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Strategic management between ideal and reality

When it comes about formulating the organisation vision, mission, goals and strategic objectives or the roles and responsibilities of the management team, we must bear in mind that a thorough analysis of the organisational contexts, of its internal and external environment, as well as of its existing or potential resources is necessary, this involving the identification and use of specific methods and techniques. Too often, managers ignore the huge difference between fiction and reality. We must always relate our decisions to the characteristics of reality and to the sometimes surprising circumstances that the economic environment might generate.

A serious analysis and a clear understanding of the internal and external environment of the organisation provide us with various pieces of information regarding the direct and indirect competitors, the arising products and services or the strengths and weaknesses of the same, but, obviously, a sound knowledge of the external environment is not enough, self-knowledge being also essential.

Many times, being concerned about the seemingly major problems, we forget about identifying small dangers that can lay the basis for crisis situations. Starting with a well defined idea regarding the trajectory of the organisation (its future evolution), we should make a clear delimitation between the organisational desires and its real capacities to materialise such desires.

The realistic approach of the organisational potential must take into account the opportunities and threats identified while analysing its external environment, as well as the strengths and weaknesses captured during the study of its internal environment. Given that reality often exceeds fiction, it is urgently necessary for the management team to propose an adequate strategy to increase / maintain / decrease the activity carried out by the organisation, depending on the realities of the economic environment and on the wishes of the shareholders, having as a reference point its innovation capacity in terms of both production output and organisational processes. The quality of the strategies is influenced by the capacity of becoming acquainted with the right knowledge about the current status of the organisation, as well as about the contexts where the activity of the organisation is carried out. Many times, managers are influenced by the organisational „stiffening condition", failing in detaching themselves from that „reality", so as to truly see its real problems.

In fact, the highest danger resides in getting used to the idea that if the organisation performs properly at present, it will perform optimally in the future as well. That is why we must make the distinction between desire and reality. A plan has virtues insofar as it succeeds in materialising starting from real data, not just from hypotheses.

Prof. Ph.D. Paul Marinescu

Customer solutions – new sources of sustainable competitive advantage in times of global economic crisis

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Abstract: *The global economic crisis changed the competition game in any marketplace. Faced with increasing competition, declining margins or decreasing demand due to crisis, the firms are looking for new ways to compete at global level. Considering Peter Drucker's argument that the reason the firms exist is to satisfy the customer, they are trying to differentiate themselves by moving their focus from simple stand-alone products and/or services and instead developing customer solutions. They are defined in the extant literature as a combination of goods and services designed to satisfy a customer's business needs and therefore they are difficult to imitate and thus they have the potential to be used as a source of sustainable*

competitive advantage. Much more, firms are facing a demand change from their customers as a response to address new business requirements imposed by the economic crisis. But the shift towards developing, selling and implementing customer solutions is not an easy journey. The firms have to transform many aspects of their business. The question that arises is what are the major challenges firms are facing in creating effective customer solutions to achieve sustainable competitive advantage and how they could address these challenges.

Keywords: customer solutions, competitive advantage, value co-creation
JEL: L10, D40, M10

1. Introduction

In different industries across various geographies the firms are looking for new ways to differentiate from the competition in the markets they are operating in by offering customer solutions rather than stand-alone products or services (Nordin & Kowalkowski, 2010). They are defined in the extant literature as integrated combination of goods and services designed to meet a customer's specific business needs (Miller et al, 2002). Much more, customers themselves are pushing them in that direction, as their needs become more extensive (Davies et al, 2006). This paper is an investigation into the potential of using customer solutions for creating sustainable competitive advantage within the boundaries defined below.

Customer solutions – as a complete subject for discussion – are beyond the scope of any single paper. The field of inquiry in this paper is thus narrowed to the discussion of customer solutions from a value creation process perspective. The reason is that, as several authors argue, providing solutions that address a customer's needs means that firms have to understand how value is created "through the eyes of the customer" (Wise & Baumgartner, 1999, p. 135). The firms evaluating the option to switch towards customer solutions have to consider a comprehensive change in many areas of their business from strategies and positions in the value stream to their organizational capabilities, structures, cultures and even people mind-sets (Davies et al, 2003; Brady et al, 2005a). Therefore, even if the driving forces provide opportunities for firms to offer customer solutions, it is not always an easy task to design, develop and sell these new offerings, especially for firms that have traditionally focused on selling products or simple services (Bowen et al, 1989; Brown, 2000). Not few are the questions a firm might have in finding the most effective way to grasp these market opportunities and many are the challenges this firm would face when making the decision to follow the road towards providing customer solutions. Therefore, the general focus research question of this paper is "what are the major challenges firms are facing in creating effective integrated solutions to achieve sustainable competitive advantage?"

The paper takes a managerial perspective for the discussion of the customer solutions. The reason is the one Harreld et al (2007) suggest. They argue that managers need to be able to accomplish two tasks: "first, they must be able to accurately sense changes in their competitive environment, including potential shifts in technology, competition,

customers, and regulation" (p. 24) and "second, they must be able to act on these opportunities and threats; to be able to seize them by reconfiguring both tangible and intangible assets to meet new challenges" (p. 25).

As there is no single best way to become an integrated solutions provider (Davies et al, 2006) and the approaches varies from industry to industry, this paper narrows further the discussion to one single industry, specifically Romanian Information Technology (IT) sector. The main reason explaining the selection of this industry is that the Information Technology (IT) sector is one of the first sectors that started the transition towards customer solutions (Cerasale & Stone, 2004). The provision of customer solutions in the IT sector is a better option for a firm in terms of added value creation when compared to simple hardware or software products (Ceci & Prencipe, 2008). Much more, as these authors argue, the development of the related internal capabilities towards offering customer solutions provides the firm higher advantages against competition.

The rest of this paper is organized as follows. A review of the extant literature on the main concepts of this paper is performed in Section 2. The following section (Section 3) covers an empirical study of the customer solution in the particular context of the Romanian IT industry including the research objectives, the research design and the demographic data analysis. The findings from literature review and research results are discussed together afterwards in this section. At the end of this section, the conclusions from these findings are provided and based on them a set of recommendations are proposed in Section 4. The research limitations and the opportunities for future research are covered in Section 5. The overall conclusion is provided in the last section of this paper (Section 6).

2. Background

2.1. The concept of sustainable competitive advantage

"What exactly constitutes sustainable competitive advantage is a question rarely asked. Most corporate strategists […] know a sustainable competitive advantage when they see it – or so they assume. […] A sustainable competitive advantage is not always so easy to identify. Perhaps it is because the meaning of sustainable competitive advantage is superficially self-evident that virtually no effort has been made to define it explicitly" (Coyne, 1986, p. 2).

Regarding the history of concept of competitive advantage, Selznick (1957) can be attributed with linking advantage to competency. The next major development belongs to Hofer & Schendel (1978) who viewed competitive advantage as something that can be used within the firm's strategy and thus competencies and competitive advantage are independent variables and performance is dependant variable. Day (1984) and Porter (1985) provided the next generation of conceptualization. Rather than being something that is used within strategy, these authors saw competitive advantage as the objective as strategy, the dependant variable. Only in 1991 Barney (1991) provided a formal definition: "A firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors. A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy

not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy" (p. 102). Based on both Barney's work and the definitions of each term provided in the dictionary, Hoffmann (2000) offered the following formal conceptual definition: "A sustainable competitive advantage is the prolonged benefit of implementing some unique value-creating strategy not simultaneously being implemented by any current or potential competitors along with the inability to duplicate the benefits of this strategy" (p. 1).

2.2. The concept of customer solutions

A number of definitions could be found in the academic and practitioner literature related to the solution concept that requires some discussions in terms of commonalities and discrepancies among these definitions.

Extant literature views the solution as a customized and integrated combination of goods and services for meeting a customer's business needs (Davies et al, 2006; Sawhney, 2006). Regardless the terminology used, three aspects are common across. First, a solution is a combination of goods and services. Second, solutions have both an integrative and a customization aspect. Third, the definitions point out the importance of addressing customers' needs in their definitions.

Beyond these commonalities, a number of differences could be observed. The first is the term of combination in the solution's definition. For instance, Hax & Wilde (2001) refer to a wider offering of products and services that satisfies most if not all the customer's needs. Second, several authors don't use the term solution itself. Stremersch et al (2001) refers to the full service as a "comprehensive bundle of products and/or services, that fully satisfies the needs and wants of a customer related to a specific event or problem" (p. 1). Third, some definitions are more specific, including details about the constitutive elements. According to Sawhney et al (2006), "a solution is a customized, integrated combination of products, services and information that solves a customer's problem" (2006, p. 78). "The companies following a solution strategy bundle their products together and add software and services" (Galbraith, 2002a, p. 194). Sheperd & Ahmed (2000) refers to integrated products (hardware and software) and services. Other particularities in the definition refer to the targeted customer set or the nature of customer's needs. Miller et al (2002) view solutions as "integrated combinations of products and/or services that are unusually tailored to create outcomes desired by specific clients or types of clients. Or the solution means bringing together products and services in order to address a customer's particular business or operational requirements (Brady et al, 2005a). The outcome of the solutions is included some definitions. For example, Johansson et al (2003) argue that "a solution is a combination of products and services that creates value beyond the sum of its parts…, it is the level of customization and integration that sets solutions above products or services or bundles of products and services." (p. 118).

To summarize, scholars and practitioners offer various definitions and interpretations of the solution concept. These definitions are often context-dependent (Storbacka & Pennanen, 2014) meaning that they can vary according to, for example, the size and scope of the offering, the type of

elements integrated into the solution and the type of industry that a firm operates in.

For consistency, the term used in this paper is integrated solution (IS).

2.3. Main characteristics of customer solutions

Penttinen & Palmer (2007) point out two main characteristics of integrated solutions (IS) which differentiates them from pure products, pure service offerings or pure (traditional) product-service bundles: the completeness of the offering and the nature of customer-provider relationship.

First, a central characteristic of integrated solutions is that they are more focused on specific customer problems than simple products (Stremersch et al, 2001). The higher the degree to which a customer problem is identified and addressed by providing the most effective solution to this problem and less the work required from the customer to solve that problem, the higher is the degree of completeness of the offering (Burianek, 2011). Thus, customer solutions usually comprise in the IT field physical products, software and services like basic installed services, maintenance services, professional services and operational services supporting and/or operating the hardware/software or a whole business processes of the customer (Oliva & Kallenberg, 2003). Similarly, Shepherd & Ahmed (2000) argue that companies have to focus on the processes and operations of their customers instead of their own products and spare parts.

Second, for meeting customer specific needs a more relational provider-customer relationship is needed and such a higher degree of interaction between both parties (Burianek, 2011). This author argues that the better the relation between customer and provider is developed the better the specific customer needs can be analyzed, discussed, and thus be met. The intensity of the relationship can be measured by using different concepts: information exchange, operational linkages, legal bonds, cooperative norms and relationship specific adaptations by the seller or the buyer (Cannon & Perreault, 1999). As Doyle (2002) argues, the two-way communication between customer and provider allows an accurate definition of the customer's specific needs and problems in such a way that the benefits of implementing the customer solution can be tailored to meet the customer's requirements.

2.4. Customer solutions – a value creation process perspective

Considering the solutions' characteristics highlighted in the previous section, the move towards integrated solutions is not only about offering additional services, but also about shifting from a product-centric to a customer-centric organization to provide integrated combinations of products and services focusing on a customer's business need (Galbraith, 2002; Hax & Wilde, 1999; Tuli et al, 2007; Wise & Baumgartner, 1999). In contrast with the product-centric mind-set based on what a firm is successful in the market it operates by enhancing the features of existing products or by (Sawhney, 2006), in the solution-centric mind-set, the provider's focus lies not on the product itself but actually on the customer and his requirements and these are the basis of defining all the value creation activities (Galbraith, 2002; Sawhney, 2006).

"A process perspective on a business is the customer's perspective […] A process

perspective requires that we start with customers and what they want from us and work backward from there" (Hammer, 1996, p. 12). In line with this view, Tuli et al (2007) argue that across different definitions of integrated solutions, there is little evidence in the extant literature to suggest that these definitions reflect provider's or customer's perspective or both. As such, Tuli et al (2007) argue that, given that the purpose of an integrated solution is to satisfy a customer's business needs, it is useful to view integrated solutions from customer's perspective and to focus on the customer's value creation processes, defined as a series of activities performed by the customer to achieve a particular goal (Payne et al, 2008).

Most researchers proposed sequential processes to describe the development and implementation of an integrated solution. According to Sawhney (2006), the solution development process begins with the analysis of a customer problem by defining customer outcomes and mapping customer activities and ends with the identification of products and services needed to solve the entire problem, before moving on the integration (implementation) stage. Similarly, Davies et al (2007) argue that an integrated solutions supplier should (a) provide an in-depth analysis of a customer's business; (b) identify and diagnose problems in a customer's organization; (c) offer solutions based on its experience of working with a number of customers facing similar situations; and (d) coordinate the integration of components into a solution. In more recent developments, Storbacka (2011) proposes a four-stage process to create integrated solutions: develop solutions, create demand, sell solutions and deliver.

Based on an empirical research, Tuli et al (2007) demonstrated that an integrated solution involves "a set of customer-supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post-deployment customer support and all of which are aimed at meeting customers' business needs" (p. 5). These authors observed that the difference resides in two relational processes that many suppliers underemphasize, but considered crucial by the customers: requirements definition and post-deployment support. They are in agreement with Brady et al, 2005b) who propose a four-stage process for developing and deploying an integrated solution throughout its lifecycle that include: strategic engagement phase (pre-bid activities); value proposition phase (bid or offer activities); systems integration phase (project execution activities); and operational service phase (post-project activities). Based on the work of Tuli et al (2007), Burianek et al (2011) derived a four-step iterative process of value creation comprising (a) analysis/consulting, (b) design/configuration, (c) implementation/delivery, and (d) support/operation.

2.5. Integrated solutions and sustainable competitive advantage

Considering the shift of focus from the goods exchange towards a solutions-oriented view (Tuli et al, 2007; Vargo & Lusch, 2004), White & Ponder (2008) extends Hoffman's (2000) work on sustainable competitive advantage – as highlighted in section 2.1 – by proposing a sustainable competitive advantage model through the co-creation of value. The starting point for the value co-production

process is the participation of both provider and customer for sharing and combining the knowledge to create together the solution (Lusch et al, 2007). In this approach, the degree of the interaction between the provider and the customer influences how the solution is created as a result of the work performed together by both parties and this could lead to a competitive advantage for the firm (White & Ponder, 2008). Furthermore, these authors argue that the nature of integrated solution itself affects the solution's sustainability. In particular, the solution's inimitability and immunity to substitution likely influences its sustainability. Indeed, as outlined in section 2.2, the integrated solution definition highlights two key dimensions, the degree of integration and the degree of customization. As immunity to substitution refers to the absence of available alternatives, while inimitability consists of two components, customization and complexity, it could be argued that assuming the solution meets the customer's needs, the provider will likely enjoy the competitive advantage created from the relationship for a prolonged period of time (White & Ponder, 2008).

2.6. Major challenges for integrated solutions providers

Even though a number of driving forces provide opportunities for firms to shift towards integrated solutions, the challenges of moving into integrated solutions should not be underestimated (Davies et al, 2006). IS providers have to transform many aspects of their business such as their organizational structure and culture as well as operations and interdepartmental collaboration (Davies et al, 2007; Tuli et al, 2007). Therefore, the major challenge to firms wanting to move into integrated solutions is how to shape their organizations in order for them to design and implement effective solutions (Davies et al, 2003).

According to Tuli et al (2007), solution effectiveness refers to the extent to which a solution meets customer's needs. Because a solution comprises four relational processes, solution effectiveness is a function of the extent to which (1) a customer's requirements are well defined, (2) goods and/or services are customized and integrated to address customer needs, (3) goods and/or services are deployed to address customer needs, and (4) post-deployment support is provided as the customer needs it. These authors argue that an IS provider must perform all four processes well to deliver a solution that a customer will consider effective. Indeed, Grönroos (1984) points out that, in many cases, customers' perceptions of service delivery processes may be more important determinants of their assessment of service quality that the outcomes derived from the service delivery.

Considering the four step value creation process – detailed in section 2.4 – Burianek et al (2011) argue that two central capabilities are main determinants for the IS offering success. In line with this author, Storbacka & Pennanen (2014) argue that an IS provider should focus on the key elements of success, namely capabilities. They are so critical because it is a challenge to manage a profitable integrated solution business.

According to Burianek et al (2011) IS providers have to develop capabilities both outside and inside their organization. Considering the external perspective, the aim is to acquire deep customer understanding about broad current and future needs such as

its internal processes, its business model and the markets the customer is operating in. To achieve this goal, these authors argue that the IS provider must build a closer relationship with the customer and this interaction with the customer must span the entire lifecycle of the solution. In regards to the internal perspective, IS providers also have to build capabilities within the organization, especially in organizing the internal value creation process in an efficient and effective manner, by establishing an internal project management. Adopting a customer's perception of solutions as relational processes requires for the IS providers to design the mechanism capable to foster a strong coordination of all the departments that are involved in the development and the implementation of the integrated solution

(Davies et al, 2007; Tuli et al 2007). These authors argue that a project in the IS business requires more than the traditional cycle of concept, definition, execution and close. An IS project involves also a pre-project phase and also a post-implementation phase towards the operational stage. In addition, the effects of each stage on the subsequent processes should be also considered and continuously monitored. Both internal and external capabilities span the entire solution lifecycle and, for that reason, they could be seen as absolutely crucial for selling integrated solutions to run a profitable business (Burianek, 2011).

A number of authors (Davies, 2004; Davies et al, 2006; Brady et al, 2005a) argue that these critical capabilities have to be combined with other competencies within system integration (to design and integrate systems composed of hardware, software and services) and operational services (to maintain, operate and upgrade a solution throughout its operational life cycle), and sometimes business consulting as well as financing services in order to deliver problem solving offerings.

3. Customer solutions in the it industry

As highlighted in section 1, the focus industry of this paper to conduct the empirical study is the IT industry in general and Romania market in particular.

3.1. Research objectives

Following the literature review as well as based on the findings of other similar research projects such as Tuli et al (2007) in the U.S.A. and Burianek et al (2011) in Germany, in order for firms to address the major challenges they are facing in creating effective integrated solutions, it was proposed that IS providers should focus on the value creation capabilities, namely customer interaction related capabilities and project management related capabilities.

Green et al (2004) suggest that too often it is assumed that practices from one sector can be simply transferred to others and that the managerial practices are universally applicable irrespective of context. Therefore, the main research objective is to determine the value creation capabilities Romanian IT integrated solutions providers should focus to create sustainable competitive advantage. For this purpose, a descriptive research study was conducted to examine the validity of the findings outlined in the previous paragraph

by collecting and analysing the data from the integrated IT solutions providers operating in Romania.

According to Remenyi et al (1998), the starting point in a research undertaking is to focus clearly on the fact that the ultimate purpose is to add something of value to the body of accumulated knowledge. Starting with the empirical investigation of current practices in designing, developing and implementing integrated IT solutions in Romania, this research aims to provide Romanian IS suppliers a number of recommendations for creating effective integrated solutions. As a result, this research study includes also some exploratory elements as the authors of this paper is looking to find out "what is happening; to seek new insights; to ask questions and to assess phenomena in a new light" (Robson, 2002, p. 59).

3.2. Research design

The approach selected for the research study was mainly deductive, as existing theory was used to conduct the empirical research (Saunders et al, 2009). Some inductive elements were included to gain some insights from respondents about the current IS practices in Romanian IT sector. As proposed by these authors, considering the deductive approach for this research study, it has been adopted a survey strategy, being a popular and common strategy in business and management research. As previously outlined, the purpose of the research study is a descriptive one with some exploratory elements and therefore the survey strategy was a good choice, considering that "it is most frequently used to answer who, what, where, how much and how many questions" (Saunders et al, 2009, p. 144). As the objectives of this research study are qualitative in nature, primary qualitative data were collected and "quantitized" afterwards, "converting it into to numerical codes so that it can be analysed statistically" (p. 153).

In terms of time horizon, considering the defined research objectives, a cross-sectional perspective was used. According to Saunders et al (2009), cross-sectional studies are "seeking to describe the incidence of a phenomenon" which is the case of this research study. This type of studies often employs the survey strategy (Easterby-Smith et al, 2008; Robson, 2002).

As the research project takes the perspective of IS providers and because there was no extant IS providers database – due to the novelty of IS concept – a procedure was developed to estimate this population and to extract a sampling frame from that population. Considering that, in fact, integrated solutions are services led (Cerasale & Stone, 2004) the population was set as the Romanian IT services companies. Due to the small size of Romanian IT services market, a purposive sampling was selected using author's judgement to select cases that will best enable to answer the defined research question and meet the research objectives (Neuman, 2005).

As outlined in section 2.2, an integrated solution is a combination of goods and services designed to satisfy a customer's needs and such they are included in the offering of small Romanian IT services providers only on exceptional basis. Ceci & Masini (2011) observed that IS provision is significantly more common among large firms. These authors argue that there are at least two good reasons for this phenomenon. First, the resources and capabilities to offer integrated solutions may

not be available to small firms on a large basis. Second, small firms may even deliberately decide to concentrate all their efforts on one specific offering based on the assumption that the specialization could provide them a clear advantage over larger firms (Ceci & Masini, 2011). Furthermore, the Romanian IT market is consolidated around few players (Top 10) controlling in total more than 50% of the market in terms of market share according to the last available report at the preparation date of the research study published by Pierre Audain Consultants (2013). Based on these considerations, the sample was set as Top 10 leading IT services providers.

The selection of the participants was made based on a number of criteria to facilitate a useful output for data analysis. First, the research focus was on the integrated solutions from a managerial perspective and therefore people on higher management positions (general and senior management) were selected for the sample. Second, the target participants at director level were carefully chosen to ensure appropriate experience, background and familiarity to participate to the research study in a thoughtful manner proven through their direct and personal involvement in selling, developing, deploying and/or supporting integrated IT solutions.

For the primary data collection, a structured questionnaire was selected as the research instrument.

The questions included in the questionnaire were developed by the authors of this paper based on the findings from the literature review. As proposed by Saunders et al (2009), a data requirement table was prepared for the research objective containing (a) the specific investigating questions, (b) the variables to answer each investigative question, (c) the detail required from data for each variable, and (d) the measurement questions included in the questionnaire for each variable. Attribute variable were used to check that the demographic data collected are representative and opinion and behaviour variables to collect data about the current practices on integrated IT solution in Romania.

As paper-based questionnaire was used for data collection, the data transfer from the completed questionnaires was done manually using Microsoft Excel. As data analysis was planned to be performed by computer, data coding was an important task for the research study. A coding scheme was established prior to data collection and incorporated it into the questionnaire (Saunders et al, 2009) by assigning a number to each response for a particular question. The data analysis was performed using descriptive statistics.

3.3. Research results and discussion of findings

The research results were grouped for discussion for each of the two value creation capabilities under analysis, namely customer interaction related capabilities and project management related capabilities.

Customer interaction related capability.

In regards to the first value creation capability, the empirical study revealed that Romanian IS providers started to move into the direction of the participation of both customer and provider for the value co-creation when developing integrated solutions and this was based on learning from past implementations. Indeed, the respondents provided positive answers to 11 out of the total number of 14 questions related to this topic.

This is in line with the extant literature that customer interaction has to change from a transactional perspective to relational processes (Johansson et al; 2003; Ballantyne & Varey, 2006; Cova & Sale, 2008a).

The study revealed that Romanian IS providers started to develop a closer "bonding relationship" with the customer (Hax & Wilde, 1993, p. 13) in order for them to be able to identify customer's current needs and also anticipate future needs (Davies, 2004) from the early stage of the engagement. There is room for improvement in this area, as a process-oriented perspective has to be put on the relationship in order to cover the whole customer life-cycle (Sawhney, 2006). In the particular case of the Romanian integrated IT solution providers, only half of the respondents confirmed that both IS provider and customer are involved in the requirements' discovery process.

The results also showed that an assigned team composed by people from different departments inside IS provider organization is involved in specific activities to get to know the right people in the customer organization (Burianek et al, 2011). But only few survey participants (30%) validated through their positive responses that the assigned project team makes use of customer knowledge when customizing and integrating products comprising an IT solution to suit the customer's operating environment. Defining a "solution space" for the integrated solution's design and configuration was reported by 91% of the respondents as crucial for an efficient internal coordination. But when asked about the current practices on internal coordination only a bit more than half of respondents reported that an efficient coordination of different functions finds the needed support inside their organization. As expected, this support is higher inside Romanian companies (64%) compared to local subsidiaries of international companies (33%).

