube.com/watch?v=OCPqhAAV5gc&nohtml5=False

LinkedIn is a business-oriented social networking service.

CareerBuilder provides „labor market intelligence, talent management software, and other recruitment solutions, including online career search services.”

Monster.com is one of the largest job search engines in the world. Monster is used to help all those seeking work to find job openings, for lower to mid-level employment, that match their skills and location.

Freelancer is a „global crowdsourcing marketplace, which allows potential employers to post jobs

that freelancers can then bid to complete.”

Toptal employs a screening process to evaluate freelancers from all over the world and „has an acceptance rate of around 3% of applicants.”

Upwork, is a global freelancing platform where entrepreneurs and professionals connect remotely.

Upwork allows everyone to interview, hire and work with through the company's platform. E-platform includes a real-time chat platform.



Fig. Nr. 5 E- labour platforms

E- labor platforms have created , e.g. Glassdoor, a „glass” job market.

Performers access online platforms to find new opportunities and to evaluate potential employers. They must manage their workplace reputations and engage their employees closely, if not they will find themselves „on the losing side of an increasingly digital war for talent”.

3. Training and Onboarding

E-labor platforms help create a personalized and onboarding experience so that new employees add greater value just in time on KVC (knowledge value chain)

Appical and LearnUp offers digital training programs for job candidates These companies create e-tools to make onboarding better.

Google is a good exemple about how developing an onboarding map road and boost the percent of its new hires by up to 15%.

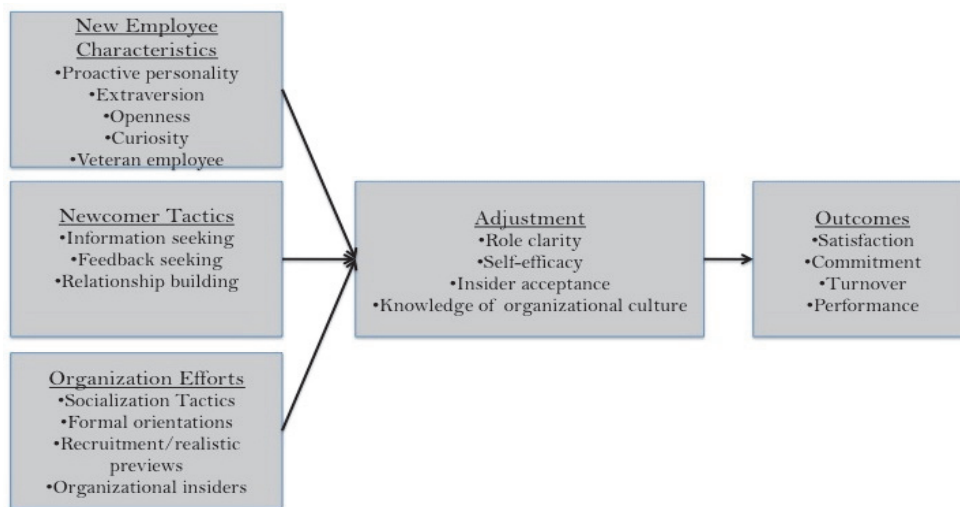


Fig nr. 6 A model of onboarding

Source: Model adapted from Bauer & Erdogan, 2011

In a business environment, where technology is evolving swiftly, it’s not enough to offer one-time training. Companies needs e- tools that support ongoing, „self-directed, and virtual learning”. „Training platforms such as Litmos and Mindflash enable companies to cut back in-person training sessions and create more effective online learning programs.”

3.1. Raising employee engagement

Predictive analytics can identify employees likely:

- to depart;
- flagging the need for mentoring;
- new jobs;
- advancement to improve their satisfaction and engagement and thus decreasing employee turnover and raising productivity.

E.g. „Bank of America has made its employees more engaged by using ID cards with embedded sensors that monitor interpersonal interactions to gauge and improve the cohesion of call-center teams whose turnover dropped sharply as a result.

E.g. “Wells Fargo has developed a predictive model to select the most qualified candidates for positions as tellers and personal bankers. Working with Kiran Analytics, the company identified the qualities that characterize engaged, high-performing employees in client-facing positions and then screened for those attributes in new candidates. By the end of the program’s first year, the retention of tellers and personal bankers rose by 15 and 12 percent, respectively.”

Conclusions

Training activity, business, enrolment on labour market to be on world stage, peoples and companies, must be on e-platforms, professional networking, virtual knowledge innovative communities (e-KIC).

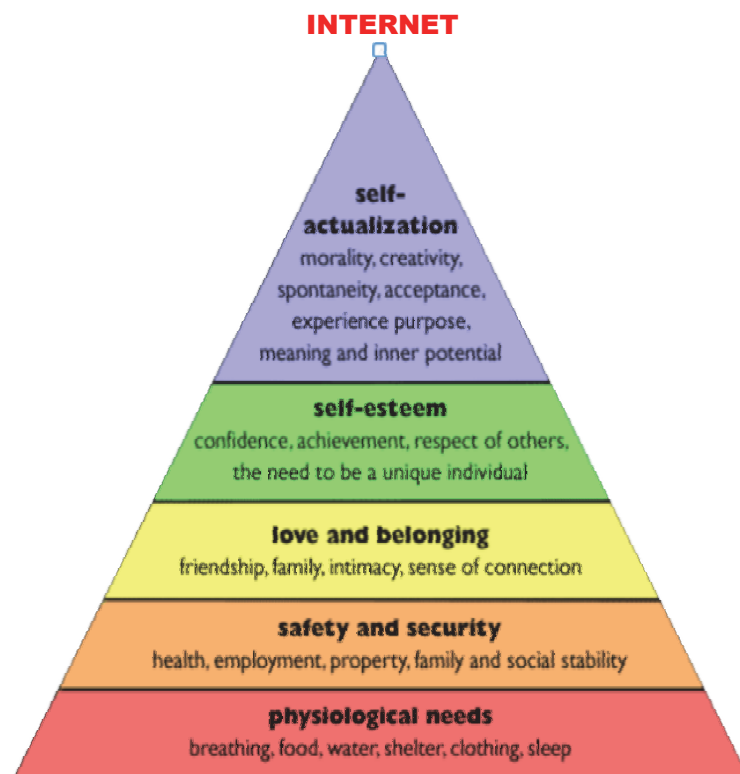


Fig nr. 7 Maslow's pyramid, up-date the XXI century human needs

Source: adapted by Zeca D.E.

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