A high number of respondents provided additional comments at the end of the questionnaire about the customer interaction in the Romanian integrated IT solutions' context. In the opinion of the survey participants, not only the provider and its customers should be considered, but also a larger network of other actors. These other actors may include the IS provider's supplier network, the customer's network, government agencies and research institutes (Storbacka, 2011). These results are in alignment with Spencer & Cova (2012) who argue that "a solution situation is not a buyer-seller dyadic 'island'. It is multi-partite and not isolated from the 'rest' of the market" (p. 1582). A second set of comments on customer interaction capability being collected through the survey was related to past experiences of integrated solution related projects that took much longer than initially planned, involved higher costs than expected and even raised some risks for project cancellation. Despite a high degree of interconnectedness and a long history of collaboration with some traditional customers, the responses from the survey revealed that Romanian IS providers were in the position to argue that a strong relationship really emerged, in contrast with Tuli et al (2007) and more recently Amit & Zott's (2012) characterizations of customer solutions.

Project management related capability

The empirical research revealed that Romanian IS providers started to adopt a customer-centric thinking by acknowledging

the fact that gaining a detailed understanding of the activities a customer performs to achieve a particular goal is crucial in the IS business, as it is highlighted in the extant literature (Wise and Baumgartner 1999; Foote et al 2001; Galbraith, 2002). The research showed good results regarding the shift to a customer-centric approach not only when designing and implementing an integrated IT solution, but also during post-implementation. Indeed, positive results were obtained regarding the need for Romanian IS providers to think in life-cycle processes instead of solving service incidents, as this was the opinion of 61% of the respondents. A similar positive output the respondents provided, but in a slightly lower number (57%), about staying engaged after implementation in an on-going relationship with the customer compared to a "one-off" project approach. There is still a room for improvement for the Romanian IS providers towards the move away from the traditional product-centric approach to value creation when – as Davies (2004) outlines – beyond the basic technical support and short-term warranties, after the product was "handed over the wall" to the customer, the provider turned back the customer and left him to take care of the post-warranty maintenance of the product.

Furthermore, based on the history of already implemented integrated IT solutions, Romanian IS providers understood how critical it is to provide customer a clear understanding on the scope of services during post-implementation. This result is explained by the fact that traditionally Romanian IS providers are IT services companies with a good history in the project management business. This is in alignment with Ballantyne & Varey (2006) who argue that the dialogue and learning is needed also during the support stage for the value co-creation. The data collected through the questionnaires provided above average support for this need of two-way communication aiming to influence the customer and supplier practices in such a way to foster a better resource utilization – both customer's resources and those of Romanian IS provider.

Modest results were provided in regards to the use of multiple, flexible hierarchical structures inside the organization for implementing an integrated IT solution by the assigned project team from the provider organization, as only 39% of the participants provided positive responses in this regard.

Related to degree of applying standardized modules when for an IS implementation (Burianek et al, 2011), a bit more than half of the respondents validated it as being a current practice in Romania, that is, IS providers started to acknowledge that the developing and even successfully implementing integrated solutions does not guarantee customers' loyalty (Biggemann et al, 2013). Instead, according to these authors, the customers prefer an integrated solution that might be standardized to lower their proportion of the development costs and avoid being locked into a relationship with a single supplier. Much more, Romanian IS providers started to recognize the importance of standardization on long run which is in line with Davies & Brady's (2000) view that succeeding solutions should be possible to be delivered at significantly lower costs than the first solutions. Related to this topic, mixed results were obtained through the data collected through questionnaires. The Service Delivery Directors from the selected companies to participate to the survey reported positive

results about the application of standardization in an overwhelming proportion (88%). Quite opposite, less than half of the Sales Directors (44%) were positive about standardization when designing integrated solutions. In between, the Managing Directors reported mainly being uncertain (67%), but more towards standardization (33%). As a result, the alignment between different stakeholders inside Romanian IS provider organization should be addressed in order for them to design and implement effective integrated solutions.

3.4. Conclusions from findings

Integrating the results from the empirical research study with the findings from the extant literature review, few managerial conclusions could be drawn. The integrated solutions are the outcomes of value creation processes between customer and provider (Brady et al, 2005b; Davies et al, 2007; Tuli et al, 2007; Storbacka, 2011). According to these authors, these processes consist in definition of customer requirements, integration and customization of the integrated solution elements, the deployment of these elements into the customer's process, and the various forms of customer support after delivery of the integrated solution. The empirical evidence in the Romanian IT sector provided a good support for that relational and value creation nature of the integrated solutions. This change from being product-oriented to becoming customer process-oriented involves a shift in the value proposition from offering physical products, spare parts and support services to the delivery of performance, optimization and productivity (Oliva and Kallenberg, 2003; Ng et all, 2009).

In line with prior studies (Tuli et al, 2007; Burianek et al, 2011), this research project strengthens the fact that a relational nature of customer-provider relationship is a necessary prerequisite of creating effective integrated solutions, considering that a solution is developed, delivered and supported in the post-implementation stage through a long-term process with the customer, not just to the customer (Johansson et al; 2003; Tuli et al 2007; Ballantyne & Varey, 2006). According to these authors, both the provider and also customers have a significant role in this process of value creation. Customers contribute by providing input to all phases of the process and by integrating the components of the provider's solution into their own processes. Thus, organization of value creation becomes a critical capability of the firm (Normann, 2001; Ng et al, 2009) and this research project provided an empirical support in this regard.

An integrated solution provider should be "client supporting" as opposed to "product supporting" and the focus should be on "how the firm can support the customers' business process" (Storbacka & Pennanen, 2014, p. 6). This undertaking is not easy and the empirical evidence of this research in the Romanian IT sector reveals that IS providers started this journey, but there is room for improvement, mainly in the area of aligning different stakeholders inside provider organization.

Prior research projects and as well as this research study suggest that those customers who participate and cooperate in the process of developing and implementing an integrated solution will optimize the solution's co-created value (Bettencourt, 1997). Similarly, the providers who fully cooperate and participate will enhance solution's value

as well. This has a positive impact on the integrated solution's likelihood of leading to a sustainable competitive advantage for the firm (White & Ponder, 2008).

4. Recommendations

Based on the conclusions drawn upon the literature review as well as the research results, this paper provides a set of practical recommendations at managerial level for the Romanian IT providers to follow as a response to address the main area of improvement. This was suggested through the empirical study, namely the flexibility to manage conflicting interests of multiple stakeholders within the provider organization.

One general recommendation across all Romanian IT suppliers is provided as an organizational design related proposition based on the works of Sawhney (2006) as well as Galbraith (2002): adopt a "front-back" hybrid organization to develop and deploy solutions. This design consists of "front-end" solution units and "back-end" product units, the first responsible for intensively interacting with the customers as well as developing and delivering integrated solutions and the second responsible for the support to be provided to the front-end units by developing product and service components for the solutions and to ensure repeatability of solutions by productizing them (Davies, 2004). Additionally, a center of command at top management level has to be implemented to provide the coordination and the negotiation between the front-end and the back-end units and to define a clear solution-focused strategy to ensure that the strategic direction is followed by both units. The implementation plan for this recommendation should be a specific one for each of the IS providers, as they largely differ in terms of current practice of internal IS value creation process, size of company and also type of company (Romanian company or local subsidiary of an international company). The plan should include activities to be performed, key roles definition, important milestones and contingency plan to mitigate the associated risks during implementation.

5. Future research directions

As any empirical work, this empirical study is subject to certain limitations, based on what several opportunities for future research on the topic of integrated solutions are provided.

A first limitation refers to the unit of analysis. This research project took the perspective of IT solutions providers, as the defined general research question was to identify "what are the major challenges firms are facing in creating effective integrated solutions to achieve sustainable competitive advantage".

Some other limitations arise from the research design. First, as the research study is cross sectional it offers a static view of the IS phenomenon with limited information about the impact of time perspective. Second, the survey strategy provided limitations as well in regards to the collected data that are limited to the number of questions included in the questionnaire. Third, as outlined in this paper, the integrated solutions are a complex phenomenon and thus the research narrowed the empirical study to one industry raising limitation issues in regards to the generalization of the results. It can be argued though that the contextual analysis

could enhance learning about integrated solutions at more general level. Forth, the selected research method was also a source of limitations. The chosen quantitative method could result in getting insights about only tangible and visible aspects of IS phenomenon. Two open questions were though added at the end of the questionnaire to gain deeper insights about the current practices of integrated solutions in Romania.

These research limitations and the respondents' comments collected through the open questions included in the questionnaire were the sources for future research on IS agenda.

The research took the perspective of IS provider. As recent conceptualizations of integrated solutions recognize the need to consider the broader business network and other parties that potentially influence or are influenced by integrated solution (Spencer & Cova, 2012; Gebauer et al, 2013), a future research avenue could take a network perspective on IS agenda to empirically investigate the extent to which network companies could have more potential for becoming value co-creators than when acting alone. In addition, the questionnaire offered the respondents the opportunity to highlight the main issues they are facing in the current practices of integrated solutions business. The comments of respondents provided an interesting avenue for future research. Romanian IT sector is a small market with few players having a short history in IS business and as a result having limited generic/specialized capabilities. Thus, the competitors get together quite often in a form of contractual partnership to respond to complex integrated IT solutions. In this case, the competitors become actors in the value-creation process. According to Bengtsson & Kock (2000), coopetition is the simultaneous appearing of competitive and cooperative relations between competitors. This practical situation suggests as potential future research the coopetition phenomenon in the context of integrated solutions.

6. Conclusion

The extant literature on business strategy argues that firms should concentrate less on making stand-alone physical products or services and more on delivering customer-focused solutions (Wise & Baumgartner 1999; Galbraith, 2002; Tuli et al, 2007). These authors argue that competitive advantage is not simply about providing goods or services, but how products and services are combined to provide integrated solutions that address a customer's business or operational needs. In designing and deploying integrated solutions, through knowledge combination, the provider and the customer become partners in the co-production of a solution for the customer, which will result in a competitive advantage for the firm (Prahalad, 2004). Integrated solutions are bundles of benefits (Day, 2004) that represent potential sources of competitive advantage because they are difficult to create and even harder to imitate due to their unique combinations of both tangible and intangible resources (Hunt, 2000; Day, 2004).

The major challenge firms are facing in their attempt to move into the IS business is how to organize themselves to design and provide effective and efficient solutions to meet growing customer demand (Brady et al, 2005a). As a way to address this major challenge, one proposed approach is to focus on the value creation process. Penrose (1959)

emphasizes that the value creation results not from the possession of the resources but from their use and how much value is created would depend on how these resources are deployed and more precisely how they are combined within the firm.

The customers are not being consumers anymore, but co-creators of value (Gummesson, 1998; Vargo & Lusch, 2004). In this customer value co-creation process, the customer-provider relationship has shifted from the firm creating value for the customer to the firm creating value with the customer (Slater, 1997). As a result, the provision of integrated solutions requires a four-step relational value creation process between provider and customer (Tuli et al, 2007, Burianek et al, 2011). Within this process two main capabilities – customer interaction capabilities as well as project management capabilities – are required in order for the firms to develop superior customer value propositions for their customers and build competitive advantage in the market they operate (Cova & Sale, 2008a; Vargo & Lusch, 2004).

Finally, the review of the extant literature outlines that the IS complexity experienced within specific industries and contexts seems to be easily overlooked in empirical studies that focus on a variety of different industries. The market opportunities, the structure of the competition and the main drivers towards IS provisioning could differ considerably among industries, countries and particular contexts. This paper highlights that the contextual dimension has to be considered in order to capture the complexity of integrated solutions phenomenon. This is in line with the contingency theory, where "the effectiveness of an organization is dependent on the congruence between its structure and its context, including the characteristics of the internal organization and the characteristics of the organization's external environment" (Lakemond, 2001, p. 5).

This paper provides an empirical evidence that the Romanian IT sector shares in a considerable extent the characteristics of other capital goods sectors from more developed countries where the provision of integrated solution has emerged. As highlighted in this paper, the IT sector was one of the first industries where integrated solutions emerged. The literature review suggests that after years of implementation, procedures and routines are now becoming standardized, and therefore it is possible to identify common paths in the capabilities managed by integrated solution providers (Ceci & Prencipe, 2008). Considering the short history of both Romanian market economy and the firms operating in this marketplace in the integrated solution business, few areas of improvements have been identified in order for these Romanian companies to become successful IS providers. Therefore, based on the findings from the extant literature review and the results of the empirical study conducted in the Romanian IT industry, this paper provides few practical recommendations at managerial level for the firms operating in this industry in order for them to grasp the market opportunities towards integrated solutions and address the major challenge they are facing to create effective integrated solutions, that is configuration of their organization around customers. The reason is the one Tuli et al (2007) suggest: the customers consider the fulfilment of their business needs a key metric for evaluating a solution's effectiveness.

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The customer perspective – an effective and efficient way to differentiate for companies in the globalization era

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Abstract: *Anywhere in the world and in any market, the firms are facing more and more a major challenge to meet growing customer demand towards addressing specific business or operational needs of their customers. In a globalization era, a firm's customers are more oriented on how to create value for their own customers and such they are looking for an approach shift from their providers. Nowadays, the customers are expecting from their providers to better understand the value creation process in their organization. Through knowledge combination, the provider and the customer are acting like partners in the co-production of a customer solution to solve a specific customer business requirement. The expected approach is for*

the provider to create value not for the customer but together with the customer. Even though a number of driving forces requires the shift of a firm's focus towards taking the perspective of the customers of that firm, it is not an easy task for any firm no matter the market it is operating in or the geographical area the firm is covering. But this shift could represent one effective and efficient way for the firm to differentiate in the market and to be rewarded with achieving a competitive advantage to be sustained over a longer period of time.

***Keywords**:* value creation, sustainable competitive advantage, customer solutions.
JEL: L10, D40, M10

1. Introduction

Peter Drucker once wrote:

"There is only one definition of a business purpose: to create a customer… What the business thinks it produces is not of first importance – especially not to the future of the business and to its success. What the customer thinks he is buying, what he considers value, is decisive – it determines what a business is, what it produces and whether it will prosper".

In most industries, some players are more profitable than others, regardless the average profitability of industry (Bharadway et al, 1993). According to these authors, the superior performers have something special and hard to imitate that allows them to differentiate themselves from their competitors that is referred in strategy literature to as sources of competitive advantages. The firms aiming for this differentiation in the industries they are operating in are in constant loop to find new ways to compete and to be successful. As Day (2004) argues the firms that have a strong focus on achieving the competitive advantage in the marketplace should consider a shift from the traditional approach on tangible resources towards building new core competences such as intangible processes and relationships in order for them to enjoy success for a longer period of time.

Considering Drucker's quote from above that the reason that firm exists is to satisfy the customer, Wodruff (1997) sees the next major source of sustainable competitive advantage coming from a more outward orientation, specifically toward customers. This dissertation is an investigation into the potential of using the customer perspective as an effective and efficient way to differentiate against competition within the boundaries defined below.

This paper takes a managerial perspective for the discussion of the customer perspective, as the people on high management positions in the firm "must be able to act on the opportunities and threats; to be able to seize them by reconfiguring both tangible and intangible assets to meet new challenges" (Harreld et al (2007, p. 25).

The customer perspective – as a complete subject for discussion – is beyond the scope of any single paper. The field of inquiry in this paper is thus narrowed to the discussion of the customer perspective in the context of the developing and implementing customer solutions defined in the extant literature as integrated combination of goods and services designed to meet customer's

specific business needs (Miller et al, 2002). The rationale behind is the one Nordin & Kowalkowski (2010) suggest that in order for firms to address the challenges they are facing from the external environment such as the intense competition and lower margins they are trying to differentiate themselves by developing customer solutions rather than stand-alone products or services.

As the approaches of using customer perspectives when designing and implementing customer solutions varies from industry to industry, this paper narrows further the discussion to one single industry, specifically Romanian Information Technology (IT) sector. The main reason explaining the selection of this industry is that building the related internal capabilities towards offering customer solutions in the Information Technology (IT) sector provides the firm higher advantages against competition (Ceci & Prencipe, 2008).

The rest of this paper is organized as follows. A review of the extant literature on the main concepts of this paper is performed in Section 2. The following section (Section 3) covers an empirical study of the customer perspective in the particular context of the Romanian IT industry including the research objectives, the research design and the demographic data analysis. The findings from literature review and research results are discussed together afterwards in this section. At the end of this section, the conclusions from these findings are provided and based on them a set of recommendations are proposed in Section 4. The research limitations and the opportunities for future research are covered in Section 5. The overall conclusion is provided in the last section of this paper (Section 6).

2. Background

2.1. Sources of sustainable competitive advantage

Within the strategic management literature one of the most widely accepted theoretical perspectives on competitive advantage (Priem & Butler, 2001) is the resource-based view of the firm (Barney, 1988; Diericks & Cool, 1989; Lippman & Rumelt, 1982; Reed & DeFillippi, 1990). The first attempt at formalizing the resource-based view of the firm (RBV) belongs to Wernerfelt (1984). He argued that firms may earn above normal returns by identifying and acquiring resources that are critical to the development of demanded products. The second belongs to Barney (1991) who stated that not all firm resources hold the potential of sustainable competitive advantage. Instead, they must possess four attributes: value, rareness, imitability, and substitutability (Barney, 1991) based on two fundamentals assumptions: that resources (and capabilities) are heterogeneously distributed across firms and that they are imperfectly mobile. Similarly, Peteraf (1993) argues that there are four conditions underlying sustainable competitive advantage: superior resources; ex-post limits to competition (including imperfect imitability and imperfect substitutability), imperfect mobility and ex-ante limits to competition.

In regards to theoretical approaches within the resource-based view, the first was Barney's VRIO framework. Barney argued that in addition to simply possessing valuable, rare, inimitable (which by then included non-substituable) resources, a firm also needed to be organized in such a manner that it could exploit the full potential of those resources, if it was to attain a competitive

advantage (Barney, 1997; Barney & Wright, 1998). A second theoretical approach was proposed by Teece et al (1997) explaining how combination of competences and resources can be developed, deployed, and protected – the dynamic capabilities framework. According to these authors, the competitive advantage of firms is seen as resting on distinctive processes (ways of coordinating and combining), shaped by the firm's (specific) assets positions (such as the firm's portfolio of difficult-to-trade knowledge assets and complementary assets), and the evolution path(s) it has adopted or inherited. Whether and how a firm's competitive advantage is eroded depends on the stability of market demand, and the ease of replicability (expanding internally) and imitability (replication by competitors). Building on both set of scholars' work, Eisenhardt & Martin (2000) argued, that resources are no real value to the firm in isolation and that their latent value could only be made available to the firm via its idiosyncratic dynamic capabilities which are defined as "the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die" (Eisenhardt & Martin, 2000, p. 1107).

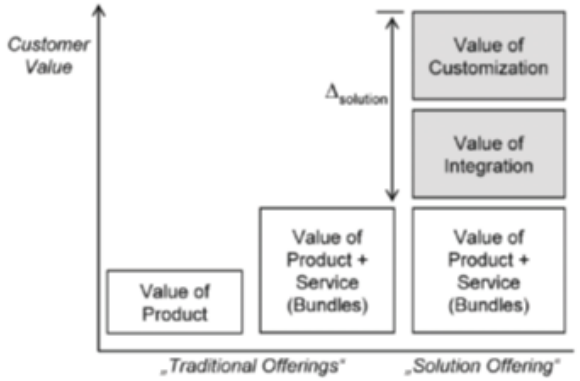
One approach found in the extant literature is to extend the resource-based view towards a more outward orientation as the one proposed by Slater (1997). As a response to the environmental changes, this author suggests that a firm should have a market-oriented culture, which consists of three components: (a) continuous learning about customers, (b) a commitment to customer innovation, and (c) a process-focused organization. According to this author, a firm focusing on these three items will provide superior customer value and will create sustainable competitive advantage. Similarly, Woodruff (1997) considers customer value as the next source for competitive advantage. In Woodruff's view, the customer value takes the perspective of the customers of a firm, namely their expectations in regards to the use of the product or the service of that firm. By having a good understanding of the customer's requirements and needs through continuous learning, a commitment to provide innovative products to customers and a focus on the customer value process, the firm will provide superior customer value and thus will be rewarded with superior performance as well as a sustainable competitive advantage. Therefore, the idea of the customer value extends the RBV toward customers, as one way in which competitive advantage can be achieved and sustained (Slater, 1997).

2.2. The concept of customer value

In the extant literature, there is no single commonly acknowledged definition of the concept of customer value. As Woodruff (1997) outlines there are a number of similarities among these definitions such as the perception of the customer value by the customers themselves rather than something determined by the provider. Much more, this author argues that this perception requires usually a trade-off between what the customer receives such as quality, benefits, worth, utilities and what he gives up to acquire and use the product such as the price of that product. Differences could be pointed out as well. For the scope of this paper, one difference is related to the circumstances within which the customers think about value (Woodruff, 1997).

In the context of offering customer solutions, the definition provided in section 1 highlights two key dimensions, the degree of integration and the degree of customization. Sawhney (2006) states that the value of integration and the value of customization represent the difference between the 'whole' (the value of the solution) and the 'sum of the parts' (the value of component products and services), as presented in Figure 1. According to Davies (2004) IS providers earn high profits when the value of the integrated package exceeds the value of individual components.

Figure 1 – Value added of solutions
(Burianek, 2011)



2.3. The customer perspective in the value creation context

"A process perspective on a business is the customer's perspective […] A process perspective requires that we start with customers and what they want from us and work backward from there" (Hammer, 1996, p. 12). Considering that the starting point when a firm's focus is the customer perspective in designing a customer solution is not a product, but a desired outcome for a customer (Foote et al, 2001), the customer value involves two new dimensions. The first relates to the customer's internal efficiency and cost structure and the other one relates to the customer's external effectiveness and output, both of them allowing the customer to create new and more competitive offerings (Normann, 2001). This author argues that the focus on customer's business involves a change in the organization of value creation in which the customer is seen as a co-producer of value and a shift from a good-dominant logic to a service-dominant logic perspective. In good-dominant logic, the customer is a passive consumer who is targeted, segmented and marketed to and so the customer constitutes an operand resource that has to be acted upon to produce an effect (Vargo & Lusch, 2009). In contrast, the service-dominant logic views customers as operant resources, that is, dynamic resources that have the capability to act upon others, and therefore embraces a "market with" orientation in which the customer is seen as a partner who creates value in collaboration with the supplier and both parties enter into a dialogue

(Jacob & Ulaga, 2008). In line with these authors, Grönroos (2008) argues that customers actively assess the value of goods they buy on the basis of the solution and performance they provide in use – meaning that no matter whether they purchase goods or services, customers always acquire service experiences. Service is defined as the basic denominator of all exchange and therefore encompasses experiences arising from direct interaction with service providers as well as interaction with goods providers that become mechanism for service (Ballantyne & Varey, 2008). In this context of exchange service for service, service is considered to be the intangible elements that are exchanged between the customer and provider with the goods/service benefits being purchased (Lusch & Vargo, 2006).

The value being co-created by customer and supplier in an interactive process also implies that the providers can only make value propositions, defined as a collection of benefits that is promised to the customer in return for the payment (Vargo & Lusch, 2004, 2006). In the context of offering customer solutions, there is a shift in the value proposition from offering physical products, spare parts, and support services to delivery of performance, optimization and productivity (Bennett et al, 2001; Oliva & Kallenberg, 2003). According to Hünerberg & Hüttmann (2003) three value propositions can be differentiated in the context of integrated solutions: (a) usage based (related to the intensity of using the integrated solution); (b) performance based (related to the performance levels of the customer solutions); and (c) value based (related to the customer economic results of using the solution such cost savings realized, revenues generated etc.). Anderson et al (2006) argue that to make customer value propositions persuasive, the providers must be able to first demonstrate and after that to document them using value word equations.

Ballantyne & Aitken (2007) argue that when considering a customer perspective in the context of offering customer solutions, the providers have to successfully coordinate the compilation of resources for the customer and to develop strong relationships and networks with customers and suppliers. With customers, the providers enter into a dialogue as well as co-create service experiences and, thus ultimately, value through direct or indirect (for example, via goods) interaction. With suppliers they share and integrate operant resources such as specialized skills and knowledge (Cova & Sale, 2008a). Furthermore, Normann (2000) argues that for co-creating the value, the relationship between the players is more complex; it is more interdependent and reciprocal rather than sequential and it does not take the form of value chains but of networks in order to develop value propositions. Thus, all parties involved in economic exchange are resource-integrating and service-providing enterprises that have the common purpose of value co-creation (Vargo & Lusch, 2008b).

2.4. Key success factors for an effective customer perspective based differentiation

As suggested by a number of authors (Galbraith, 2002; Sawhney, 2006), when choosing the customer perspective to differentiate in the market the provider's focus should not on the product itself but actually on the customer and his requirements and these are the basis of defining all the value creation activities. In line with this view, Tuli et al (2007) argue that if the aim of a firm is to

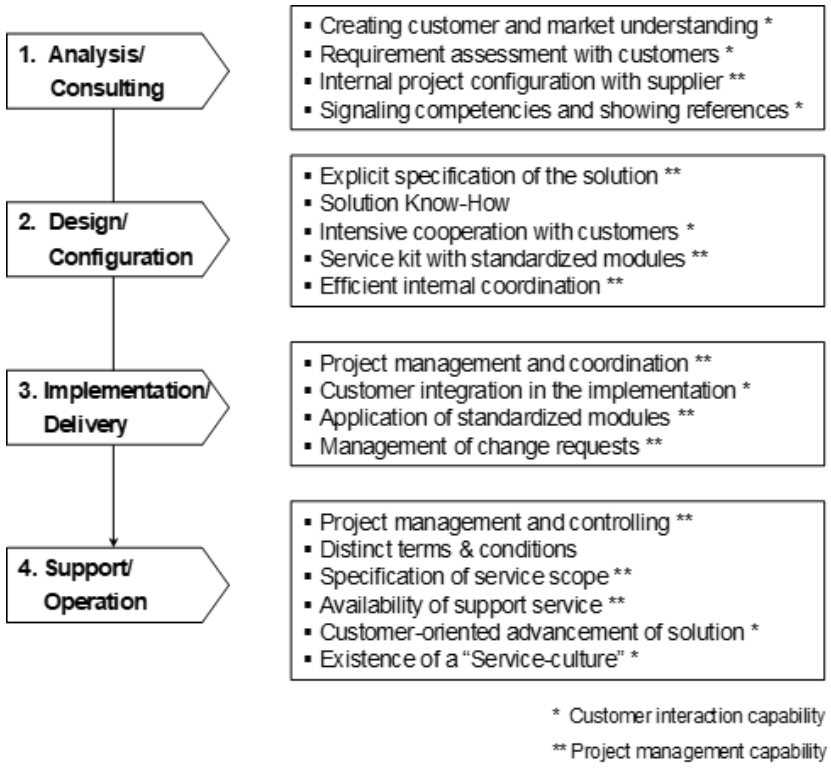
satisfy a customer's business needs, the firm should focus on the customer's value creation processes, defined as a series of activities performed by the customer to achieve a particular goal (Payne et al, 2008).

In the context of offering customer solutions from a customer perspective, most researchers proposed sequential processes to describe the development and implementation of an integrated solution. According to Sawhney (2006), the solution development process begins with the analysis of a customer problem by defining customer outcomes and mapping customer activities and ends with the identification of products and services needed to solve the entire problem, before moving on the integration (implementation) stage. Similarly, Storbacka (2011) proposes a four-stage process to create integrated solutions: develop solutions, create demand, sell solutions and deliver.

Based on an empirical research, Tuli et al (2007) demonstrated that an integrated solution involves "a set of customer-supplier relational processes comprising (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post-deployment customer support and all of which are aimed at meeting customers' business needs" (p. 5). These authors observed that the difference resides in two relational processes that many suppliers underemphasize, but considered crucial by the customers: requirements definition and post-deployment support. They are in agreement with Brady et al, 2005b) who propose a four-stage process for developing and deploying an integrated solution throughout its lifecycle that include: strategic engagement phase (pre-bid activities); value proposition phase (bid or offer activities); systems integration phase (project execution activities); and operational service phase (post-project activities). Based on the work of Tuli et al (2007), Burianek et al (2011) derived a four-step iterative process of value creation comprising (a) analysis/consulting, (b) design/configuration, (c) implementation/delivery, and (d) support/operation.

Grönroos (1984) points out that in many cases, customers' perceptions of service delivery processes may be more important determinants of their assessment of service quality that the outcomes derived from the service delivery. Therefore, identifying the success critical activities within each step of this four-stage process is crucial (Burianek et al, 2011). Figure 2 highlights a number of factors these authors identified through conducting an empirical research.

Figure 2 – Critical success factors for creating effective solutions (Burianek et al, 2011)



As Tuli et al (2007) suggest, in the context of designing customer solutions, the customers consider the fulfilment of their business needs a key metric for evaluating a customer solution's effectiveness.

3.The customer perspective in the it industry

As highlighted in section 1, the focus industry of this paper to conduct the empirical study is the IT industry in general and Romania market in particular.

3.1. Research objectives

Following the literature review as well as based on the findings of other similar research projects such as Tuli et al (2007) in the U.S.A. and Burianek et al (2011) in Germany, in order for firms to effectively use the customer perspective when designing customer solutions, they should focus on the critical success factors of value creation relational process of customer solutions, as detailed in section 2.4.

Green et al (2004) suggest that too often it is assumed that practices from one sector can be simply transferred to others and that the managerial practices are universally applicable irrespective of context. Therefore, the main research objective is to determine the key success factors the providers should focus to effectively use the customer

perspective in order for them to differentiate in the Romanian IT market. For this purpose, a descriptive research study was conducted to examine the validity of the findings outlined in the previous paragraph by collecting and analysing the data from the players operating in the Romanian IT market.

Starting with the empirical investigation of current practices in designing, developing and implementing customer solutions in the Romanian IT market, this research aims to provide the companies operating in this market a number of recommendations in regards to the critical success factors they have to focus to differentiate themselves from their rivals.

3.2. Research design

The approach selected for the research study was mainly deductive, as existing theory was used to conduct the empirical research (Saunders et al, 2009). Some inductive elements were included to gain some insights from respondents about the current practices of offering customer solutions in Romanian IT sector. As proposed by these authors, considering the deductive approach for this research study, it has been adopted a survey strategy, being a popular and common strategy in business and management research.

As the research project takes the perspective of providers and because there was no extant database of providers offering customer solutions – due to the novelty of IS concept – a procedure was developed to estimate this population and to extract a sampling frame from that population. Considering that, in fact, integrated solutions are services led (Cerasale & Stone, 2004) the population was set as the Romanian IT services companies. Due to the small size of Romanian IT services market, a purposive sampling was selected using author's judgement to select cases that will best enable to answer the defined research question and meet the research objectives (Neuman, 2005).

As outlined in section 1, a customer solution is a combination of goods and services designed to satisfy a customer's needs and such they are included in the offering of small Romanian IT services providers only on exceptional basis. Ceci & Masini (2011) observed that IS provision is significantly more common among large firms. These authors argue that there are at least two good reasons for this phenomenon. First, the resources and capabilities to offer integrated solutions may not be available to small firms on a large basis. Second, small firms may even deliberately decide to concentrate all their efforts on one specific offering based on the assumption that the specialization could provide them a clear advantage over larger firms (Ceci & Masini, 2011). Furthermore, the Romanian IT market is consolidated around few players (Top 10) controlling in total more than 50% of the market in terms of market share according to the last available report at the preparation date of the research study published by Pierre Audain Consultants (2013). Based on these considerations, the sample was set as Top 10 leading IT services providers.

The selection of the participants was made based on a number of criteria to facilitate a useful output for data analysis. First, the research focus was on the customer solutions from a managerial perspective and therefore people on higher management positions (general and senior management) were selected for the sample. Second, the target participants at director level were carefully

chosen to ensure appropriate experience, background and familiarity to participate to the research study in a thoughtful manner proven through their direct and personal involvement in selling, developing, deploying and/or supporting integrated IT solutions.

For the primary data collection, a structured questionnaire was selected as the research instrument.

The questions included in the questionnaire were developed by the authors of this paper based on the findings from the literature review.

As paper-based questionnaire was used for data collection, the data transfer from the completed questionnaires was done manually using Microsoft Excel. As data analysis was planned to be performed by computer, a coding scheme was established prior to data collection and incorporated it into the questionnaire (Saunders et al, 2009) by assigning a number to each response for a particular question. The data analysis was performed using descriptive statistics.

3.3. Research results and discussion of findings

Understanding the broad needs of a customer was seen by 57% of respondents as being crucial in the early stage of designing a customer solution. Delineating in the analysis phase of both current and future needs of the customer was considered important by 60% of respondents. Another crucial aspect in selling customer solutions revealed by the research was building trust to get to "know the right people" in the customer organization, as reported by 74% of respondents. Only 52% of respondents confirmed that the assigned teams from the provider and customer organization are involved in the requirements' discovery process during the analysis phase of a customer solution. An even lower number of respondents (35%) had a positive response about the assigned team from the provider probing multiple stakeholders in the customer organization when asking questions to identify customers' needs. When asked about the provider's involvement in defining the internal project configuration with the customer, many of the respondents (65%) reported that clear responsibilities throughout the whole lifecycle of the customer solution needs to be agreed with the customer from an early stage. No participant to the survey provided a negative response in this regards that leads to an assessment of a high level of criticality for this activity.

In the design phase of a customer solution, both the provider and customer participate together and agree upon a clear solution specification, as 83% of the participants provided positive in this regard. A same number of respondents provided positive feedback when asked to rate the importance of customer transparency and openness to avoid later cost intensive solution adjustments. A similar high number of respondents (74%) reported that involved staff from IS are assigned to have solution-specific experience, qualification and know-how of provider organization.

A quite high number of respondents (61%) provided positive results about a provider that can do a better job when using information and guidance from the customer about its stakeholders during IS implementation. Although, only few survey's participants (30%) validated through their positive responses that the assigned project team

makes use of customer knowledge when customizing and integrating products comprising an IT solution to suit the customer's operating environment. Customer's openness to making adjustments to modify its routines and processes was validated as being important to accommodate the components of an IT solution by 40% of the respondents only. Regarding the coordination of IS provider's internal processes with the customer's processes, more than half (57%) of the respondents considered it as being a critical activity during the implementation of a customer solution.

3.4. Conclusions from findings

The respondents to the survey provided good results in regards to the fact that the development and the implementation of a customer solution demands intense interactions between the provider and the customer, including reciprocal adaptation, mutual relationship investments and risk taking, which is in line with the extant research into the relational characteristics of solutions (Tuli et al, 2007; Cova & Sale, 2008b). As research results shows, learning from most challenging or unsuccessful projects of implementing customer solutions from the past, Romanian providers started to view customer's openness and willingness to be involved during the development and implementation stages as a major determinant of their role in customer's value creation process. Based on the responses to the survey, the current practices in Romania show that there are still some lacks in this regard for a number of reasons. The comments from the survey revealed that not always and not all customers are ready, able or even willing to co-operate with the providers on the value-creation level. This is in line with Hakanen & Jaakkola (2012) who provide a reason for that: value co-creation engagement may demand several changes in the customer's strategy, operations and mindset that are not always well received.

Biggemman et al (2013) argue that some degree of flexibility is also necessary both for providers and customers when implementing customer solutions. In addition, the customer should be open to make adjustments for modifying its routines and processes to get the most value of the solution (Burianek et al, 2011). In both areas, the results of the empirical study in the Romanian IT market were only modest.

4. Recommendations

Based on the conclusions drawn upon the literature review as well as the research results, this paper provides a set of practical recommendations at managerial level for the Romanian IT providers to follow as a response to address the main area of improvement. This was suggested through the empirical study, namely how to effectively manage the conflicting interests of multiple stakeholders inside the customer organization.

Two main recommendations are proposed when considering the stakeholders perspective within the customer organization and they are based on the work of Biggemann et al (2013) who highlight the importance of involving multiple stakeholders from customer organization in identifying the current and future needs of the customer.

First, in order to improve the willingness of different stakeholders within customer organization to participate in the process

of understanding the customer's needs, the IS provider could propose a preliminary consulting phase for analyzing the internal implications of an integrated solution, as the solution affects the interests of several internal stakeholders who would be expected to collaborate. As an implementation plan for this recommendation, a free-of-charge consulting engagement could be proposed in a very early stage with a defined scope of work scanning past, present and future IS contextual situation. High profile consultants from IS provider with strong expertise in the area of integrated solutions should be assigned to deliver this engagement to conduct a high professional assessment of the customer situation and highlight best practice projects from the past. The rationale behind this proposition is the one Biggemann et al (2013) suggest, namely new potential customer benefits of (and obstacles to) the solution could be outlined during this assessment as the process dynamics of solutions could lead to the change of stakeholders' interests over time during the development of the integrated solution.

Second, the openness of different stakeholders who may not want from various reasons to participate in the value creation process during the development and the implementation of an integrated solution could be improved by the IS provider assuming in the very beginning a role of value facilitator instead of value co-creator (Hakanen & Jaakkola, 2012). In this role the supplier of a customer solution will provide the stakeholder from the customer organization deep information on how to develop technology and processes to get the most value of the solution and the stakeholder will use the knowledge provided by the supplier by themselves. As an implementation plan for this recommendation, this activity should be performed any time during the development and the implementation stages of an integrated solution when such a stakeholder is identified. The person recommended to be assigned to play this value facilitator's role should be selected based on a number of two decision criteria. The first one is the required level of knowledge in developing integrated solutions and the other one is the personal bond with that stakeholder, as this person assigned by the IS provider will play a consultative role of discussing related value creation themes until the stakeholder will feel comfortable enough that this person nominated by the IS provider should fully assume the role of value creation co-participator.

5. Future research directions

As any empirical work, this empirical study is subject to certain limitations, based on what several opportunities for future research on the topic of integrated solutions are provided.

As this research project took the perspective of the providers, one limitation arises from the unit of analysis. Indeed, the defined general research question was to determine the main focus of the providers to use the customer perspective when designing customer solutions as an effective and efficient way to differentiate in the market.

The research design provides some other limitations. As the research study is cross sectional it offers a static view of the customer perspective in the context of the customer solutions with limited information about the impact of time perspective. The survey strategy provided limitations as well in regards to the collected data that are limited to the number of questions included in the questionnaire. Finally, due to the complexity of the topic of this paper, the research narrowed the empirical study to one industry raising

limitation issues in regards to the generalization of the results. It can be argued though that the contextual analysis could enhance learning about integrated solutions at more general level.

These research limitations and the respondents' comments collected through the open questions included in the questionnaire were the sources for future research on the customer perspective when designing and implementing customer solutions.

The research took the provider's perspective. As recent conceptualizations of customer solutions recognize the need to consider the broader business network and other parties that potentially influence or are influenced by integrated solution (Spencer & Cova, 2012; Gebauer et al, 2013), a future research avenue could take a network perspective to empirically investigate the extent to which companies in a network could have more potential for becoming value co-creators than when acting alone. In addition, the responses provided by the survey participants an interesting avenue for future research. In the survey participants' view, the value is co-created within a broader network with actors interacting in a longitudinal rather than iterative relational process of resource integration. Therefore, future longitudinal empirical research are called for in order to better understand the complexity of the customer perspective when developing customer solutions.

6. Conclusion

Integrating the results from the empirical research study with the findings from the extant literature review, few managerial conclusions could be drawn.

The research study conducted in the Romania IT market provided in a considerable extent an empirical evidence for the critical success activities of the four stages value creation process suggested in the extant literature and summarized in Figure 2 in other capital goods sectors from more developed countries where the customer perspective in the provision of integrated solution has emerged. Therefore Romanian providers should focus on these factors/activities if they want to differentiate from the competition. In the same time the research project identified some areas of improvement in the contextual situation of the Romanian IT market in order for these factors/activities to fully contribute to effective and efficient use of customer perspective when developing and implementing customer solutions.

The review of the extant literature outlines that the complexity of the customer perspective experienced within specific industries and contexts seems to be easily overlooked in empirical studies that focus on a variety of different industries. The market opportunities, the structure of the competition and the main drivers towards offering customer solutions could differ considerably among industries, countries and particular contexts. This paper highlights that the contextual dimension has to be considered in order to capture the complexity of phenomenon of creating a customer-centric organization. This is in line with the contingency theory, where "the effectiveness of an organization is dependent on the congruence between its structure and its context, including the characteristics of the internal organization and the characteristics of the organization's external environment" (Lakemond, 2001, p. 5).

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Can Mobile Payments Boost E-Commerce Business in Romania?

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Abstract: *The purpose of this paper is to highlight the influence of mobile payments on the development and consolidation of E-commerce businesses in Romania, as well as the tendencies of using mobile banking and mobile payments applications by consumers in this area. At the same time, the author makes a brief comparison of the mobile payment companies in Romania for 2019, in order to outline the features, advantages and benefits offered by them in the current context of business transformation by digital disruption. The research methodology is based on the analysis and interpretation of the data provided by the recent studies conducted by specialized companies in the field of Ecommerce and mobile payments, as well as based on the comparison method used to classify the services offered by the mobile payment companies. The findings of the research show that the impact of the introduction and use of mobile payments in Ecommerce businesses in Romania is a substantial one from the point of view of the increase of sales and profit, also showing an increase in the number of mobile payments companies in the conditions of diversification of their services.*

Keywords: mobile payment, E-commerce business, Fin Tech companies, digital disruption

JEL Classification: G21, G23, L81

1. Introduction

The purpose of this paper is to highlight the influence of mobile payments on the development and consolidation of E-commerce businesses in Romania, as well as the tendencies of using mobile banking and mobile payments applications by consumers in this area. At the same time, the author makes a brief comparison of the mobile payment companies in Romania for 2019, in order to outline the features, advantages and benefits offered by them in the current context of business transformation by digital disruption.

The originality of the paper is given by the research objective focused on highlighting the implications of the use of mobile payment in Ecommerce on the development of businesses in the field in Romania, as well as on presenting the differentiation of FinTech companies in Romania based on the characteristics of the services offered by them.

The findings of the research show that the impact of the introduction and use of mobile payments in Ecommerce businesses in Romania is a substantial one from the point of view of the increase of sales and profit, also showing an increase in the number of mobile payments companies in the conditions of diversification of their services.

The limits of the research are highlighted by applying only qualitative methods and tools in research, a future development of the research being desirable to also involve quantitative approaches, meant to reflect more specifically the influence of the use of mobile payment on Ecommerce-type businesses in Romania.

2. Literature review

A whole series of researches highlighted by articles and specialized studies in the fields of E-commerce and mobile payment come to reflect the current developments without precedent so far as a result of technological innovations in both fields, but also of the action of the developing economic markets. In this regard, authors from different corners of the world have reported the product changes and future trends through analyzes carried out on qualitative and quantitative basis in the sectors mentioned above.

In an editorial titled „Entrepreneurship in the context of the fourth Industrial Revolution" the author shows that „The networks of devices that will be connected to each other and that will be able to store and exchange data at an extraordinary speed can provide unlimited possibilities for creating contexts in which people can develop their business" (Marinescu, 2018). According to this, Cojocaru & Cojocaru do an analysis of the market trends and technological changes in the field of mobile devices showing that "the user experience is the final test for all the mobile devices"(Cojocaru & Cojocaru, 2014).

Yadav et al. highlight „that variety of services, social influence, perceived usefulness, cost and perceived trust have significant influence on consumer's intention to adopt m-commerce. The only exception was perceived ease of use which observed statistically insignificant influence on adoption of m-commerce" (Yadav et al., 2016).

A paper of Sivathanu points out in the findings the followings: „the results suggest that the behavioral intention (BI) to use and innovation resistance (IR) affect the usage of digital payment systems. The relation between BI to use digital payment systems and the AU of digital payment systems is moderated by the stickiness to cash payments" (Sivathanu, 2019).

Lim Chiu et al. reveals also in their paper „that the non-adopters of mobile banking asserted that the antecedents of initial trust played a significant influence on behavioral intention to use online banking services" (Lim Chiu et al., 2017).

In their research, Zhang, Lu and Kizildag shows that „the "fun" feature of the technology and consumers' innovativeness characteristics are considered important in influencing mobile banking adoption. Trust in the banks has its predominant role in mobile technology adoption for banking services" (Zhang et al., 2018).

The analysis of the factors related to the characteristics of the technologies used in mobile banking was the object of research of the authors Valaei, Nikhashemi, Bressolles and Jin which in their paper shows "that the task and performance characteristics are more relevant compared to technology characteristics when doing transactions via apps. In addition, the findings uncovered that user satisfaction and continuous intention to use apps stem from the degree of fit in online transactions". The authors also underline „that users in the lower income group are more concerned about the performance characteristics of banking apps, and there are no differences across age and gender groups" (Valaei et al., 2019).

Another research of Anneli Järvinen „reveals deviations between various banking services and company-level results regarding consumers' trust in their banking relationships"and „also highlights deviations in consumer trust between European countries, and identifies countries with low, medium and high trust in banking and in distinct banking services" (Anneli Järvinen, 2014).

Regarding Romania, a study conducted by Leoveanu and Sandu shows "that young people are very open to new type of banking applications and they enjoy using mobile banking" and that "more than half of the students that declared they are not using mobile banking in this moment and more than half from total sample declared they will definitely call on mobile banking [in the future]" (Leoveanu & Sandu, n.d.) and this shows the availability of young people adapting to the use of new technologies that appear in the activity of ecommerce and banking.

3. Research methodology

The research methodology is based on the analysis and interpretation of the data provided by the recent studies conducted by specialized companies in the field of Ecommerce and mobile payments, as well as based on the comparison method used to classify the services offered by the mobile payment companies.

According to „The 2018 Global Ecommerce Report", Internet penetration across Europe reaches 83% in 2018 from 80% in 2015. In this regard, penetration in social media, defined by Internet users who use social media sites via any device at least once a month, reaches 73% in Sweden, in the UK - 66%, in Spain and France - 58%, in Italy - 57% and in Romania - 51%, to exemplify only a few European countries (Global Ecommerce Report, 2018).

Considering the part of the population that uses each device for Internet access, the following trends can be highlighted: 57.6% - on the desktop, 36.2% - on the mobile phone and 6.2% - on the tablet. Regarding ranking of shopping websites (no of visitors) in Romania

the first place is occupied by Olx.ro, followed by eMag.ro and thirdly Aliexpress.com while in France, Germany, Italy, Spain and Great Britain the wellknown website Amazon.com is the first choice (Global Ecommerce Report, 2018).

„2017 was a milestone year for the mobile industry: the number of people connected to mobile services surpassed 5 billion globally. As such, two out of three people in the world had a mobile subscription at the end of 2017. Looking out to 2025, the mobile industry will reach new major milestones across key indicators –unique subscribers, internet users and 4G/5G connections" (Global Ecommerce Report, 2018).

As examples of top ecommerce websites in Europe (Global Ecommerce Report, 2018) there are: 1.Amazon, 2.eBay and 3.Aliexpress; regarding top payment method, one can point out: 1.PayPal, 2. Debit/ credit card and 3. Cash on delivery; considering top 3 countries ranked by B2C Turnover, there are 1.United Kingdom, 2.France and 3.Germany; with reference to top ecommerce import destinations, one can show Germany and France.

Taking an overview of Romania, specific macroindicators for 2018 were: a population of 19.6 million inhabitants; a degree of urbanization of 55%; an unemployment level of 5.2%; and an economic growth of 4.1% in 2018 compared to 2017. Also, the GDP per capita in 2018 was $ 23,626, as well as a declared literacy of population of 99%.

The 2018 Global Ecommerce Report highlights also the following data for Romania: the internet penetration rate is 74%; the percentage of online shoppers is 18%; the GDP of E-commerce activities is 2.55%, and the percentage of online buyers abroad is 3%. Romania had have about 7,000 online stores in 2017, more than the figure of 2016 of 5,000 and expects to reach 14,000 in 2018. (Global Ecommerce Report, 2018).

At European Union level, the European Commission monitors the digital competitiveness of member countries by calculating the Digital Economy and Society Index (DESI), which includes features related to connectivity, human capital, the use of Internet services, the integration of digital technologies and the provision of public digital services. Thus, regarding this index, Romania is ranked 27, penultimate, as in 2018, when it advanced from the last place held in 2017 (European Comission, 2019).

The important characteristics in the context of the paper are represented by the use of Internet services and the integration of digital technologies. According to the first characteristic, the following can be emphasized (European Comission, 2019):

- Internet users increased from 56% in 2016, to 61% in 2017 and to 68% in 2018 (27th in the EU) compared to 83% for the EU;
- users of social networks increased from 74% in 2016, to 82% in 2017 and to 86% in 2018 (1st place in the EU) compared to 65% for the EU;
- mobile banking users increased from 8% in 2016, to 11% in 2017 to decrease to 10% in 2018 (28th in the EU) compared to 64% for the EU;
- mobile shopping users increased from 18% in 2016, to 23% in 2017 and to 26% in 2018 (28th place in the EU) compared to 69% for the EU, and online sales users dropped from 5% in 2016 to 4% in 2017 and then increased to 5% in 2018 (26th in the EU) compared to 23% for the EU.

Regarding the second characteristic (European Comission, 2019), it is highlighted:

- SMEs selling online increased from 7% in 2016, to 7% in 2017 and up to 8% in 2018 (27th place in the EU) compared to 17% for the EU;

- e-Commerce turnover increased from 4% in 2016, to 5% in 2017 and to 5% in 2018 (25th place in the EU) compared to 10% for the EU;

- selling online cross-border remained the same in all the years 2% (28th place in the EU in 2018) compared to 8% for the EU.

„Romania has committed to invest in digital technologies, via EU-coordinated programmes. The country is a member of the EuroHPC Joint Undertaking; it has also signed the Declaration creating the European Blockchain Partnership and the Declaration on Cooperation on Artificial Intelligence. Digitising enterprises remains an important challenge" (European Comission, 2019).

„The 2018 Global Ecommerce Report" also presents data on the ecommerce activity related to the use of mobile and mobile banking in Romania.

In terms of social media sites, in Romania the most used websites are: Facebook - 87.5%; Twitter - 1.2%; YouTube - 5.1% and Pinterest - 4.5%. In the top of the home delivery companies is the first place Fan Courier, followed by Urgent Cargus and Romanian Post.

Concerning the device usage are available the following data: mobile phone (any type) - 96%; smart phone - 60%, laptop or desktop computer - 56%, tablet - 23%.

Linked to the device usage there are the Internet use data: total number of active internet users - 13.74 million, 70%, and total number of active mobile internet users - 12.23 million, 62%. In this regard, the frequency of Internet use is expressed as: every day - 85%, at least once per week - 8%, at least once per month - 4%, less than once per month - 3%. Considering Internet connections the report shows that: speed and devices - average internet speed via fixed connections is 98.64 MBPS; average internet speed via mobile connections is 28.65 MBPS (Global Ecommerce Report, 2018).

Regarding access the internet there is most often via a computer or tablet - 20% compared to a smartphone 38%, and on both a smartphone and computer or tablet - 32%. Share of web traffic by device is: Laptops & Desktops - 59%; Mobile phones - 38%; Tablet Devices - 3%. Weekly online activities by device as a percentage of the total population engaging in each activity at least once per week: use a search engine - smartphone - 44% vs. computer 40%, social network visit - smartphone 44% vs. computer 34% and look for product information smartphone - 21% and computer - 16%.

Analysing social media use the report shows that: total number of active social media users is 10 million, and as percentage - 51%; total number of social users accessing via mobile - 8.9 million and active mobile social users as a percentage of the total population - 45%.

In terms of comparing mobile users versus mobile connections and comparing the number of unique mobile users to the number of mobile connections the followings are highlighted.

The number of unique mobile users is 15.97 million, mobile penetration - 81% (mobile users vs. total population), total number of mobile connections - 27.61 million; mobile connections as a percentage of total population - 141%, average number of connections per single mobile user - 1.73 (Global Ecommerce Report, 2018).

As a particular aspect derives the use of mobile for payments and the report presents that cash (delivery on cash) is the most used method of payment, followed by bank transfer, cash payment at shops / on site / at headquarters. Also the preference of payment methods in 2017 was the following: cash - 70%; card - 25%; bank payment / internet banking 5%. And not less, the amounts spent on online comparator (average spending per e-shopper) have increased from $ 1,218 in 2015 to $ 1,452 in 2017 and $ 1,757 in 2018.

The author realized also a research regarding the evolution of mobile payments in Romania and he has associated this evolution with the ecommerce trend of recent years in our country. A glance on the mobile connectivity in Romania was made by The Global System of Mobile Communications (GSMA) – an association that „represents the interest of mobile operators worldwide" (GSMA, 2019).

In this respect, a research of GSMA points out the overall country index score for Romania in 2018 was 73.8 out of a maximum possible score of 100, concerning the followings: mobile network infrastructure – 72.6 out of a maximum possible score of 100; affordability of devices & services – 81.9; consumer readiness – 80.2; availability of relevant content & services - 62.2 (GSMA, 2019).

A group of factors have been considered regarding GSMA mobile connectivity index. First of all, financial inclusion factors as representing the percentage of the population aged 15+ that reports owning or using each financial product or service, such as: has a bank account – 61%; has a credit card – 12%; makes and/or receives mobile payments via GSMA – 0.5%; makes online purchases and/or pays bills online – 12%.

A second factor, ecommerce growth by categories: Fashion and Beauty +22%; Electronics and physical media +11%; Food and personal care +19%; Furniture and appliances +19%; Toys, Diy and Hobbies +15%; Travel (including accommodation) +31%; Digital music +11%, and Video games +12% (GSMA, 2019).

A report on „Mobile Payments in Romania" in 2018 by AUKA remarks that „being (or remaining) number one in financial services requires being number one in payments. To be number one in payments, you need to be number one in mobile payments" (AUKA, 2019).

A first analysis of FinTech companies was made in 2019 under the name of "Romania's FinTech Map" by the conference organized by the Romanian business magazine Wall-Street under the name of "Future Banking 2019".

The analysis has the merit to highlight FinTech companies in the fields of Payments & wallets, Lending / Crowdfunding, Investments & Wealth Management, Personal Finance, Insurtech, Financial Infrastructure and Enablers, so that, on the one hand, a promotion of these companies is ensured, and, on the other, a highlight of the strengths and markets to which they are addressed.

An analysis of the companies presented in the table reveals that, although specialized in Payments & Wallets, they also associate other financial services with the basic service, which diversifies their activity in order to increase the turnover and profits.

Depending on the types of clients that most of the Payments & Wallet type companies in Romania have selected, it can be said that there is not only the predominance of the B2C type, but also an alternation with the B2B type.

We can highlight a large part of companies in the pre-seed or seed stage, although

there are companies that have reached full development. Regarding the operating area, respectively the countries in which they operate, these companies have a spectacular spread, and depending on the dimensions achieved and the size of the financing achieved.

It is also noted that the emergence of these companies (their establishment) was carried out over the years starting with the international financial crisis and was based in particular on the financing of bootstrapping, that is, by not calling on external sources, but relying on their own savings. However, it is worth noting some other companies that have managed to benefit from raising more or less funds as amounts of money (300 k $ - 12 mil. $).

Table no. 1. Payments & Wallets FinTech Companies in Romania in 2019

Name	Founded	Funds Raised	Services	Client Type	Country of Operations	Current Stage
Pago	04/2016	570 K €	Online Payments, Insurance, Money transfer, In app donations	B2C	Romania	Growth
Minutizer	03/2014	Bootstrapped	Pay per minute; Blockchain; Time base payments; Payment solutions; Real time payments	B2B B2C	Romania, Holland, Mexico,, Columbia, Panama	Growth
Volt	2017	Bootstrapped	P2P payments, money transfer, instant transfers during non-banking hours, send money like sending a message, transfers from card to card	B2C	Romania	Seed
Younify	2014	Bootstrapped	Internet Banking, Mobile Banking, PSD2, Invoice Payment	B2B	Romania	Seed
Oveit	2016	350 K $	Payment solution, FacePay, digital wallet	B2B B2C	Romania, Japan, South Africa, Uk, USA	Growth
Pay by Face	01/2019	Bootstrapped	Biometric Payment Processing Platform	B2B2C	Romania	Pre-Seed
Moneymailme	2016	12 mil. $	money transfer, enabling platform, mobile app, social payments application	P2P	Over 130 countries worldwide	Growth
SelfPay	2009	Bootstrapped	smart kiosk, self-service kiosk, bill payment, innovation, kiosk solutions, retail kiosk, self-service technologies, digital kiosk	B2C B2B	Romania	Growth
Paybilla	2018	300 K €	Payments, Billing	B2B	Europe	Seed
mobilPayWallet	03/2013	Bootstrapped	Digital Wallet, Digital Payment, Mobile Payments, mcommerce, eWallet	B2C	Romania	Growth
M3 Payments	2019	12 mil. $	payments, business, sme, online platform	B2B	Europe	Seed
ProxiCash	2018	Bootstrapped	Cash Withdrawals, Account Withdrawals, PISP	B2B2C	Romania	Pree-Seed

Source: Future Banking – Romanias Fintech map 2019

5. Results and discussions

The report on „Mobile Payments in Romania" in 2018 by AUKA states that there is currently no mobile payment solution that dominates the Romanian market, expressing the opinion that factors such as lack of confidence, low market penetration or existing barriers in regulation, results in the fact that most payments are still in cash (AUKA, 2019).

In this regard, Romania is positioned at the tail end, being behind its neighbors in Eastern Europe, a fact evidenced by the statistical observations that show the cash withdrawals had a growth rate similar to the payments made by card. This is explained by the lack of knowledge of the population in the financial field, which leads to the low use of non-cash payment instruments (AUKA, 2019).

However, in Romania there is a clear tendency to recover the trend that Europe is aware of today, that of reducing cash payments and increasing the use of non-cash payment instruments. Thus, the banks in Romania, in particular, but also the Romanian and foreign companies of the FinTech type are starting to develop new solutions for making payments easier and suitable between business partners, between customers and suppliers, between traders and customers and between individuals, in fact giving freedom of decision and action to all participants by focusing on the customers of mobile payment services.

In the circumstances in which the EU directive on PS2 payment services is in force from the second half of 2019, open banking companies are becoming a serious competition for banks, including the Romanian banks, as evidenced by a survey among bankers (AUKA, 2019). Romanian bankers, where 29% of them expressed concern about the threat already posed by large companies in the group GAFA (Google-Amazon-Facebook-Apple) in the coming years, shows in a percentage of 19% that they have already made plans to introduce bank-issued mobile payments.

"Romanian bankers were also most likely to acknowledge their role would change post PSD2. Almost a third (30%) believed their roles would be affected compared to an average of 24 per cent across the board" (AUKA, 2019).

In the competition between banks and FinTech-type companies of open banking services, banks are in a temporary advantage and, in many respects, they still enjoy the confidence of customers in terms of customer money management, although the truth is that this trust has decreased after the effects of the international financial crisis. However, the current conditions of economic development and diversification and amplification of financial services, intermediate or not, worldwide, make it possible to multiply the number of non-banking companies that offer payment services, therefore the increased competition in this area. This development of the FinTech company segment will also be able to achieve a close connection with the Romanian ecommerce companies, so that the enhancement of the ecommerce activity in Romania will be strongly driven by this association.

The originality of the paper is given by the research objective focused on highlighting the implications of the use of mobile payment in Ecommerce on the development of businesses in the field in Romania, as well as on presenting the differentiation of FinTech

companies in Romania based on the characteristics of the services offered by them.

6. Conclusions

The present paper aims to carry out, first of all, an analysis of the way in which the ecommerce activity in Romania evolves, highlighting the main characteristics of the stage regarding the digitization of the economy and the society, the factors that led to the development of ecommerce in Romania. , as well as the relationship between ecommerce and the provision of mobile banking services to current and potential customers.

Secondly, the paper wanted to present the current situation of the implementation of mobile payment services at the level of Romania based on the analysis of some research carried out by specialized consulting firms.

The third research direction of the study tried to make a comparison between several FinTech companies in the field of mobile payment services, in order to increase their influence on the Romanian market and to boost the ecommerce activity in Romania.

The limits of the research are highlighted by applying only qualitative methods and tools in research, a future development of the research being desirable to also involve quantitative approaches, meant to reflect more specifically the influence of the use of mobile payment on Ecommerce-type businesses in Romania.

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The Evolution of Bank Lending at Regional Level in Romania

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Abstract: *As a result of the economic and financial relapses following the international financial crisis started in 2007, the examination of the way in which the bank lending of the non-financial companies at regional level in Romania evolved is relevant on the one hand, by presenting the transformations suffered by the credit conditions, and, on the other hand through its implications on the level of regional development, the absorption of structural and cohesion funds offered by the European Union, access to financing, as and the use of new financing methods. The approach by which this research is carried out is based on a qualitative method, and considers the collection, analysis and interpretation of the data from 2015 and 2019 included in the surveys and statistical studies carried out by the specialists of the National Bank of Romania and other Romanian institutions. The results of research underline a sustained correlation between the evolution of bank lending and the other aspects mentioned above, highlighting the importance of access to bank financing at territorial level in order to increase the level of regional development in Romania.*

Keywords*:* bank lending, credit conditions, regional development, European funds absorption

JEL Classification: G21, G32

1. Introduction

As a result of the economic and financial relapses following the international financial crisis started in 2007, the examination of the way in which the bank lending of the non-financial companies at regional level in Romania evolved is relevant on the one hand, by presenting the transformations suffered by the credit conditions such as lending standards, lending terms, credit demand and credit risk evolution, and, on the other hand through its implications on the level of regional development, the absorption of structural and cohesion funds offered by the European Union, access to financing, as and the use of new financing methods.

The approach by which this research is carried out is based on a qualitative method, and considers the collection, analysis and interpretation of the data from 2015 and 2019 included in the surveys and statistical studies carried out by the specialists of the National Bank of Romania and other Romanian institutions.

The results of research underline a sustained correlation between the evolution of bank lending and the other aspects mentioned above, highlighting the importance of access to bank financing at territorial level in order to increase the level of regional development in Romania.

The paper defines its originality by synthesizing and aggregating data on the credit of non-financial companies and households at local level, on counties and NUTS II regions, by interpreting the results obtained with an impact on the development at regional level and with highlighting possible measures to be taken at macro and microeconomic level.

The present research is limited by considering only a qualitative research methods, in the current context, it is necessary if a quantitative research of economic care type is necessary to highlight the influence of the evolution of the lending at territorial level in Romania, in the case of entrepreneurship development at the level local, accessory and absorption of European funds non-reimbursable at local level, as well as increases of the local level of the local community.

2. Literature review

The present paper tries to make a synthesis of the information collected by the author from different bodies and institutions specialized in the economic field, to reflect on the influence exerted by the current level of bank lending in the territory on the level of regional development of Romania.

As a result of overcoming the economic and financial difficulties and uncertainties manifested as effects of the international financial crisis, Romania is currently facing new challenges due to changes in the international trading system worldwide, the inevitable BREXIT and the contrasting economic developments at Union level. European, and internally, as a result of the political instability with propagating effects on the economic-financial and social fields.

Thus, the references envisaged by the author are based more on the official resources and documents, than on the authors' research, the latter being limited to the following references.

An econometrical analysis on regional development in Romania considers that „one of the goals of the national development policy is to support the sustainable economic and social growth of regions territorially balanced

in Romania, in order to reduce economic and social inequalities among regions" (Motica, 2019).

The paper of Herman & Nistor shows the importance of competitive advantage at teritorial level in order to attract resources at regional level: „after identifying some competitive advantages of each region, some strategies are designed to foster the development [...] and efficient resource utilization" (Herman & Nistor, 2017).

Another research highlights „the peculiarities of the county distribution by the size of credits"for both individuals and non-financial institutions in order to determin „which are the most important users of banking credits, at county level, in the post crisis period, in Romania" (Stoica, 2015).

The author of this paper also conducted different analysis in order to evidentiate multiple features of bank lending in Romania after the financial crisis. One of them (Leoveanu, 2015) points out that after crisis „banks have substantially reduced the funds assigned for financing business, especially the small and medium enterprises. According to analysts' estimates, over 90% of Romanian companies have difficulty in accessing funding for existing business in order to exploit opportunities for delivering growth business". In a paper of 2016 the author presents that "the last […] years was characterized by the private sector credit growth, especially in households and the fact that loans in lei is the main driver of credit growth in Romania" (Leoveanu, 2016).

3. Research methodology

The approach by which this research is carried out is based on a qualitative method, and considers the collection, analysis and interpretation of the data from 2015 and 2019 included in the surveys and statistical studies carried out by the specialists of the National Bank of Romania and other Romanian institutions.

A review of the main macroeconomic indicators of Romania is concretely necessary to be carried out in the circumstances in which the analysis of the bank lending at regional level is made, namely in counties and NUTS II development regions.

On these considerations, the important indicators on the Romanian financial market are highlighted first in the table below.

Table no. 1 Romanian financial market indicators in 2019

Markets	Last	Reference	Previous	Range	Frequency
Currency	4.29	Dec/19	4.29	0.26 : 4.38	Daily
Stock Market (points)	9880	Dec/19	9779	281 : 10858	Daily
Government Bond 10Y (%)	4.74	Dec/19	4.75	2.66 : 14.01	Daily

Source: Tradingeconomics, https://tradingeconomics.com/romania/indicators

Also, it is necessary to highlight the important macroeconomic indicators from the point of view of evaluating the current economic situation in the perspective of the accession to the euro area of our country.

From the presentations made in the tables one can easily observe a worsening of these macroeconomic indicators for Romania, given that, at the level of 2015, all the nominal convergence criteria regarding the accession to the euro area were met by Romania, and the situation of the real convergence indicators. of the Romanian economy with the economies of the euro area countries is at the highest level compared to the current level.

Table no. 2 Romanian macroeconomic indicators in 2019

Overview	Last	Reference	Previous	Range	Frequency
GDP Growth Rate (%)	0.6	Sep/19	0.8	-7.1 : 6.1	Quarterly
GDP Annual Growth Rate (%)	3	Sep/19	4.4	-7.4 : 12.6	Quarterly
Unemployment Rate (%)	4	Oct/19	4.1	3.8 : 8.7	Monthly
Inflation Rate (%)	3.8	Nov/19	3.4	-3.5 : 317	Monthly
Interest Rate (%)	2.5	Nov/19	2.5	1.75 : 12.5	Daily
Balance of Trade (EUR Million)	-1969	Oct/19	-1188	-2542 : 138	Monthly
Current Account (EUR Million)	-765	Sep/19	-1011	-2344 : 831	Monthly
Current Account to GDP (%)	-4.5	Dec/18	-3.2	-13.6 : 6.6	Yearly
Government Debt to GDP (%)	35.1	Dec/18	35.2	6.6 : 39.2	Yearly
Government Budget (% of GDP)	-3	Dec/18	-2.7	-9.1 : 0.5	Yearly
Retail Sales MoM (%)	0.8	Oct/19	0.9	-9.8 : 11.2	Monthly
Corporate Tax Rate (%)	16	Dec/19	16	16 : 38	Yearly
Personal Income Tax Rate (%)	10	Dec/19	10	10 : 48	Ye

Source: Tradingeconomics, https://tradingeconomics.com/romania/indicators

According to Tredingeconomics website the credit conditions in Romania have suffered significant changes since 2015 highlighted like this: „Standard & Poor's credit rating for Romania stands at BBB- with negative outlook. Moody's credit rating for Romania was last set at Baa3 with stable outlook. Fitch's credit rating for Romania was last reported at BBB- with stable outlook. In general, a credit rating is used by sovereign wealth funds, pension funds and other investors to gauge the credit worthiness of Romania thus having a big impact on the country's borrowing costs. This page includes the government debt credit rating for Romania as reported by major credit rating agencies" (Tradingeconomics, 2019).

The analysis of regional bank lending by the author was based on the collection of data from the National Bank of Romania on territorial lending in Romania, on calculating and highlighting the level differences between 2015 and 2019 in total, for non-financial companies and for households, as well as interpreting the results at the level of NUTS II development regions with identifying the size of the impact of bank lending on the regional development, as well as the inverse influences in the current economic situation.

The author's analysis targeted bank lending in lei at the regional level in total, associated with companies and also taking into account households. The data and calculations are presented successively in tables no. 3 and no. 4 for the years 2015, respectively 2019.

In the non-financial companies sector, the lending conditions are characterized at the level of 2019 as compared to 2015 such as: a) the lending standards recorded a tightening in 2019, according to the size of the companies and the maturity of the loans; b) the terms of the lending that registered changes were the spread of the average interest rate on loans to IRCC / ROBOR, respectively the first one applied for the most risky loans, which has recorded an increase of the same intensity; c) the demand for loans from companies increased marginally at the aggregate level, the evolution due to the small and medium-sized companies; d) regarding the evolution of the credit risk, depending on the size of the companies, the banks evaluate a moderate growth in the case of medium enterprises and corporations (NBR, 2019a).

Table no. 3 The territorial structure of bank loans granted to non-financial companies and households in 2015

	Oct-15				
NUTS II Regions	**National currency loans**	**Nonfinancial companies**	**% of total**	**Households**	**% of total**
Regiunea NE	**10800.13**	**5491.25**	**0.51**	**5295.78**	**0.49**
BACĂU	2,485.4	1,551.7	0.6	932.4	0.38
BOTOŞANI	951.4	462.4	0.5	486.3	0.51
IAŞI	3,276.6	1,299.1	0.4	1,970.2	0.60
NEAMŢ	1,305.9	680.5	0.5	625.0	0.48
SUCEAVA	1,720.8	952.6	0.6	766.9	0.45
VASLUI	1,059.9	544.9	0.5	515.0	0.49
Regiunea SE	**11534.09**	**5912.65**	**0.51**	**5526.86**	**0.48**

BRĂILA	1,299.4	692.0	0.5	606.8	0.47
BUZĂU	1,630.0	801.0	0.5	780.2	0.48
CONSTANȚA	4,489.0	2,323.6	0.5	2,124.0	0.47
GALAȚI	2,058.5	1,031.4	0.5	1,023.5	0.50
TULCEA	914.1	415.8	0.5	498.3	0.55
VRANCEA	1,143.1	648.9	0.6	494.1	0.43
Regiunea Sud Muntenia	**10489.85**	**4900.40**	**0.47**	**5564.13**	**0.53**
ARGEŞ	2,985.7	1,425.6	0.5	1,557.4	0.52
CĂLĂRAŞI	944.6	552.6	0.6	381.6	0.40
DÂMBOVIȚA	1,056.5	358.1	0.3	692.0	0.65
GIURGIU	585.8	269.2	0.5	316.6	0.54
IALOMIȚA	941.8	500.7	0.5	440.8	0.47
PRAHOVA	3,071.6	1,353.7	0.4	1,713.4	0.56
TELEORMAN	903.8	440.5	0.5	462.4	0.51
Regiunea SV Oltenia	**8923.82**	**4851.73**	**0.54**	**4067.92**	**0.46**
DOLJ	3,551.2	2,008.2	0.6	1,541.0	0.43
GORJ	1,987.4	1,238.4	0.6	748.9	0.38
MEHEDINȚI	730.5	259.1	0.4	471.3	0.65
OLT	1,072.4	445.1	0.4	626.9	0.58
VÂLCEA	1,582.4	900.8	0.6	679.9	0.43
Regiunea Vest	**8081.73**	**3454.51**	**0.43**	**4613.40**	**0.57**
ARAD	1,686.9	741.8	0.4	938.8	0.56
CARAŞ-SEVERIN	673.4	234.8	0.3	436.6	0.65
HUNEDOARA	1,409.2	447.3	0.3	960.7	0.68
TIMIŞ	4,312.2	2,030.6	0.5	2,277.3	0.53
Regiunea NV	**12644.48**	**6767.63**	**0.54**	**5687.68**	**0.45**
BIHOR	2,586.2	1,363.5	0.5	1,220.8	0.47
BISTRIȚA-NĂSĂUD	884.3	451.6	0.5	432.6	0.49
CLUJ	5,127.5	2,509.6	0.5	2,436.0	0.48
MARAMUREŞ	1,747.5	1,014.4	0.6	728.6	0.42
SATU MARE	1,456.5	935.4	0.6	520.6	0.36
SĂLAJ	842.5	493.3	0.6	349.0	0.41
Regiunea Centru	**10500.46**	**5404.40**	**0.51**	**5077.36**	**0.48**
ALBA	1,331.8	678.3	0.5	651.3	0.49
BRAŞOV	3,954.3	2,270.1	0.6	1,680.7	0.43
COVASNA	547.1	225.6	0.4	321.2	0.59
HARGHITA	674.9	337.6	0.5	337.1	0.50

MUREŞ	1,787.5	830.3	0.5	955.6	0.53
SIBIU	2,204.8	1,062.4	0.5	1,131.4	0.51
Regiunea Bucuresti-Ilfov	**35,848.8**	**18,180.6**	**0.5**	**15,044.6**	**0.42**
TOTAL	**108823.35**	**54963.19**		**50877.69**	

Source: NBR, Statistic Database and Author's calculations

In the households sector, the lending conditions are characterized at the level of 2019 as compared to 2015 such as: a) the lending standards experienced a tightening from 2015 to 2019, both in the case of consumer loans and in the case of real estate loans granted to the population; b) the terms of the credit recorded the moderate tightening of the spread of the average interest rate on loans to IRCC/ROBOR in the case of consumer loans and in the case of loans for the purchase of housing and land granted to the population; c) the population's demand for loans registered an increasing evolution towards 2019, for both segments of the population's credit (NBR, 2019a).

Table no. 4 The territorial structure of bank loans granted to companies and households in 2019

	Oct-15				
NUTS II Regions	**National currency loans**	**Nonfinancial companies**	**% of total**	**Households**	**% of total**
Regiunea NE	**7010.73**	**3621.91**	**0.52**	**3387.24**	**0.48**
BACĂU	970.57	457.24	0.47	513.25	0.53
BOTOŞANI	444.60	174.70	0.39	269.89	0.61
IAŞI	3970.31	2433.66	0.61	1535.77	0.39
NEAMŢ	623.32	278.62	0.45	344.13	0.55
SUCEAVA	699.71	219.57	0.31	480.11	0.69
VASLUI	302.22	58.12	0.19	244.09	0.81
Regiunea SE	**6436.74**	**3096.76**	**0.48**	**3311.05**	**0.51**
BRĂILA	503.6	225.5	0.4	278.1	0.55
BUZĂU	759.4	443.3	0.6	305.7	0.40
CONSTANŢA	3,192.2	1,542.3	0.5	1,646.2	0.52
GALAŢI	1,075.3	440.8	0.4	623.9	0.58
TULCEA	427.0	220.0	0.5	202.7	0.47
VRANCEA	479.3	224.9	0.5	254.4	0.53
Regiunea Sud Muntenia	**4587.02**	**2306.02**	**0.50**	**2278.43**	**0.50**
ARGEŞ	1,419.9	637.7	0.4	781.8	0.55
CĂLĂRAŞI	135.7	2.0	0.0	133.5	0.98
DÂMBOVIŢA	814.3	581.5	0.7	231.0	0.28

GIURGIU	183.0	49.8	0.3	133.2	0.73
IALOMIȚA	170.5	22.5	0.1	147.9	0.87
PRAHOVA	1,702.0	996.2	0.6	705.7	0.41
TELEORMAN	161.6	16.4	0.1	145.2	0.90
Regiunea SV Oltenia	**3357.39**	**1497.91**	**0.45**	**1845.93**	**0.55**
DOLJ	1,401.9	533.0	0.4	868.2	0.62
GORJ	289.2	120.1	0.4	169.1	0.58
MEHEDINȚI	371.2	120.3	0.3	250.9	0.68
OLT	815.6	579.1	0.7	230.6	0.28
VÂLCEA	479.5	145.4	0.3	327.2	0.68
Regiunea Vest	**6028.25**	**3354.47**	**0.56**	**2669.14**	**0.44**
ARAD	1,225.4	731.6	0.6	493.4	0.40
CARAŞ-SEVERIN	193.9	40.9	0.2	152.9	0.79
HUNEDOARA	413.6	119.9	0.3	291.3	0.70
TIMIŞ	4,195.3	2,462.0	0.6	1,731.6	0.41
Regiunea NV	**9610.45**	**4899.70**	**0.51**	**4167.63**	**0.43**
BIHOR	1,957.9	1,074.9	0.5	876.7	0.45
BISTRIȚA-NĂSĂUD	701.3	424.9	0.6	274.9	0.39
CLUJ	4,810.3	2,300.4	0.5	1,986.6	0.41
MARAMUREŞ	902.5	446.5	0.5	451.0	0.50
SATU MARE	965.7	610.2	0.6	348.4	0.36
SĂLAJ	272.9	42.9	0.2	230.0	0.84
Regiunea Centru	**8831.18**	**5509.30**	**0.62**	**3313.96**	**0.38**
ALBA	1,509.3	1,118.6	0.7	388.1	0.26
BRAŞOV	3,607.6	2,361.2	0.7	1,245.7	0.35
COVASNA	185.7	81.5	0.4	104.1	0.56
HARGHITA	285.1	178.6	0.6	106.5	0.37
MUREŞ	1,514.9	916.3	0.6	594.2	0.39
SIBIU	1,728.6	853.1	0.5	875.5	0.51
Regiunea Bucuresti-Ilfov	**45,055.6**	**26,776.7**	**0.6**	**13,993.7**	**0.31**
TOTAL	**90917.42**	**51062.77**		**34967.07**	

Source: NBR, Statistic Database and Author's calculations

As a corollary of the analysis made in the two tables, the differences between 2015 and 2019 are highlighted below, by calculating the deviations in total, for non-financial companies and for households. One can say, there is a decrease in bank lending in 2019 compared to 2015, both in total and in terms of non-financial companies and households (NBR, 2019b).

Table no. 5 Deviation 2019/2015 in total, for nonfinancial companies and for households by territorial structure of bank loans

NUTS II Regions	Total Deviation 2019/2015	Companies Deviation 2019/2015	Households Deviation 2019/2015
Regiunea NE	-0.35	-0.34	-0.36
Regiunea SE	-0.44	-0.48	-0.40
Regiunea Sud Muntenia	-0.56	-0.53	-0.59
Regiunea SV Oltenia	-0.62	-0.69	-0.55
Regiunea Vest	-0.25	-0.03	-0.42
Regiunea NV	-0.24	-0.28	-0.27
Regiunea Centru	-0.16	0.02	-0.35
Regiunea Bucuresti-Ilfov	0.26	0.47	-0.07

Source: Author's calculations

4. Results and discussion

At the total level, the regions SV Oltenia and Sud Muntenia are experiencing decreases of more than 50%, the same trend being maintained in the case of split loans by type of debtor. The evolution of lending in the other regions can be highlighted in the same measure, thus noting Regiunea Centru, Regiunea NV and Regiunea Vest regions with significantly lower negative deviations from the regions highlighted above, to be highlighted the Centru region with a positive deviation this time regarding loans granted to non-financial companies. The only region that shows positive credit growth is the region Regiunea Bucuresti-Ilfov.

The impact of the changes regarding the macroeconomic conditions and the credit conditions regulated at the level of the NBR, but also of each bank, will have and will have major consequences on the regional economic development of Romania through the following evidences:

- diminishing the potential of the companies regarding the assurance of the support through borrowed funds from the banks of accessing the non-reimbursable European funds necessary for the development of the existing non-financial companies and the start-ups that must be set up at regional level;
- diminishing the potential for raising the standard of living by improving living and working conditions at the level of individual households;
- diminishing the potential of creating optimal conditions for ensuring the improvement of the infrastructure of all types at the local and regional level;
- indirectly and negatively affecting the conditions regarding education, health and culture at the level of small and medium-sized localities.

5. Conclusions

The present paper tries to make a synthesis of the information collected by the author from different bodies and institutions specialized in the economic field, to reflect on the influence exerted by the current level of bank lending in the territory on the level of regional development of Romania.

The analysis of regional bank lending by the author was based on the collection of data from the National Bank of Romania on territorial lending in Romania, on calculating and highlighting the level differences between 2015 and 2019 in total, for non-financial companies and for households. , as well as interpreting the results at the level of NUTS II development regions with identifying the size of the impact of bank lending on the regional development, as well as the inverse influences in the current economic situation.

The paper defines its originality by synthesizing and aggregating data on the credit of non-financial companies and households at local level, on counties and NUTS II regions, by interpreting the results obtained with an impact on the development at regional level and with highlighting possible measures to be taken at macro and microeconomic level.

The present research is limited by considering only a qualitative research methods, in the current context, it is necessary if a quantitative research of economic care type is necessary to highlight the influence of the evolution of the lending at territorial level in Romania, in the case of entrepreneurship development at the level local, accessory and absorption of European funds non-reimbursable at local level, as well as increases of the local level of the local community.

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Performant Management Through The Introduction of The Lean Six Sigma Methodology in the Hospitals In Romania Case Study Municipal Emergency Hospital Moinesti

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Abstract: *The purpose of this paper is to present the results that can be obtained by implementing the Lean Six Sigma methodology in the health system of our country. The results are also supported by the case study regarding the implementation of Lean Six Sigma techniques in a public hospital with good performances, nationally recognized: The Municipal Emergency Hospital Moinesti. These strategies, which include Lean and Six Sigma methods, aim to implement process improvements through a set of principles and practices that promote greater efficiency and effectiveness, with fewer errors. The main motivation for the thematic research is due to the fact that the Romanian health system has notable deficiencies which, despite the many positive changes in our country in general, in the health system, in particular, the progress is expected. From previous studies in clinics in the US and Europe we have found that there is a methodology that puts patients and their needs first, by reducing and avoiding waste, as well as streamlining and organizing medical services, so that they can meet patients' expectations. The present paper is based on both a secondary research and the actual carrying out of a case study, extended at the experiment level. The results of this paper show that the medical organization has a greater capacity to respond to challenges within the system, the use of resources has been maximized. There has been an increase in the satisfaction of the patients but also of the doctors, with the elimination or reduction of some costs. The application of the Lean Six Sigma concept in healthcare is a new topic and few researches have been carried out in this field, this work can be useful to the entities that carry out their activity in this area of utmost importance, who want to increase their level and quality. the services offered.*

Keywords: Management, Lean Six Sigma, Hospital, Health.
JEL Classification: M12, M14, M54

Introduction

In recent years in Europe, various management strategies have been developed to improve the performance of hospitals, in particular by improving the processes through which they operate (Toma, S.-G., Marinescu, P., Constantin, I., 2018). These strategies, which include Lean and Six Sigma, aim to implement process improvements through a set of principles and practices that promote greater efficiency and effectiveness, with fewer bad practices or errors (Marinescu, P., Toma, S.-G., 2008). Due to their initial application in manufacturing industries, these process improvement strategies could also be adapted for other areas such as: construction, software development, financial services, healthcare, laboratory sciences, etc (Toma, S.-G., Marinescu, P., 2013). Healthcare in public hospitals is an industry, like many in the health field, which must operate at peak performance at all times. When you use Six Sigma Training in other industries, increased profit or business success is usually the goal (Toma, S-G., Marinescu, P., 2018). However, in the healthcare industry, especially in hospital care, the Six Sigma process has gotten harder. Regardless of whether you are directly dealing with patient problems, or the efficiency processes, everything revolves around better performance in relation to patient care.

Improving the level of patient satisfaction is very important for the long-term success of a medical organization (Toma, S.-G., Marinescu, P., 2012). To improve patient satisfaction, healthcare providers must focus on strategies to improve equality. That is, health professionals must demonstrate quality in line with organizational culture. The following attributes have been identified for a quality health system: (1) safe, (2) efficient, (3) patient-centred, (4) timely, (5) effective. In a study presented in Brussels in January 2015, Romania is ranked 35th in the European Index of healthcare systems with a total number of only 453 points (out of 1000 possible points). This result was mainly generated by the old medical equipment, limited access to medical services for some citizens, but also by the low quality of the management of the players in the health system. Thus, with Romania's accession to the European Union, the Romanian healthcare system has been more closely monitored by the other member countries. Clinics and hospitals are becoming increasingly criticized for the many deficiencies identified. Unfortunately, the health system in Romania is not yet able to cover the shortfall in terms of accessibility to medical services, the constant migration of medical staff, old equipment, lack of medical staff, etc. The Romanian health system treats millions of people every year, at the same time, saving lives in most cases. However, financial, social and economic disputes appear constantly, putting the healthcare system in a bad light.

Over the years, various innovations have tried to save the medical system from collapse. Before 1989, the medical system was guided by bureaucracy, so that after the revolution, they changed their way, applying different rules, more or less agreed by the consumers. Even if there are deficiencies in the services market in Romania, the health care system must be "refreshed" so that it can be aligned with the European health systems. An important step in achieving the modernization of the Romanian medical system would be by improving the quality of medical care.

To achieve this goal, we propose actions such as:

- reducing bureaucracy;
- decrease of medical fraud (especially financial fraud);
- equal access to medical services;
- avoiding / diminishing the migration process of medical personnel;
- providing modern medical equipment to clinics and hospitals;
- improving the quality of medical processes;
- disposal of any type of waste (time, movement, financial resources, etc.).

Once these first requirements are met, the Romanian healthcare system could achieve the alignment (in qualitative terms) with the European health systems. But in order to address these criteria, the involvement of the government and the medical staff is mandatory (Toma, S.-G., Marinescu, P., 2015).

What is Lean?

Lean (also known as Lean Production, Lean Enterprise and Lean Thinking) involves a set of principles, practices and methods for process design, improvement and management. Lean development is attributed to Taiichi Ohno's articulation of Toyota's production system. Ohno aims to improve efficiency by eliminating certain types of waste (called muda, in Japanese) that absorb time and resources, but add no value (Ohno, 1988). Lean & Six Sigma are tools that are increasingly being used by hospitals around the world to increase patient satisfaction, along with reducing costs and improving hospital performance. Given the challenges of health care, rising costs, increasing workload, complex regulatory environment and labour shortage in key areas, it is obvious that there are errors and wasted activities in almost all processes (Toma, S.-G., Marinescu, P., Grădinaru, C., 2018) (Womack J, Jones D., 1996). The Lean Six Sigma methodologies help us to cope with the double pressures of cost reduction, as well as maintaining high levels of quality assistance, offering practical tools for process improvement (Marinescu, P., Toma, S.-G., 2008). A Lean process reflects the goal of continuous waste reduction and improving the workflow to effectively produce a product or service that is considered to be of great value to those who use it. Lean implementation involves systematic evaluation and analysis of the process. The preliminary stages of the Lean evaluation include "mapping the value stream" in which key persons, resources, activities and information flows needed to provide a product or service are made explicit and graphically rendered. The value flow map is a key tool for identifying opportunities for waste reduction and for closer integration of process steps, thus improving process efficiency (Toma, S.-G., Marinescu, P., Grădinaru, C., 2018).

What is Six Sigma?

Six Sigma, like Lean, is a business management strategy used to improve the quality and efficiency of operational processes (Jimmerson C, Weber D, Sobek DK, 2005). While Lean focuses on identifying ways to streamline processes and reduce errors, Six Sigma primarily aims to make the process more uniform and accurate by applying statistical methods, Six Sigma was initially developed by Motorola's Bill Smith in 1986 as a way to eliminate manufacturing defects, where it is understood that a defect is a product or process that does not meet the

expectations and requirements of customers. The name Six Sigma refers to a quality level defined as the near perfect defect rate of 3-4 defects per million products or cases (Jones D, Mitchell A., 2006). A variety of systematic methodologies for identifying, evaluating and improving processes have been developed as part of the Six Sigma approach. The Six Sigma improvement model comprises: definition, measurement, analysis, improvement and control (DMAIC). This involves observing the following steps for understanding and improving a process: 1) defining the project objectives and the client's requirements (internal and external); 2) measuring the process to determine the current performance; 3) analysis and determination of the main cause (s) of the relevant defects; 4) process improvement by eliminating root causes of defects and 5) controlling the future performance of the process. Another Six Sigma methodology, called Design for Six Sigma (DFSS), is used to systematically design new products and services that meet customer expectations and meet Six Sigma quality conditions. This concept involves training and certification of specialists in designated processes and flows (called black belts, green belts or other similar titles) within organizations. Various combinations of Lean and Six Sigma techniques have been developed over the years, which are frequently described as a single Lean Six Sigma approach. These variants are just two of the many approaches that are used for systematic analysis and improvement of process flow and efficiency in the industry. Other similar approaches include Business Process Modelling (BPM), Business Process Reengineering (BPR) and Workflow Mapping (WM). Another variety of techniques can be found in TQM and CQI oriented, such as Kaizen, Shewhart Cycles (PDCA) and different management accounting systems.

Applying Lean and Six Sigma in healthcare

De Koning et al. describe several applications of an integrated Lean Six Sigma approach, established in a Dutch hospital that has reduced the complexity of employing part-time clinical staff, optimizing the operating room programming by designing a new pre-surgical hospitalization process and the development of a new system of work planning for the rapid completion of equipment maintenance requests (De Koning H, Verver JPS, den Heuvel J, et al., 2006). Other successful applications of Lean and Six Sigma have been reported in many other areas of healthcare.

Lean - Seven Waste - how it applies to hospitals.

Waste is anything that does not add value to a product or service in the office, department, laboratory, etc. In the context of healthcare, value is defined as the provision of services / satisfaction for clients / patients, any activity that does not contribute to it is classified as waste. The principle of the 7 wastes can help to improve healthcare, allowing the staff to examine their own jobs and eliminate wasteful activity. This enhances the patient experience, giving staff working with patients more time to raise the quality of services. Since waste is a symptom rather than the root cause of the problem, it indicates problems within the system or organization.

The 7 wastes are defined and can be translated into a healthcare context as follows:

1. **Overproduction** - performing a "just-in-house" activity and / or in a lot. This also contributes to the constraint of the patient's steps by feeding the wrong work or the wrong size of the lot. Examples include requesting tests and referrals to outpatients "just in case".

2. **Inventory** - refers to materials, but can be translated as patient. Inventory retention works against quality and efficiency, which makes it difficult to identify problems. Examples include the use of beds for inpatients for patients who are awaiting tests, but may be safely discharged or ordering excess materials because the supply is not reliable.

3. **Waiting** - refers to waiting for a patient or material, instead of moving at the pace of customer demand. The wait may be the result of a variation of the process (the dice game will illustrate this). Examples are waiting in queues for operation, waiting for tests or preparing all the equipment in the operating list.

4. **Transportation** - any movement of a patient or material is wasteful. Although transport cannot be completely eliminated, its reduction should be attempted, especially in terms of time. When the steps of the process are located side by side, they are easier to visualize, to identify and to solve. Examples include moving the patient to an inpatient bed to be reviewed at the post-operative round and then to another outpatient unit, moving the patient for tests or to see the physiotherapist.

5. **Defects** - a defect that is passed through the process can escalate the impact of the initial defect. The goal is to have zero defects.

6. **Personnel movement** - unnecessary movement in the workplace refers to the appearance and organization. How far is it traveling to get to a computer, to enter download information? Is there a better way to minimize wasted time?

7. **Useless processing** - using complex equipment to perform simple tasks. Often, the equipment is large and inflexible, a robot in the pharmacy. Although it may take several hours for a patient to receive the prescription, the task of disposing of it takes several seconds.

Lean Six Sigma methodologies can be applied to any process in the hospital (Sewail L, DeToung C., 2003). Some of the most common areas are:

- Reduction of patient rotating time in OPD / Radiology / Laboratories.
- Increased adherence to the OT program
- Reduction of delays in the admission / discharge process
- Efficient management of materials
- Reduction of falls in geriatric and orthopaedic patients
- Simplification of the emergency flow process
- Reduction of billing errors
- Improving the performance of cases from day hospitalization;
- Improving the accuracy of clinical coding;
- Reduction of errors caused by high risk medication;
- Reduction of errors in ordering and administering drugs;
- Improving the active management of personnel costs;
- Increased productivity of medical

staff;

• Increased accuracy of laboratory results;

• Improving the availability of the bed in various departments of hospitals;

• Reducing the number of postoperative wound infections and wound related problems;

• Improving the scheduling of MRI exams;

• Improved return time for pharmacy orders;

• Improve the recruitment of the nurse or the technician;

• Increased surgical capacity;

• Improving the accuracy of patient registration;

• Improve employee retention.

Case study: Implementation of the Lean Six Sigma methodology as a pilot project in the Moinesti Emergency Municipal Hospital

Starting from a real example, namely the pilot project within the Moinesti Emergency Municipal Hospital, we analysed how to implement the Lean Six Sigma methodology in the hospitals in Romania. Lean Thinking integration means speed, a better approach to processes by eliminating waste, statistical thinking (Marinescu, P., Toma, S.-G., 2008). This involves data collection and processing for understanding, process and variation in processes, application, definition of objectives. The first and most important challenge is the initial investment in the training system of the Lean Six Sigma system, the absence or difficulty of obtaining baseline data on process performance, real-time analysis at the same time as the healthcare process (Chassin, 1998). For the healthcare industry, identifying processes that can be measured in terms of defects or errors per million opportunities is often a struggle (Lanham B, Maxson-Cooper P., 2003) . Another barrier to implementing the Lean Six Sigma methodology in the healthcare industry is the psychology of the workforce (Marinescu, P., Toma, S.-G., Constantin, I., 2016). Last but not least, it is important to present recommendations by harmonizing the medical language, the business language and the statistical language (Toma, S.-G., Marinescu, P., Grădinaru, C., 2016).

In this paper, the following five experiments were analysed which can contribute to the improvement of processes and the elimination of waste from the hospital as a result of the implementation of the Lean Six Sigma concept:

(1) Reduction of unnecessary laboratory tests

(2) Improving the quality of the image by magnetic resonance imaging (MR)

(3) Decreased waiting time before surgery

(4) Reduction of catheter infections

(5) Decreased over-stay in hospitals.

Experiment 1: Decreasing unnecessary laboratory tests.

Many blood and urine tests required in the paediatric and obstetrics-gynaecology departments need to be repeated because of procedural errors. The result is the delay in getting the final results to the doctor and unnecessary costs to recover the tests. Although human error is an important cause in most cases, there may be other important factors that need to be identified. These

include complexity, exhaustion, distraction, and inadequate supervision by senior staff. A quality improvement team was formed to analyse the process. The first part of the analysis included an examination of the current process, starting with the coordination of a laboratory test by a doctor until the results were reported to the doctor. Once the process was displayed, the team developed a graphical chart to conclude on the possible reasons for the errors. This was followed by data collection to measure the frequency of the type of actual errors. The team focused on potential errors related to personnel actions, equipment problems, and systematic impediments to the process to minimize errors. Therefore, two categories of problems were examined by the team: those related to sample collection, transport and storage of samples. For the development of standards and methods for improving blood collection, practical simulations of sample collection, transport and storage of samples were carried out, followed by an examination and discussion of the team with the assistants and technicians responsible for these activities. Following the analysis of the entire process, the principles of efficient management that will lead to cost savings were drawn and accepted.

Experiment 2: Improving the quality of the MRI image.

Many imaging technologies are introduced to the healthcare market every year. These changes ensure enhanced image quality and provide specialist diagnostic doctors to treat patients more precisely. However, this is generally achieved only with considerable additional expenses. Cost management and medical management design is required. Lean Six Sigma tools can be used to optimize radiology design protocols in diagnostic imaging. Of course, there is always the risk of variation, because reading and interpreting can change from one person to another, but through superior imaging techniques, this problem can be overcome. The quality of the MRI image depends on many parameters, such as the technical variables, the processing conditions, the calibration of the equipment, the performance of the specialist interpreting the images. Thus, the performance in the imagistic interpretation of the specialist is of utmost importance and must be improved by training. The other parameters should be improved by providing training to the technician and ensuring the maintenance of MRI equipment when required.

Experiment 3: Decreased waiting time before surgery.

Often, patients experience dissatisfaction while waiting for surgery. From the hospital's point of view, this led to loss of resources, increased costs and additional risk to the patient. As for the patients, they complain that their time was wasted and added that there was a major inconvenience for their family. Furthermore, prolonged surgery involved additional stress. A quality improvement team was formed to identify possible nodes in the process where there could have been a significant delay. The team developed a picture of the process by which patients were admitted to the hospital for surgical intervention. Following this, the team developed a diagram to track why time could be wasted at these points during the process. The data is collected by modifying the medical record so that the possible delays

in surgery and the reasons for the delay are mentioned. It was found that the substantial delay is due to the laboratory tests to be taken into consideration before the intervention but also to the availability of another mandatory EKG (Electrocardiogram) investigation.

Experiment 4: Reduction of catheter infection.

Catheter infection is one of the serious problems that patients face after surgery. In order to carry out this project, patients with catheter infections were identified through the nurses and doctors by reviewing a dedicated documentation kept in all hospital sectors and by direct observation of the patients. Thus, an infection control team was formed. This team organized a series of meetings with key representatives from medicine and surgery, medical staff from both the medical care and critical care units, anaesthesia, treatment, materials management, in order to lead to performance improvement. The necessary information to identify the factors that influence the occurrence of the catheter infections was gathered by this team through evaluation sessions and observations made during the procedures of insertion and maintenance of the catheter. This process led to the development of the chart which highlighted the patient, equipment, medical staff and environment affecting catheter infections. This process was also beneficial in identifying the various needs: the need for staff to understand the nature and severity of the problem; a uniform education program for providers and physicians; selecting the insertion site to reduce the risk of infection; practical antiseptic standards during catheter insertion and replacement; skin antiseptic standardization; standardization of sterile land and compliance with its use. Such a plan was developed by this team and at the base of this plan is the primary education of the caretaker.

Experiment 5: Decreased number of days of hospitalization.

Medical errors and adverse events in medical organizations are generally the most common and can be avoided. In addition to their ability to harm patients, increase the length of stay in the hospital, they greatly aggravate the financial difficulties of healthcare organizations through unnecessary cost increases. Thus, in this field, many patients were waiting in the inpatient ward to be placed in a treatment unit. To analyse where the blockage was, a quality improvement team was formed that identified possible nodes in the hospitalization process that could contribute to significant delays, the team developed a flow chart to optimize the movement of patients to the hospital (King DL, Ben-Tovim DI, Bassham J. , 2006). The team established that the excessive length of hospital stay was largely influenced by the discharge planning process. The weak link was the critical bridge between the treatment received by the patient in the hospital and the post-discharge care provided by the community. Thus, the team has prepared an efficient outpatient planning to allow easy transfer from hospital to home, producing better outcomes for the patient and reducing the likelihood of re-hospitalization.

Conclusions.

The healthcare industry is still in the early stages of evolution in terms of introducing the Lean Six Sigma methodology.

Therefore, medical staff should seek guidance for training and implementation with management support. Successful execution of simple projects in hospitals can enable practitioners to acquire stronger initiatives in the future and to create large-scale clinical changes. The introduction of the Lean Six Sigma culture in medical-specific organizations can be achieved through commitment and management involvement. Thus, the positive effects can be multiplied, having a considerable impact at all levels. A high level of internal communication is also needed to facilitate the implementation of Lean Six Sigma. The established quality improvement team should work with external quality facilitators, who can train them to implement the training and training systems required for all projects involved in system implementation, project management and use of quality tools. In addition, it also has an impact in clinical areas, such as infection control and drug delivery, lack of financial resources, lack of human resources, lack of time, poor training and internal resistance. The authors believe that implementing the Lean Six Sigma concept as a business strategy allows the health care sector to provide a truly high-class service for patients. Lean Six Sigma is a methodology for eliminating any type of waste, to reduce variability and streamline processes. With the help of numerous tools proposed by Lean Six Sigma, we consider that, by applying them, the health system in Romania can solve some of the existing problems and offer medical services to patients with a high degree of quality. The real impact that Lean Six Sigma, if we focus on the basic issues of health care and improving the quality of life of patients, may be surprising. According to the authors, the application of Lean Six Sigma in the healthcare industry in Romania will expand in the next five years.

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Industry 4.0 – Opportunities and Risks in the It&C Industry –

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Abstract: *In this paper we describe the challenges posed by Industry 4.0 and analyse the opportunities and risks in the IT&C industry in Romania based on the information available in the specialized literature. Industry 4.0 is characterized by intelligent manufacturing and implementation of Cyber Physical Systems in production which refers to both the built-in sensors, the microcomputer networks and the direct connection of the machines to the value chain. Today, IoT is only a small part of the global phenomenon that can be called "The Internet of Everything". The economic growth in our country was one of the highest in the EU since 2010, with an average rate of 3.0 percent during 2010-18. The 2018 GDP per capita is around 65 percent of the EU28 average, up from 25 percent 20 years ago. The IT&C sector is one of the growth engines of the Romanian economy. In the last years, foreign companies have opened development and support centres in Romania. Of the total workforce in Romania, 2.2% work in IT&C, generating 5.9% of GDP. Digitization generates economic growth. The method used is a descriptive and quantitative one, combined with a SWOT analysis. The goal is to underline the huge possibilities that our IT&C sector has, and how it can impact our national economy given "Industry 4.0". With a well developed IT&C sector, the cost of digitalisation can be much lower for our country compared to those that do not have such capable specialists in this field. Due to the changes brought by "Industry 4.0", the Romanian entities need to look also at examples from other countries in the EU.*

Keywords: Opportunities and risk, SWOT, IT industry, Industry 4.0
JEL Classification: M12, M14, M54

Introduction

"Digitalization means an entire ecosystem. Digitalization is the new paradigm of our time, deeply affecting the former value chains in industries at a breath-taking speed" (Grigore, A-M., Coman, A., 2018). The digitalization new business models, with a lead to a moral wear at the enterprise level and many changes in all economic processes. Digital technologies transform the main value chains.

The demands of the customers have increased in the last few years. The markets have evolved accordingly and require companies with high precision products and services. Information systems and modern technologies have made it possible to offer such products and services. Thus, real opportunities in the market have only those companies that have the capacity to adapt quickly to innovative technology. The latest industrial revolution, known as Industry 4.0, perceives operations as a holistic system. This is a challenge that must be met and met in order to achieve stability and permanence in the world market (Saucedo Martínez, J. A. et. al., 2017). Industry 4.0 is characterized by intelligent manufacturing and implementation of Cyber Physical Systems (CPS) in production which refers to both the built-in sensors and the microcomputer networks and the direct connection of the machines to the value chain. In addition, it aims at digital enhancement and product redesign (Shamim, 2016).

The new products, which the market demands, are customized according to the requirements and expectations of each important customer. In addition, the market no longer requires only simple products, but solutions. This requires a precise combination of products and services. All these challenges require companies to constantly innovate and improve. Business management plays a vital role in satisfying these new requirements, which must ensure the conditions for dynamic capacity development, effective learning and innovation.

In this paper we describe the challenges imposed by Industry 4.0 and analyze the opportunities and risks in the IT&C industry in Romania based on the information available in the specialized literature.

"Industry 4.0 comes right on the heels of The Internet of Things (IoT) phenomenon" (Herold, 2016). Today, IoT is only a small part of the global phenomenon that can be called "The Internet of Everything". This business environment comprises four components, namely the internet of things, the internet of data, the internet of services, and the internet of people. The phenomenon received this title because it includes things, data, services, machines and people. Industry 4.0 is based on the interconnection of the entire value chain through autonomous systems. These systems are created by intelligent networks of machines and data. Cloud computing is the key that paved the way for this revolution. The high speed at which the changes took place on many levels required a reassessment of the management and leadership style, of the business practices in the workplace and not least of the corporate structures. Managers and leaders pose the problem of changes in strategies, business dynamics and of course, their role. Given that Industry 4.0 involves the replacement of the work performed by people, the choice of strategies and management style are of particular importance.

The IT&C Industry in EU28

The value added (VA) of the IT&C sector in the EU in 2016 was 591 billion euros, with 6 million people employed. More than 31 billion euros were spent on R&D. The IT&C sector in the EU represents only 4.0% of the value added. From the total employment, the IT&C sector represents 2.6%. In the total Business Expenditure on Research and Development (BERD), the IT&C sector represents 15.6%. The number of employees working in the R&D departments of the IT&C sector represents 20.4% of the researchers in the EU (Mas, M. et. al., 2019).

The IT&C sector, according to Mas, covers the IT&C producing sector and the IT&C service sector. This means, that in the presented data we have: the manufacture of electronic components and boards, the manufacture of computers and peripheral equipment, the manufacture of communication equipment, the manufacture of consumer electronics, telecommunications and computer and related activities. The presented data does not cover the IT&C trade industry and the manufacture of magnetic and optical media.

The IT&C sector is growing faster than all the other economic sectors of the EU economy. From 1995 until 2016, the IT&C sector multiplied its value added by 3.6 times in real terms. In the same period, the total increase of the whole economy was by 1.4 times. The number of employees in this sector was also growing in the above-mentioned period, but only by 1.5 times. In the PREDICT estimation, we found that the IT&C sector is growing faster than the rest of the economy in 2017 and 2018 for both variables, value added and employment.

Two other important variables, the labour productivity and the expenditures in R&D, have a more dynamic behaviour than the one of the total economy. In addition, the number of researchers in the IT&C sector is growing much faster that the rest of the economy.

The most dynamic part of the IT&C sector is the service sector. The IT&C manufacturing labour productivity, on the other hand, was growing faster than in the IT&C service sector.

Ireland, Malta, Sweden, Finland, Hungary and Romania are in 2016 the six EU countries with the largest IT&C sector (in relative size, presented as value added / GDP), all above 5.0%.

Regarding the labour productivity Denmark, Ireland and Poland were the EU countries with the highest growth rate.

The IT&C Industry in the world

The highest IT&C sector share of 16% of the total economy has Taiwan, compared with EU countries and eleven other non-EU countries (like Australia, Brazil, Canada, China, India, Japan, Norway, Russia, South Korea, Switzerland and United States). In the second place, we find South Korea, this being valid for all major variables. In the third position we found Japan for value added and employment, the United States and Norway for the variable BERD.

The EU is in the eighth position, after India, China and Switzerland regarding the variable value added and the ninth position after China regarding the variable BERD.

The United States has the highest labour productivity (calculated per hour worked) in the IT&C manufacturing sector and in the

IT&C service sector. The United State are followed regarding labour productivity per hour worked by Norway, Taiwan and the EU. In China and India, we found the lowest labour productivity per hour worked compared to labour productivity in the total economy.

The most dynamic behaviour in the period 2006 – 2016, in almost all variables, have China and India. In terms of employment, India is followed by Australia, China and Brazil. The dynamics of growth is much lower in the United States and the EU than in the Asian countries. The EU did not entirely achieve the objectives established in the Digital Agenda and that puts it behind the United States regarding some important variables.

The main strength of Taiwan and South Korea is built on the manufacturing of electronic components.

One important information of the EUROSTAT report is that the centre of gravity of the IT&C sector is fast moving towards East, in the direction of Asia. China, for example, is moving fast in the direction of higher value added activities and this includes the IT&C producing sector. China is an important threat due to the size of its economy, not only for the EU, but also for the United States, which up to now is the leading country in the world (Mas, M. et. al., 2019).

The IT&C Industry in Romania

The economic growth in our country was one of the highest in the EU since 2010, with an average rate of 3.0 percent during 2010-18. The 2018 GDP per capita is around 65 percent of the EU28 average, up from 25 percent 20 years ago.

The GDP grew at 4.1 percent in 2018, mainly because of the fiscal stimulus implemented in the past years. The estimated GDP growth for 2019 is at 4.2 percent. This is supported by private consumption and private investment. Fiscal policy will likely continue to be pro-cyclical, because of the adopted pension laws and the wage increases. According to the World Bank overview, the challenge is to maintain the fiscal deficit to below 3 percent of GDP in 2019 and beyond (World Bank, 2019). The situation of the budget execution for the first 9 months in 2018 shows a deficit of 16.8 billion lei (1.77% of the GDP). The deficit exceeds in this period more than twice the deficit in the same period of 2017, with 6.8 billion lei (0.79% of the GDP). The deficit 2017 was 2.88%, close to the maximal level of 3% of the GDP stipulated by the Maastricht treaty. The investment plans for 2018 are fulfilled. The reduction of the planned expenditure, including from investments, have a negative impact upon the real and potential economic growth. A sustainable economic growth in the long term cannot happened without real investments and structural reforms (Barbu, 2019).

The electro-IT&C market in our country grows fast, showing a good dynamic in the last years. This is explained, in large part, due to e-commerce. For 2019, the estimation done by "Keys Fin" - experts present an advance of 7.5% (over 36 billion lei) in their report about Romania. The turnover of local electro-IT&C product traders increased by 8% in 2018 compared to the previous year and by 37.6% compared to 2014 (Ciocotisan, 2019).

Romania is a top electronics producer in Central and Eastern Europe. In the past 20 years, Romania has also grown into a major centre for mobile technology, information

security, and related hardware research. The country is a regional leader in fields such as IT and motor vehicle production. According to the Labour Ledger as at 1 January 2018, the active civilian population amounted to 8 717 900 persons, representing 44.7% of the resident population. Out of the total active population, 54.7% were men and 45.3% were women (EURES, 2019).

The IT&C sector is one of the growth engines of the Romanian economy. Important companies from abroad have opened in the last year's development and support centres in Romania. These companies came to Romania, because the workforce is better prepared than in other countries. According to Bogdan Belciu (management consulting partner at PWC Romania) the IT&C sector in Romania has a larger contribution to the GDP than the European average. Of the total workforce in Romania, 2.2% work in IT&C, generating 5.9% of GDP. The labour force share is lower than the share in the GDP and this shows that this sector creates a high value added. Digitization contributes to the speed of economic growth (Ziarul financiar, 2018).

Methodology

The present paper includes an analysis of the documentation found in various publications and scientific articles in order to define the opportunities and risks of the Romanian IT&C industry in the context of "Industry 4.0".

Therefore, we used a comprehensive search into numerous sources of secondary data, such as statistics, articles, reports and books regarding the IT&C industry in the context of "Industry 4.0" and management.

The electronic databases, which we took into consideration, were Academia.edu, Springer, Invest Romania, Eurostat, BRILL and Wiley Online Library. Other sources were the archives of different journals and conferences, such us the journal "Manager", the conference "BASIQ", "ICBE" and "ETIMM".

The method used is a descriptive and quantitative one, combined with a SWOT analysis. A SWOT analysis is a comprehensive look at strengths and weaknesses, or internal factors, as well as external factors in the market. A SWOT analysis starts by studying its strengths and weaknesses. Subsequently, an external environment SWOT analysis enables to determine how strengths can be exploit and weaknesses minimize. The external environment SWOT analysis is a detailed look at the industry. One facet of an external SWOT analysis is studying various opportunities in the marketplace. Opportunities can include an unfulfilled need of consumers or new technological arrivals, according to the article "SWOT Analysis" at quickmba.com. For example, the Internet became a new way to market products in the mid-1990s. An external environment SWOT analysis also enables us to examine various threats in the industry (Suttle, 2019).

Results and discussions

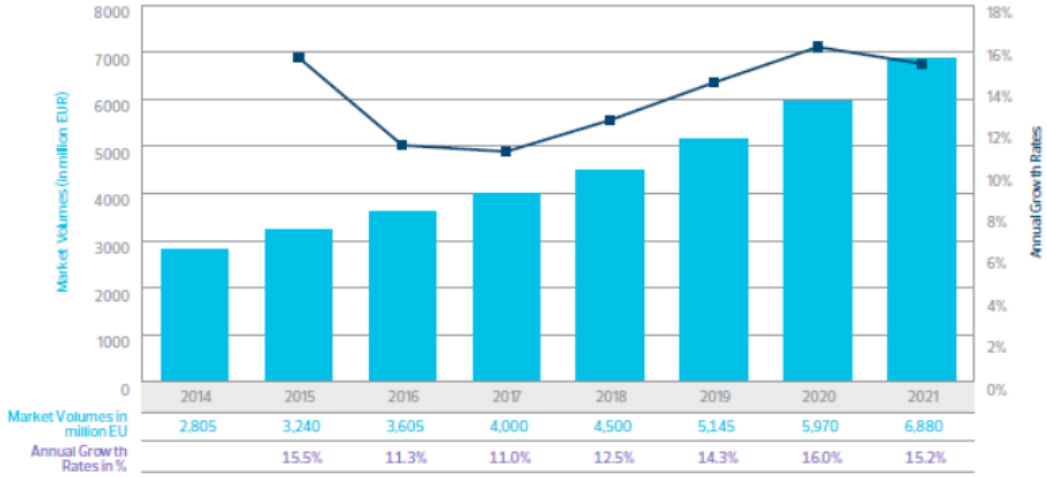
The opportunities and risks analysis of the Romanian IT&C Industry

The fact that the IT&C industry is developing much faster than any other sector of the economy is mainly related to the changes brought by Industry 4.0. The investments in information technologies is a major factor for the performance of a firm, no matter of the sector of economy in which it is working

(Gabor, M. R. et. al., 2019). The knowledge society is experiencing a full swing of development. According to the EUROSTAT indicators, the impact of IT&C is already very important, but this is only the beginning.

The new industrial revolution brings also an important risk regarding poverty. This risk is related to the fact, that in the next period, robots will cover a big number of jobs that today are done by humans. At the UN Summit for Sustainable Development, which took place in 2015 in New York, the participants adopted the 2030 Agenda for Sustainable Development. This agenda is a commitment to poverty eradication and sustainable development by 2030, worldwide (Târțiu, V. E. et. al., 2019).

Figure 1: Total Romanian SITC industry (Audoin, 2018)



The export of products and services generated by the Romanian IT industry will reach 77% of the total IT market in 2017, a significant increase compared to the share of 69% in 2015 (Audoin, 2018). Compared with the export, as a percentage, the consumption of products and services in the local market is decreasing from 31% in 2015 to 23% in 2017. A market consolidation is expected. The estimation says that the market will increase from € 4.1 billion in 2017 to approximately € 5.5 billion in 2020 (Raveica, 2019). The decisive growth factor is represented by all exports, which will rise to a share of 79% of the IT market in 2020. The stagnation of technology consumption has an impact on the competitiveness and productivity of the public sector, but especially on the private sector. Therefore, we have specialists, but the local market is in a relative stagnation of technology consumption (Audoin, 2018).

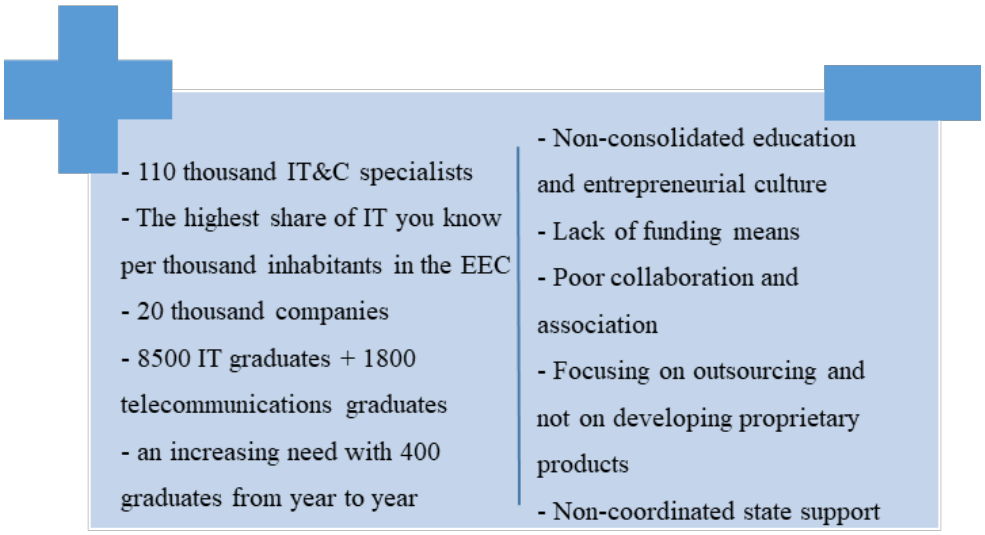
The number of employees increased in the last fifteen years from 14,000 to 100,000. The productivity reached 50,000 euros / employee in 2018, but it is still under the EU average. The IT sector is 2.2 times more productive than the total Romanian economy. Moreover, Romanian IT provides 24% of the country's annual output with only 2% of the total employees. The number of specialists

graduating annually is about 7,000 people / year. In 2018, Romania had already a deficit of 18,000 IT specialists. Although there is a high demand, the number of graduates could not be increased. In the last 15 years, the schooling figures have unfortunately remained behind the growth of the industry (Pavel, 2019).

In the export of IT solutions, we face sometimes a paradox. This export is an export of Romanian intelligence, but it is for the benefit of multinational companies.

The Romanian IT-specialist is happy to get a good "salary" from a multinational company. Specialists are not ready to take risk and build their own companies. Nevertheless, this is not everything. Romanian specialist creates some of the products that we buy from multinational companies. The multinationals are growing, because our specialists are not interested in their own intellectual property. This means that, the local consumption of technology uses the suppliers, foreign companies, which appeal to Romanian specialists, so we export products and services that we sometimes contract just from those who have accessed the Romanian specialists. In this case, the registration of export figures, respectively the local market, may be affected by the export to foreign companies, that own the property, and than sell back to the Romanian market. Mostly, Romanian developers work in the "lohn" system. This is also caused by the insufficient local consumption (Raveica, 2019).

Figure 2: Opportunities and risks in the Romanian IT&C sector (Raveica, 2019)



Companies like Orange increased their segment of IT&C services for B2B (Business-to-Business) customers by 27% in 2019. The predefined machine learning algorithms give unlimited business application possibilities. Orange launched a public cloud service, called Flexible Engine. This is an option for B2B customers to quickly optimize, transform and develop business applications. The main request from Orange customers referred to solutions of hosting (hosting), state-of-the-art Wi-Fi technology and network security (Popa, 2019). This example is another confirmation of the huge potential of our market and on the other hand of the new challenges regarding the cyber security.

The safety of performed operations is today an important issue due to the migration to the digital environment. This issue is important for everybody, final consumer, business and the state. The cyber-attacks are not any more a subject for storytellers. We expect that in the future, private business and the state will allocate a lot of time in developing solution and implementing them to defend from cyber-attacks. The Law 362/2018, based on the NIS Directive, is the foundation for the security of network and information systems. Everybody needs to take all the measures necessary to reduce the risks of cyber-attacks. This means that business, state and consumers need to invest in cyber security systems and services (RePatriot, 2019).

This new issue is not only important for the IT&C sector, but for all the sectors of the economy using, or planning to use the new technologies. That is a way we have to think also about risk management when we analyse the threats. "The development of risk response strategies is a distinct stage in the risk management process in projects and has different names from one methodology / standard to another" (Ciocoiu, N., Irimescu, E. C., Stefan, V. E., 2019). The main task is to select the best solution for the future and to estimate the impact of the new strategy in all affected activity sectors.

In Industry 4.0 oriented Production Management strategies and approaches, the Production Activity Control Mechanisms (PACM) plays an important role because it facilitates management's meeting of goals, solving problems, meeting cost requirements, ensuring product quality and the accomplishment of production orders. (Costa, D. et. al., 2019).

Conclusion

McElroy used in her work the questions of the possibility that Romania could be "The Silicon Valley of Europe" (McElroy, 2019). In the last fifteen years, the Romania IT&C sector developed immensely. McElroy is not the only one looking at Romania as the possible technology hub of Europe. After analysing our opportunities in this sector, we have to improve very soon our strengths and to minimise the threats.

The goal of this paper is to underline the huge possibilities that our IT&C sector has, and based on this, the opportunities of our national economy has in the context of "Industry 4.0". With a good developed IT&C sector, the cost of digitalisation can be much lower for our country than for those that do not have such capable specialists in this field.

First, we need to improve the level of digitalisation in the public sector, then, to support the Romanian specialists to build up start-ups and to sell the creation of theirs minds as their own intellectual property in

Romania and abroad. In parallel, the gap between the numbers of IT&C specialist which are coming out every year must be increased. The number of 18.000 IT specialist that are needed today in the labour market is calculated based on the real demand of IT companies. "Industry 4.0" needs a much bigger number of specialists in this field. Due to the changes brought by "Industry 4.0", the Romanian entities need to look also at examples from other countries in the EU.

In the next stage, it is mandatory to study and define the necessary and accepted measures of private companies, institutions and authorities for ensuring and maintaining the extraordinary position of our country, the leader in the European Union in terms of the number of IT& C employees per capita.

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About the Need to Redefine the Concept of Illegal Trading; A Case Analysis and A *De Lege Ferenda* Proposal

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Abstract: *The paper aims to analyse the links between various networks and the way they can interact, particularly where networks belong to different stakeholders, involving also State authority. The case analysis argues on the idea that each restructuring process especially where it targets state-controlled institution needs to incorporate measures to install good corporate governance and management efforts toward open communication and transparency, along with effective quantitative risk analysis and compliance management when assessing an offence which may be deemed "criminal" in its European autonomous meaning. The methodology used comprised a comparative study and historical and logical research tools but also qualitative research such as interviews with the subject company and benchmarking the result to similar cases. The results of the paper point out the relevance of the rules and principles underlying the restructuring process of a public authority, effects and interaction between institutions and the need for clearer and more transparent legal framework, particularly where sanctions can be combined in a manner with negative impact on offender's ability to continue to operate.*

Keywords: State agency, currency control regulation, confiscation, proportionality
JEL Classification: K34, K38, K42

Introduction

This article emerged from the need to redefine the expression „illegal trading" within the meaning of Law 12/1990 on the protection of population against unlawful commercial activities ("Law 19/1990"), in particular that form of illegal trading which relates to the carrying out commercial activities without complying with the requirements prescribed by [applicable] law. It refers to the outcome of a case which was closed by the fiscal authority by imposing a significant fine along with the additional measure of confiscating the amount generated by the company through the so-called illegal trading. Our analysis touches mostly the aspects of legality and effects of the confiscation since this measure envisaged in our case, the full value of certain transaction carried out apparently by breaching of the Currency control Regulation no. 4/2005 ("Regulation no. 4/2005") issued by National Bank of Romania ("NBR"). Occasionally, the fiscal authority followed the same procedure and where applicable, it fined the companies and confiscated the amount representing the value of the transactions on the basis of article 1 para. a) which speaks about carrying out commercial activities without complying with the requirements provided by law and article 3 allowing confiscation of the amounts serving to or generated through an offence.

This article elaborates on the effects of restructuring a public authority in connection with the interdependent network's theory following a previous article in which we examined theoretical aspects of the restructuring in case of a public authority, such as fiscal administration. An interdependent network is a system of coupled networks where nodes of one or more networks depend on nodes in other networks. Such dependencies are even more strengthen by the developments in modern technology and the tendency of certain authorities to exceed their competences. Dependencies may lead to cascading failures between the networks and a relatively small failure can lead to a catastrophic breakdown of the system, such as insolvency and even bankruptcy.

In the strategic reorientation of an organization, restructuring is the result of a change in optics and it evolved with the global economic environment to the role that characterizes "an organization's ability to innovate, develop a competitive edge over other competing organizations, and change practices, processes and products" (Hirsch P. M. and De Soucey M., 2006). As noted by Seibel H.D., Mayumi O., "the restructuring of an institution requires changes in the corporate culture and mindset of both management and staff". In the case of a state-owned institution restructuring needs to incorporate measures to install "good corporate governance, open communication, ambitious targets and performance incentives, together with effective risk and compliance management" (Seibel H. D. and Mayumi O., 2009).

In Romania, "[an] ineffective public administration and widespread corruption undermine service delivery and hamper Romania's ability to implement structural reforms and draw on EU funds" (European Commission, 2016). Despite the fact that Romania has undergone significant economic growth, the business environment is facing bureaucratic procedures and legal insecurity, and certain legislative initiatives endanger the stability of the financial sector. There is a clear correlation between the deficient management of human resources within

the public administration and the problems faced in the business environment, particularly where legal norms fail to meet the clarity and predictability criteria.

The authors have used comparative methods and practical analysis to investigate the application of legal certainty and other fundamental principles in general practice of the ECHR and ECJ are used to punctually address the necessity of amending an obsolete and unclear legal norm with concrete effects on local business environment, that is illegal trading or carrying out commercial activities without complying with the requirements provided by law.

Brief description of the case

In our analysis, the company was subject to an investigation conducted by the antifraud arm of the fiscal authority. Similarly, to other cases, the control body carrying out an investigation, identified certain incoming payments denominated in euros, received by the economic agent from various clients in exchange for the goods delivered and subsequently, deposited in the company's bank account by one of the company's employees. In other words, the company issues an invoice denominated in lei, representing the value of the goods or services supplied or provided to the client(s) but receives the respective amount in euros or other currency from individual purchasers. The invoices issued in Romanian lei are then cleared by accounting registrations whereby the amount received in foreign currency is converted into lei at the exchange rate announced by the National Bank of Romania. The fiscal body finds that the operations thus carried out represent a violation of the provisions of Regulation no. 4/2005 regarding the currency regime, particularly the obligations which requires a Romanian resident to pay to other resident supplying goods or services, in local currency. Such violation was deemed by the control body to constitute verbum regens of the contravention provided by art. 1, para. 1, a) of Law 12/1990 and ended up besides the maximum fine provided by Law 12/1990 with the additional measure of the confiscation of all amounts denominated in euros.

In the request to reject the complaint made against the contravention minutes, the investigative body argues, among other things, that collecting amounts denominated in euro is a "competitive advantage" because the economic agent avoids the payment of exchange rate differences. In addition, according to the control body, the main sanction with the fine (in our case the fine was 20,000 lei which represents the maximum fine prescribed by Law 12/1990) is insufficient compared to the gravity of the violation, hence the necessity of confiscation, seen as being able to ensure compliance with the legal provision. An additional supporting argument of the ascertaining control body was that the prohibition imposed by Regulation no. 4/2005 "passes" the home legal norm, transforming it into a norm of general applicability. As regards the additional measure of confiscation, in response to claimant arguments that the purpose of this sanction [the confiscation] is not cure, but rather punitive, repressive and exemplary sanction, which characterizes an action having a "criminal" nature as opposed to a simple contravention, the control body expressly recognizes that these conditions are met: "a considerable amount of the amount collected in foreign currency" (the amount subject to confiscation); "punitive,

coercive purpose" of the sanction applied; the confiscation has "the role of discouraging the recurrence of the wrongful act".

In front of the first court, the claimant briefly sustained the following:

(a) lack of competence of the control body in which relates to its right to assess a breach of the Regulation no. 4/2005 regarding the currency regime and consequently, the right to sanction such breach outside the framework provided by Regulation no. 4/2005;

(b) lack of authority of the control body when imposing the additional measure of confiscation of the value obtained while carrying out the transactions in breach of Regulation no. 4/2005;

(c)wrong assessment of the alleged contravention when declaring it as being sanctioned by Law 12/1990 instead of applying the sanctions allowed by Regulation no. 4/2005;

(d)failure of the facts recorded by the control minutes to meet the requirements prescribed for a contravention, particularly those related to the illegal behaviour, the guilt of the offender and the seriousness of the breach;

(e) additional measure of confiscation of an amount equal to the value of the transactions carried out allegedly in breach of Regulation no. 4/2005 does not fulfil the criteria prescribed by the ECJ in connection with the principle of proportionality.

Additional aspects stressed by the claimant envisaged a comparison to other players in the industry who regularly report significantly lower profits on much larger turnovers. For clarity, in our case study, the additional measure of confiscation represented a ridiculous 5,4% of total turnover for year 2017 and approx. 4% of 2018 turnover. Even if lower than the regular yearly profits, if implemented by force, the confiscation of a large amount would pose a high risk for the company being able to continue operating as a going concern. Furthermore, if enforced, the confiscation may cause other creditors of the company reconsidering their ability to maintain enough commercial or financial credit to let the business continue to operate. In preparation of the court judgement, the company employed the services of a judicial expert accountant to perform an out of court expertise which concluded on the legality of accountancy registrations and operations carried out in connection with the alleged illegal transactions.

First court decision

The first court decision was rendered upon a single court hearing whereby the court rejected all evidences submitted by the claimant and rejected the complaint in all respects. The court decision summarily stated that that „according to art. 15 paragraph 1 of the Emergency Ordinance no. 2/2001, the contravention is confirmed by the minutes concluded by the persons specified in the normative act that establishes and sanctions the contravention". It also notes that "the offender was sanctioned under art. 1 paragraph a), art. 2 paragraph 1 and art. 3 of Law 12/1990 on the protection of the population against illegal activities of production, trade or services". Further, it states that "the provisions of art. 2 para. 2 expressly provide that the officials of the specialized apparatus of the mayor, the bodies of the General Directorate for Tax Anti-Fraud, the bodies of the financial control and the personnel of the Romanian

Police, the Romanian Gendarmerie and the Romanian Border Police find the contraventions and apply the sanctions in this matter" and that, therefore," it has no relevance that this attribution is not found in the provisions of GEO no. 74/2013 and GD 520/2013 invoked by the claimant and as the agents of the respondent were competent to ascertain the contravention committed by the petitioner and to sanction it ". Consequently, the first court "rejects the arguments that the power to sanction the offence would fall within the competence of the staff of the National Bank of Romania ...., and will hold that the minutes of finding the contravention was legal legally drawn from this perspective."

Trading without complying with the requirements prescribed by law; the applicability of Regulation no. 4/2005 on currency control

Illegal trading within the meaning of article 1 para. a) of Law 12/1990 relates to one person, be it an individual or legal entity, carrying out commercial activities without complying with the requirements prescribed by law. As a general remark, we believe such definition gives a large power of assessment in favour of the controlling authorities and lacks the character of being foreseeable by the economic agents. Following the logic exposed by the first court decision, breaches of Regulation no. 4/2005 on currency control may be sanctioned to the same extent (meaning by fine and additional measures such as confiscation) by the authorities who by their nature and purpose of activity may not be prepared to appropriately asses and/or handle breaches of currency control regime, such as officials of the specialized apparatus of the mayor. As noted by Montesquieu, "particular intelligent beings are of a finite nature, and consequently liable to error" (Charles de Seconant, Baron de Montesquieu, 1748) hence the authorities' tendency to exceed their powers or exercise them sometimes in a wrong manner, with negative effects on the privately held companies.

The above quoted paragraph of Law 12/1990 generated a significant amount of interpretations, being questioned several times from a constitutional point of view in cases where authorities used their powers to impose sanctions like the one debated in our case. The views expressed by the Constitutional Court on points raised by various claimants when criticizing article 1 para. a) of Law 12/1990 remained unaltered through time:

6. …the author argues, in essence, that the criticized legal provision does not have a sufficiently precise and clear wording, rendering it unpredictable for the recipient of the rule, since the phrase "without meeting the conditions established by the law" does not allow the recipient to get compliant his behaviour or becoming capable to foresee and measure, to a reasonable extent, the consequences which may derive from a certain noncompliance;…. In these circumstances, the claimant believes that he does not enjoy the constitutional guarantee established by the principle of legality, by not being exposed to an arbitrary judgment of the investigative bodies or of the courts, in particular, the judge being forced to establish, by means of case law, outside the purpose of the applicable laws and regulations, which are the requirements regarding the conduct of economic activities, by which the provisions of art. 1 paragraph (4) of the Constitution.

16. By decisions no. 1.117 of October 16, 2008 and no. 942 of November 13, 2012, …, the Court, analysing criticisms similar to those in the present case, found that a problem of interpretation and application of the criticized law text is being discussed, respectively that regarding the meaning of the notion of "law" used in the contents…. It was found that these criticisms cannot be received, as article 1 para. a) of Law no. 12/1990 is sufficiently clear and predictable,…, leaving no doubt as to the conduct on which must have the people who carry out a commercial activity.

17. …the Court held that the provisions of article 1 para. a) of Law no. 12/1990 take into account the normative acts regarding the execution of acts and deeds of commerce, foreseeing the consequences of the violation of the legislation in this matter, whose compliance is a pre-existing obligation… and, for this reason, did not hold the violation of the requirements of predictability of the criticized legal norm.

Among others, Court's stance on article 1 para. a) was that it is precise, clear and predictable, the compilation of an exhaustive list of the normative acts regarding the features characterizing the legal trade (as opposed to illegal trade) not being necessary for the interpretation and the application of the norm [article 1 para. a) of Law 12/1090] challenged by the exception of unconstitutionality.

Legal certainty principle

Legal certainty aims at adaptation of the individual behaviour to the legal validity standards, protection from the State interference and individual confidence in the legal status reliability (Fenwick, 2017). This principle was characterized in various decisions of the European Court of Human Rights.

In Steel and Others v. The United Kingdom case, the ECHR stressed that the Convention requires the law, be it written or unwritten, sufficiently precise to allow the citizen, if needed, with appropriate advice to predict some extent in certain circumstances and the consequences which an action may cause.

In Hashman and Harrup v. The United Kingdom case, the ECHR pointed out that one of the requirements flowing from the expression "prescribed by law" is foreseeability. A certain norm cannot be regarded as "law" unless it is formulated with sufficient precision that gives the person an opportunity to be guided in their actions by that specific rule of thumb. The degree of clarity should ensure formulation of national laws and cannot cover all eventualities. It largely depends on the content of the document, the scope covered by this law, as well as the number and status of those to whom it is addressed.

In Olsson v. Sweden case, the ECHR defined that the law, which granted certain powers to public authorities, must be written with sufficient clarity and accounted for a legitimate purpose to give the individual adequate protection against arbitrary interference.

In Rekvényi v. Hungary case, the ECHR considers in detail, the predictability criterion of behaviour in the future. Norm cannot be considered as "law" unless it is formulated with sufficient precision, which entitles the persons to follow the rule in their actions. A reasonable person should be able, if needed, with appropriate advice to anticipate to a reasonable degree, the consequences which

may result from his action or omission to act. Predictability of consequences with absolute certainty is not required because it cannot be achieved.

Criticism of and discussion on the current approach; breach of EU principles and EU treaties

Assuming the Romanian Constitutional Court was right in its logic when declaring the wording "without complying with the requirements provided by law" as meeting the criteria for legal certainty, then such approach places within the powers of the control body to ability to asses, on a case by case basis, which are the offences falling within the purpose of Law 12/1990, particularly art. 1 para. a) or under other pieces of legislation and decide at its discretion, upon the additional measure of confiscation. In case of an abuse or wrong assessment, the courts should be able to censorship them and remedy the negative effects. However, a question remains where neither the control body nor the court are able to properly asses and enforce the law by framing a certain case within the relevant norm. However, we believe that the defects hidden in article 1 para. a) of Law 12/1990 refer not only to the meaning of "law" but to the meaning of the full expression used, that is "without complying with the requirements provided by law".

We note that the Romanian legal system has a vast number of requirements, each of those raising the same questions: which are the criteria applied by the control body or the court to assess the circumstances regarded as breaches of Law 12/1990 and which ones will be outside its purposes and sanctioned differently? Even accepting ad absurdum that a certain behaviour may contain elements of a contravention, who decides upon the degree of guilt and importance of offence to ground the sanction on article 1 para. a) which enables the confiscation. In line with Constitution, confiscation must in all cases be provided by law. While most of other normative acts do not provide for confiscation as an additional measure, article 3 of Law 12/1990 provides that "The goods that served or were intended to serve when committing any of the offences provided in article 1, if they belong to the offender, as well as the money and goods acquired by committing the contravention are confiscated" leaving no room for interpretation. Apparently, the analysis made by the Constitutional Court left apart the issue of additional measure of confiscation: when it comes to practice, once the control body sets the legal ground within Law 12/1990 framework, then confiscation comes naturally. A certain behaviour which may be sanctioned pursuant to different legal norms, once qualified as an offence pursuant to Law 12/1990, will in most cases lead to confiscation. However, such approach does not match with the EU rules and principles, as argued below.

In our case, from a EU perspective, the minutes and the first court decision represent a serious violation of both the European Convention on Human Rights and the Law of the European Union, respectively of the Treaty on the Functioning of the European Union ("TFEU") and Charter of Fundamental Rights of the European Union, as international treaties, to which Romania is a party and which are directly applicable in the Romanian domestic legal order and have super-legislative legal force. Each of the Convention, the TFEU and the Charter, while retaining their character as sources of

international law, also become the source of Romanian domestic law (Mendelson M.H. et. al., 2019). As a result of their super-legislative force, any internal legal norms to the contrary must be removed from application, the conventional supra-legislative norms being applied directly, unless the domestic law is more favourable to human rights.

The direct application of the Convention falls within the jurisdiction of the courts, in particular the court vested with the settlement of a particular dispute, by virtue of the full jurisdiction of the courts, in what relates to interpreting and applying the legal norms, a process that includes the choice of the applicable law in case of a conflict of laws, by giving effect to the legal norm having a superior legal force. The national judge is the first judge, the ordinary law judge for both the European Convention on Human Rights and TFEU and other EU regulations.

For the purpose of the Convention, among the holders of the rights enshrined in the Convention are not only natural persons, but also collective law subjects, including for-profit legal entities (commercial) companies such as the claimant in our case. The jurisprudence of the European Court of Human Rights is constant and rich in recognizing the quality of legal persons, including for profit, holders of conventional rights. The conventional rights invoked by the claimant are, undisputable, rights which belong equally to and protect also entities made for profit and the ECHR always intended to include corporate entities and other non-natural persons (Emberland, 2006).

Having in mind the prevalence of the Convention and TFEU provisions over the domestic norms, we believe that the case raises serious concerns as regards the ignorance of fundamental principles laid down in the Convention on Human Rights, TFEU and European Charter of Fundamental Rights. Hereinbelow, we summarised some of the inconsistencies which need to be addressed when considering amending or annulling article 1 para. a) and article 3 of Law no. 12/1990.

Violation of the principle of the legality of criminal offences and penalties

The conventional and Charter norms guarantee the principle of legality of criminal offences and penalties. The notion of "law" is, in its turn, an autonomous European notion, imposing also qualitative conditions, among which the predictability (clarity) of the law and guarantees against arbitrariness. Moreover, according to the constant jurisprudence of the European Court of Human Rights and European Court of Justice, the legality is strict, so the qualitative requirement of clarity of the law is higher in "criminal" (autonomous) matters than in extra-criminal matters.

The legal rule on the basis of which the contravention was applied to the claimant through the challenged minutes and which the first court applied without a self-assessment is neither clear nor predictable. Thus, one and the same fact, of not collecting the price of a good sold in the national currency, could be qualified, as one requiring the applicability of Regulation no. 4/2005 regarding the currency regime and of Law no. 312/2004 regarding the Statute of the National Bank, as well as one requiring the applicability of Law no. 12/1990.

However, the two normative acts are completely different in terms of the punishing regime and the control body competent

to apply the sanctions; the size of the contravention is different; the additional measure of confiscation exists only in one of the two normative acts; the competent body with the application of the sanction is different (in one case, the staff within the National Bank of Romania, while the other fiscal authority's employees) - article 1 para. a), article 2 paragraph (1) and (2) and article 3 of Law no. 12/1990, on the one hand, respectively article 3 paragraph (1) and article 7 paragraph (3) of the National Bank of Romania Regulation no. 4/2005, correlated with article 57 paragraph (1) of Law no. 312/2004.

Obviously, the recipient of the rule could not clearly state whether, in connection with the alleged breach, the control body could apply the sanction of confiscation pursuant to Law no. 12/1990 or not (according to NBR Regulation no. 4/2005 and Law no. 312/2004).

At the same time, the legal norm applied by the control body and by the first court does not provide any guarantees against arbitrariness. Thus, the prohibition of making payments in a currency other than the national currency is contained exclusively in the Regulation no. 4/2005, which provides, by reference to Law no. 312/2004, the exclusive sanction of the fine (but not the additional measure of confiscation) and establishes as the competent [controlling] body as being NBR's staff. Fiscal authority officials are competent in our view only in which relates to actions falling under the domain regulated by Law no. 12/1990. However, the fiscal authority officials, acting as control body, expressly found the claimant as acting in violation of the NBR Regulation no. 4/2005 (although they did not have this competence in any form), then, instead of applying the sanction provided by the applicable act (and which could not be confiscation), they applied the sanction of confiscation from different normative act. The arbitrary choice of the normative act, one regarding the competence of the control body and the sanction, another regulating the prohibition, validated by the first court decision, demonstrates that the internal law allows arbitrariness in the application of the sanction (the control body, endorsed by the first court, has apparently an option to choose the rule that suits the circumstances in order to justify their competence, to support the existence of an unlawful act and consequently, legality of the sanction applied).

Given that the right to legality and proportionality of the offences and penalties guaranteed in article 49 of the Charter has a correspondent in the right to legality enshrined in article 7 of the European Convention on Human Rights, and having regard to the principle of protection equivalence and subsidiarity, contained in article 52 para. 3 of the Charter, it follows that the minutes and the first court decision violate art. 7 of the Convention and also article 49 of the Charter. Other issues relate also to the proportionality of the sanctions, being clearly that neither the control body nor the court have exerted any power to properly asses the effects of the sanctions by quality and behaviour of the offender. Finally, as repeatedly envisaged by ECJ, in order to establish whether a provision of community law is in conformity with the principle of proportionality it is necessary to ascertain whether the means which it employs are appropriate and necessary to attain the objective sought. where community legislation makes a distinction between a primary obligation , compliance with which is necessary in order to

attain the objective sought , and a secondary obligation , essentially of an administrative nature , it cannot , without breaching the principle of proportionality , penalize failure to comply with the secondary obligation as severely as failure to comply with the primary obligation.

Violation of the non bis in idem principle

The control minutes contested by the claimant and the first court decision violate the right to non bis in idem, a fundamental legal principle common to practically all national criminal justice orders in Europe, usually as a constitutional human right (Vervaele, 2005). It is also known as the prohibition of double jeopardy. According to this principle, a person cannot be prosecuted more than once for the same (criminal) behaviour. Its ratio is twofold: on the one hand, to offer judicial protection to persons against the State's jus puniendi, once they have been subject to a prosecution (as part of the principles of fair trial and equity, and on the other hand to ensure legal certainty and the respect of the res judiciata (Alexy, 2002). Neither the conventional norm nor the Charter allow a person be prosecuted, tried or convicted twice for the same act. It is not necessary that all forms of state action (prosecution, trial, conviction) exist at once or have the same cause, a single form being sufficient to violate the principle. Moreover, as it relates to criminal matters and, therefore, to strict legality, the law must offer guarantees against arbitrariness.

However, the domestic law, as interpreted by the administrative body and by the first court, allows, for one and the same fact, different sanctions to be applied, by different control bodies (NBR's staff and fiscal authority's employees), cumulatively, in different procedures (the contravention fine provided by the NBR Regulation no. 4/2005 and the Law no. 312/2004, on the one hand; the contravention fine and confiscation, provided for by the Law no. 12/1990, on the other hand).

As the domestic law does not contain guarantees against arbitrariness from the perspective of the non bis in idem principle, in the autonomous European sense, it turns out that one could invoke the violation of article 4 of Protocol no. 7 to the Convention and article 50 of the Charter.

Violation of the right to peaceful enjoyment of possessions

In the autonomous European sense, money constitute a "property", and since the money received by the claimant were deposited in the company's bank account, it is an effective asset belonging to the claimant. Therefore, the claimant was the holder of an ownership right over an asset, so art. 1 of Protocol no. 1 to the Convention is applicable.

Confiscation of the amount representing the cash value of sales performed constitutes a deprivation of property, which constitutes a violation of the right to property, which entails the application of rule no. 2 of article 1 Protocol 1, namely the one contained in the second sentence of paragraph 1. In order to be valid, such interference must be provided by the "law", pursue a legitimate purpose and be proportionate.

The interference is not provided by a clear, predictable law, an aspect which was already demonstrated.

Additionally, even if one could assume the interference is allowed by law, then in the

form of deprivation of property (confiscation) it does not pursue a legitimate purpose. The confiscation was ordered by the tax authorities, whose role is to ensure proper collection of revenues from the public budget. Or, through the control minutes, an aspect not contested or debated by the first court, it was held that the claimant recorded accurately in its accounting books and records, as income, the price of sales received in Euro. Being recorded as an income, the sums so collected influence the calculation of the taxable profit. None of the claimant's actions reviewed by the control body were designed to hide the profits or otherwise influence the taxable base, a matter that must be of concern to the fiscal authorities. On the other hand, the first court decision endorses the defendant's argument that by doing so, the claimant preserved an advantage toward its competitors by avoiding bearing the risk of exchange rate fluctuations and various fees and commissions related to the exchange operation. In other words, by avoiding certain costs and expenses, the claimant increased its taxable profit and paid consequently, a higher profit tax to the public budget. The alleged "illegality" retained by the control minutes and validated by the first court decision consists of the fact that the bank ultimately, did not make a revenue out of the exchange rate differences. Again, from a theoretical point of view, the role of the tax authorities is to ensure collection of revenues to the public budget, and not increasing or generating revenues for private companies (in our case a bank). It follows that the additional measure of confiscation, considered legal by the first court, did not pursue any legitimate purpose from the perspective of the attributions and competence of a fiscal body.

Therefore, not being provided for by a clear law, not having a legitimate purpose and being totally disproportionate, the confiscation, applied through the minutes and maintained by the first court decision, is a violation of the claimant's right to protection of its property, so that both the Convention and the Charter were breached. Moreover, examining a similar case by reference to the proportionality principle, ECJ stated that "The confiscation measure in question was purely deterrent and punitive in its purpose. However, it has not been convincingly shown that the fine alone was not sufficient to achieve the desired deterrent and punitive effect and prevent future breaches of the declaration requirement. In these circumstances, the Court concludes that the confiscation of the entire amount of money that should have been declared, as an additional sanction to the fine, was disproportionate.

Violation of the right to a fair trial

The first court decision violates the right to a fair criminal case, guaranteed pursuant to article 6 of the European Convention on Human Rights and article 47 of the Charter. As shown above, the additional measure of confiscation is deemed "criminal" in the European autonomous sense. The right to a fair trial requires that litigants should have an effective judicial remedy enabling them to assert their civil rights (Běleš and Others v. the Czech Republic, § 49; Naït-Liman v. Switzerland [GC], § 112). Everyone has the right to have any claim relating to his "civil rights and obligations" brought before a court or tribunal. In this way, the right to a fair trial embodies the "right to a court", of which the right of access, that is, the right to

institute proceedings before courts in civil matters, constitutes one aspect (Golder v. the United Kingdom, § 36; Naït-Liman v. Switzerland [GC], § 113).

By its decision, the first court has expressly stated that the control body has an overall competence of sanctioning the facts regarded as offences, and the court can only render null the minutes if the legal framing given by the control body is wrong, as opposed to court's right to reassess factual circumstances and requalify the sanctions by applying a different law than the one invoked by the control body. In other words, the first court argues that it can neither legally requalify facts, nor modify or adapt the sanctions to the degree of guilt and the seriousness of the offence, which clearly indicated that the court does not have or exercise full jurisdiction over the case.

In its constant case law, the European Court of Human Rights has accepted that, for "criminal" (in the European autonomous sense) acts of lesser importance, the sanction should not be applied directly by a court, but by an administrative body, subject to the right of the person concerned to challenge the sanction in front of a court. Such court must have full jurisdiction, both over the facts and in law, including the right to qualify or re-qualify the facts from a legal perspective as well as the right to modulate / adapt the sanctions to the actual gravity and the guilt of perpetrator (which in all cases requires examination of the evidence produced and assessment of certain subjective components).

The first court declined to recognize its full jurisdiction thus infringing the claimant's right to a court having full jurisdiction over the case and, thereby, the right to a fair case.

Materials and Methods

The data analysed in this paper was collected from the sources such as the database of the Ministry of Justice but also from direct interviews with the subject company. The data obtained was then compared to data resulting from other cases to find similarities and to the ECJ and European Court of Human Rights cases. A detailed analysis was performed on the jurisprudence of the Romanian Constitutional Court related to constitutional aspects of Law 12/1990. The data and information obtained was processed and interpreted within the context of the proposed study of the impact of restructuring of a public authority and effects of such action on the private sector. The reorganization of the fiscal authority by granting vast powers to the newly created antifraud department which acts as a "special" arm of the fiscal authority was part of a larger restructuring process. As demonstrated by other examples, such restructuring apparently failed to achieve its declared purposes and continues to negatively impact on the local business environment.

Results and discussions

The requirement of "quality of law" provides that the law must be sufficiently accessible, precise and foreseeable in its application in order to avoid any risk of arbitrariness. According to Barak (Barak, 2012), "generality of the law that implies restrictions is one of the legal certainty's structural components. Law must be general and could be applied for all. Substance but not the wording of the act must be general. "General" law in wording could be selective in substance". Considering the Constitutional Court decisions and the

issues raised by practice, we believe that a mandatory action implies the amendment of article 1 para. a) of Law 12/1990. The meaning of the illegal trading without meeting the requirements provided by law, should be clearly stated by reference to normative acts containing requirements to be complied with or alternatively, it must exclude from its application the additional measure of confiscation which seems to lead to abuse in many cases. A general wording wrongfully applied generates effects which by their nature, damage the alleged offenders' ability to continue operate. An overall penalty consisting of fine and confiscation of the entire sum representing the price of good sold to clients is not and cannot be upheld by the court as being proportionate to the aims sought without a fully-fledged analysis of the case.

Conclusion

The need to debate the manner the expression "without meeting the conditions established by law" rests within the thin line of applying the national law while giving effect to the EU regulation and ECJ case law. The conclusion is that the legal certainty principle requirements in Romania still must be understood and properly interpreted and applied by the courts, especially when asked to review and reassess facts and dosage of certain sanctions. Faced with an incredible flow of normative acts and a number of equally increasing offences, for a potential offender the wording of Law 12/1990, even if amended, does not meet the requirements of the legal certainty principle. Due to the strong links between article 1 para. a) of Law 12/1990 and article 3 which allows confiscation, one can only come to the conclusion that this piece of legislation does not contain a clear restriction to differentiate behaviours or actions falling under other normative acts, neither it is predictable and clearly formulated. Last but not least, it generates confusion in assessing the legitimate public interest and it does not operate a clear division of powers and responsibilities between controlling bodies and the court, especially when looking for a unique and predictable enforcement. Both ECHR and ECJ underline the interpretative role of the judge in guaranteeing the predictability of the normative acts in the systems of continental law. This emphasizes as a final take away, the need for a clear and predictable legal environment, with courts able and willing to exert full jurisdiction over a case.

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Regional Disparities in the Development of Small and Medium Enterprises: An Analysis of Hotels and Restaurants Sector in Romania

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Abstract: *The aim of this paper is to analyse the impact of tourism small and medium enterprises (SMEs) on economic development. Even if, SMEs are deficient in terms of skilled labour force, and finance, they have the power to generate value added, backward and forward linkages, entrepreneurship spirit, adaptation to change, with an extreme importance in long-term development and survival on a dynamic market. SMEs are more flexible being supportive of economic growth in local communities. The expansion of SMEs in Romania has various particularities on regional level, being identified different disparities in terms of local units' distribution and turnover creation. Still, in order for SMEs to be able to survive, various measures need to be taken by governments and support their future expansion, considering the economic, social, cultural and political context.*

Keywords*:* small and medium enterprises, Romania, regional disparities, economic development, turnover

JEL Classification: L83, Z32

1. Introduction

The economic, technological and social importance of small and medium enterprises (SMEs) makes them a key engine for economic development and job creation in different countries. Especially in tourism sector, their contribution is significant as a contributor to growth in local communities. SMEs have an important contribution also to the progress of the contemporary society, being a generator of economic performance and a support to increase of the living standards of citizens (Sánchez et al, 2011).

SMEs are known as foundation enterprises; they contribute to economic growth, supporting GDP creation. Dimoska et al (2015) argue that with their high adaptability and capacity to generate increased turnover, SMEs play an important role in solving regional disparities, and other sector imbalances which exists within an economy, but also provide platforms to increase experience, skills for both employees and entrepreneurs, multiplier economic effect through forward and backward linkages.

Also, SMEs offer also other types of advantages related to flexible communication, fostering change, supple management practices, adaptation to changing environmental conditions, entrepreneurship spirit, more powerful interpersonal relationships, higher cohesion, technological innovation, development of new products (Sánchez et al, 2011; Dimoska et al, 2015). On the other hand, SMEs confront themselves with various problems related to access to finance and various resources or other constrains connected to their organizational size (Camilleri, 2018).

The present article aims to underline the tourism SMEs contribution in terms of number of enterprises and turnover within the Romanian economy at regional level. The next section summarizes the literature review regarding the importance of tourism SMEs for economic development. The third section describes de methodology. The fourth section refers to the tourism SMEs in Romania and it finishes a regional analysis about their contribution in terms of number of active units and turnover creation. The last section concludes the paper and it offers some general suggestions for tourism SMEs development and survival strategies in a dynamic economic and social environment.

2. Literature review

All around the world, from the total number of enterprises operating in the tourism sector, SMEs have a large majority. The tourism sector is dominated, by tradition, by SMEs which provide various types of products and services from accommodation, food and beverage to transportation, recreational activities, and thus contributing to the total tourism experience (Dimoska et al, 2015)

SME in tourism generates important impact on local development of destinations, reducing social and economic disparities, creating jobs for residents and generating added value for the community. Still, SMEs need to work closely in their current strategies in order to improve their performance as a result of a dynamic business environment and powerful competition coming from internal and international operators.

The investigations conducted by Mohamed and Warth (2012) underlined that SMEs in tourism may generate more economically innovations as compared with larger companies, as they are more flexible

and more diversified. Still, in SMEs operating in tourism sector, finding a qualified human resource represents an important challenge, as they are missing the experience, customer service skills. Another shortcoming that SMEs face is the limited budget allocated for marketing and promotional activities

In different countries, SMEs are expected to play an important role in providing growth for the tourism sector, in particular, and for the national economy, in general. Governments around the world are implementing different plans and policies in order to support the development of SMEs, related to ensuring entrepreneurial skills; enhancing access to diverse financing instruments; more and better infrastructure; smart regulation and smart institutions; digitalisation etc. (OECD, 2019).

The development of tourism industry depends on a large scale on the presence and extension of micro, small and medium-sized enterprises. There is a bidirectional relationship between tourism development and expansion of SMEs; thus tourism sector supports the development of local communities, while on the other hand, in order for the tourism sector to growth, the presence of SMEs is needed to provide products and services for the tourists (Jaafar et al, 2014).

Still, SMEs long-term survival on the market is not easy as they operate in a dynamic environment where the competition is fierce and the management and marketing tools become vital for preserving their competitive position. Moreover, managers seem to lack long-term vision and planning activity as they are missing not just the financial resources but also time, expertise, human resources, knowledge etc.

3. Research methodology

The current research concentrates on the particularities of tourism SMEs in Romania (mainly Hotels and Restaurants sector) at regional level in terms of the:

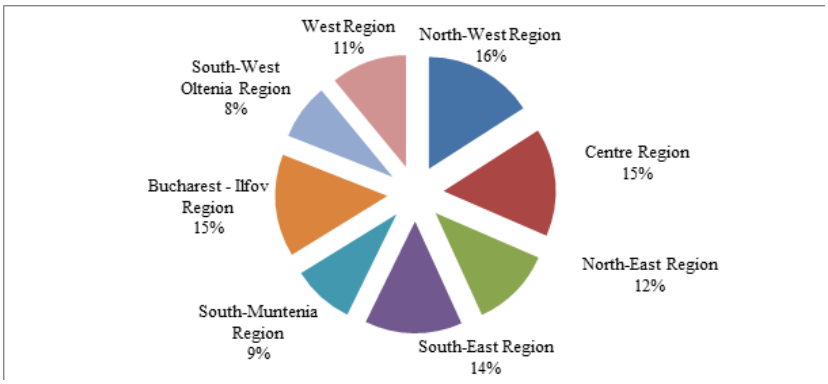
- Distribution of the active companies, by development regions (2017);
- Share of small and medium enterprises, by development regions (2017);
- Evolution rate of the number of active companies, by size classes and development regions (2011-2017);
- Total turnover, by development regions, between 2011-2017 (millions of Euros, current prices);
- Share of turnover in small and medium enterprises, by development regions, 2017.

The data were collected from the National Institute of Statistics in Romania and the statistics processed in order to identify the specific disparities in Hotels and Restaurants sector in terms of development patterns of microenterprises, small, medium and large enterprises.

4. SME in Hotels and Restaurants sector in Romania: a regional analysis

In the Hotels and Restaurants sector in Romania, out of the total of 26,414 active enterprises operating at national level, most of them activate in the North - West region (15.9%), followed by the Center region (15.6%) and the Bucharest - Ilfov region (14 , 8%); the South - West Oltenia region is on the last place (8.1%) (fig. nr. 1).

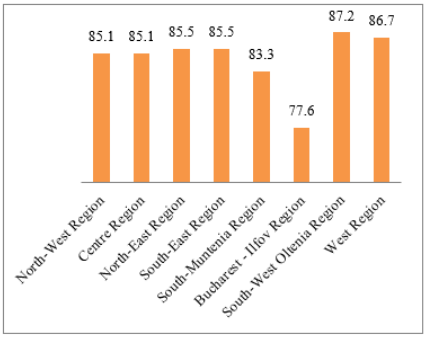
Figure 1: Distribution of the active companies, by development regions, in the Hotels and Restaurants sector, 2017



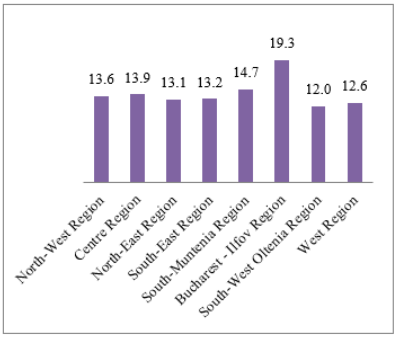
Source: realized based on the data provided by the National Institute of Statistics (INS)

In regarding, the distribution of active companies by size classes, in Hotels and Restaurants sector, micro-enterprises (with up to 9 employees) prevail, in proportion of over 80%; the Bucharest-Ilfov region is the exception, where the share is slightly lower by 77.6% respectively. The highest concentration of micro-enterprises is found in the South-West Oltenia region (87.2%), followed by the West region (86.7%) (fig nr. 2 (a)).

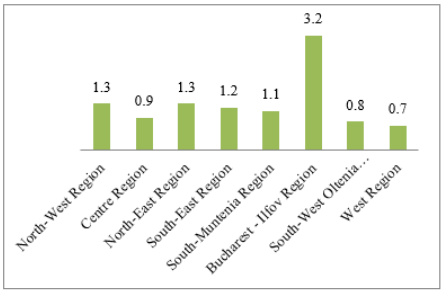
Figure 2: Share of microenterprises (0-9 employees) – (a) ; small - sized enterprises (10-49 employees) – (b) and medium-sized enterprises (50-249 employees) in the Hotels and restaurants sector, by development regions, 2017



(a) Microenterprises



(b) Small-sized enterprises



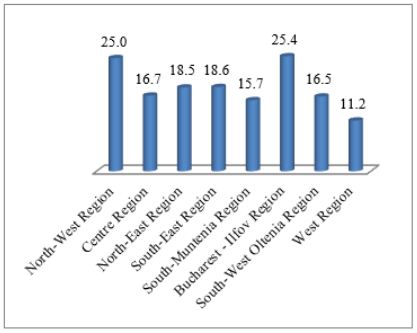
(c) Medium-sized enterprises

Source: realized based on the data provided by the National Institute of Statistics (INS)

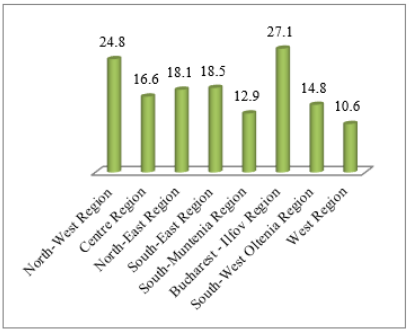
Small businesses with 10 to 50 employees have a share of 12% to 15%; only in the Bucharest - Ilfov region, this share is 19.3% (fig. nr. 2 (b)). The medium-sized enterprises (50 up to 249 employees), hold low weights, of about 1%, while in the Bucharest-Ilfov region their share is around 3.2% (fig. nr. 2 (c)). Large companies with more than 250 employees are limited in number, on average 1 company (in absolute values) at regional level; 3 - 4 active companies in the Centre region and about 18-20 companies in the Bucharest - Ilfov region.

The evolution of the total number of active enterprises in the Hotels and Restaurants sector, between 2011 and 2017, shows that Bucharest - Ilfov region and North - West region were the most dynamic, with increases of the number of companies by 25.4% and 25% respectively (fig. nr. 3 (a)). The micro-enterprises in the Bucharest – Ilfov region and the North - West region registered increases above the average 27.1% and 24.8% respectively (fig. nr. 3 (b)). Small businesses had different evolutions, and the most dynamic is the South - Muntenia region with a 36.1% increase in the number of businesses, the South - West Oltenia with 33.3%, while in the South - East region, the number of small businesses increased by only 15.3% (fig. nr. 3 (c)). The number of medium-sized enterprises increased by 84% in the South - East region, 71% in the North - West region and decreased by 2.5% in the Centre region and by 11% in the South - West Oltenia region (fig. nr. 3 (d)).

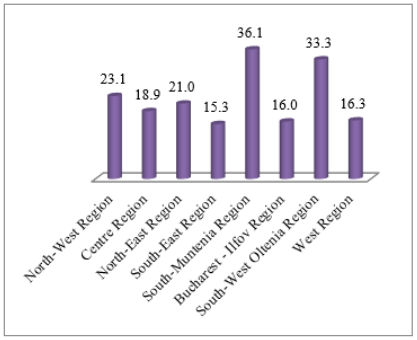
3: The evolution rate of the number of active companies in the Hotels and restaurants sector, by size classes and development regions (2011-2017)



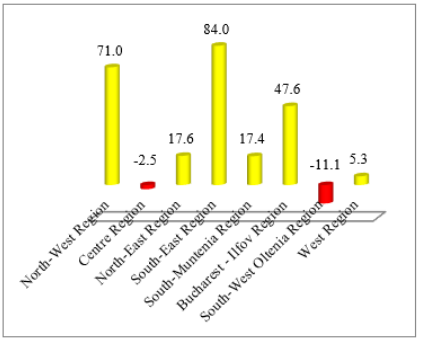
(a) Total



(b) Microenterprises



(c) Small-sized enterprises



(d) Medium-sized enterprises

Source: realized based on the data provided by the National Institute of Statistics (INS)

In the Hotels and Restaurants sector, the turnover increased, in nominal terms, by 76.9%; the highest evolution rates were registered in the North-West region (96.9%); the Bucharest-Ilfov region (90.1%), the West region (89%), where the turnover almost doubled in between 2011 - 2017; in the South-East region, the turnover's increase rate was only 52.4% (table nr. 1).

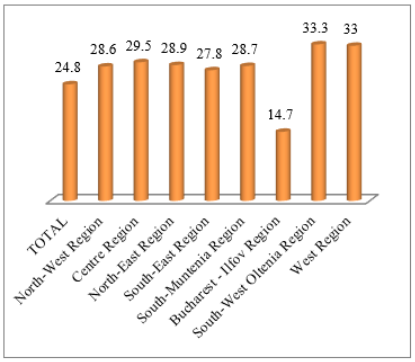
Table 1: The total turnover in the Hotels and Restaurants sector, by development regions, between 2011-2017 (millions of Euros, current prices)

	Evolution rate 2017/2011 (%)
Total	*76,9*
North – West region	*96,9*
Centre region	*78,0*
North – East region	*73,1*
South – East region	*52,4*
South-Muntenia region	*53,1*
Bucharest – Ilfov region	*90,1*
South – West Oltenia region	*53,6*
West region	*89,0*

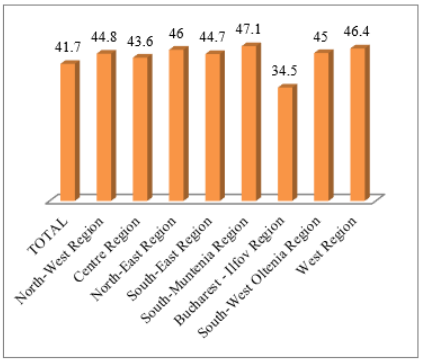
Source: realized based on the data provided by the National Institute of Statistics (INS)

At the regional level, even though micro-enterprises predominate as a percentage in the total number of local units active in the Hotels and Restaurants sector, the smallest contribution is made by the small-sized enterprises (the South - Muntenia region - 47.1%; the West region - 46.4%; the North-East region - 46%), followed by micro-enterprises (the South - West Oltenia region 33.3%; the West region - 33%; the Centre region - 29.5%) and medium - sized enterprises (the South region - East 26.6%, the Bucharest - Ilfov region - 26.3%, the North - West region 24.3%). Large-sized companies hold important weights in the total turnover, only in the Bucharest - Ilfov region (24.5%).

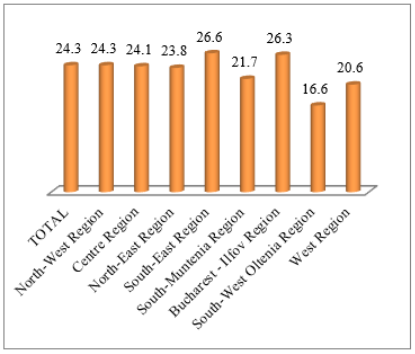
Figure 4: Share of turnover in (a) microenterprises, (b) small-sized and (c) medium-sized, (d) large-sized enterprises, by development regions, in the Hotels and Restaurants sector, 2017

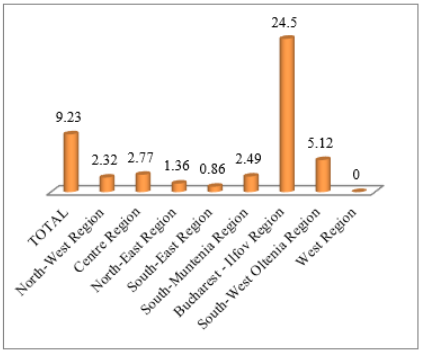


(a) Share of microenterprises' turnover in total turnover



(b) Share of small-sized enterprises' turnover in total turnover





Source: realized based on the data provided by the National Institute of Statistics (INS)

5. Conclusions and recommendations

SMEs are considered generators of development entrepreneurship. In order to support SMEs development and to encourage local entrepreneurship, financial resources are necessary (Gregoric and Pajic, 2016). The development of tourism industry will depend upon management performances and plans implemented in SMEs and thus, the training skills, experience, leadership of manager will have a significant importance in the future (Set, 2013).

The average number of enterprises is relatively uniformly distributed at regional level, their weight varying between 8% for the South - West Oltenia region and 16% for the North - West region. Regarding the distribution of active enterprises by size classes, in the Hotels and Restaurants sector, micro-enterprises with up to 9 employees predominate, in proportion of over 80%, except for the Bucharest-Ilfov region where the share is slightly lower by 77.6%. In between 2011 and 2017, the turnover of the businesses in the Hotels and Restaurants sector almost doubled in the North – West region, the Bucharest – Ilfov region, the West region. Small businesses have the biggest contribution to the turnover (45%), followed by of micro-enterprises (30%) and medium-sized enterprises (25%).

The researches of Sadi and Iftikhar (2011) underlined that customer orientation

and marketing planning are important for the efficiency of SMEs marketing. Their limited budget allocated for advertising campaign need to be compensated through an effective communication with the customers. Especially in the tourism sector companies need to concentrate more on the customers, in order to satisfy them and thus to bring significant benefits in terms of turnover and profits. Thus, the Internet became a viable tool for tourism SMEs interested in developing social connections, social networks. Even if, tourism SMEs are lacking financial and human resources, they still consider that marketing planning is very important to ensure future performance

Mohamed and Warth (2012) proposed several solution in order for SMEs in tourism to overcome various obstacles, related especially to: adopting new technologies; establishing partnerships and creating strategic alliances in order to identify new opportunities and attract financial resources; implementing new training and educational programmes through collaboration with universities and educational institutions; boosting innovation and specialization; supporting e-commerce; implementing IT solutions to increase online presence.

Future researches in the field should tackle closely the profound reasons regarding the regional disparities in terms of the development of tourism SMEs in order to facilitate the identification of structural reforms for growth and cohesion.

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Key leadership qualities for major science events. The case of SCIKIDS Science Festival

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Abstract*: The paper describe leadership qualities identified as important by stakeholders of a major science event.*

Can leadership skills raise a major science event for the community?

What are the qualities needed to develop such an event that aims to become a tradition in a unfriendly society as the romanian society?

Financial skills, credibility and communication are just a few of the leadership issues identified as important in successfully implementing a major scientific event.

SCIKIDS Science Festival, is the largest youth science festival in Romania, celebrating 7 editions. The inaugural event was held on October 2013. In 2019 SCIKIDS Science Festival celebrated seven edition accumulating over 50.000 visitors.

This study is based on findings from seven years of practice in science events area

Keywords:leadership, organization, leader,communicate, science event.

INTRODUCTION

Everybody defines leadership differently but I really like the way John C Maxwell defines leadership, "A leader is one who knows the way, goes the way, and shows the way." Irrespective of how you define a leader, he or she can prove to be a difference maker between success and failure. A good leader has a futuristic vision and knows how to turn his ideas into real-world success stories. In this article, we take an in-depth look at some of the important leadership qualities that separate good leaders from a bad one.

REVIEW OF THE SCIENTIFIC LITARATURE

As Emma Abson pointed out in "How Event Managers Lead: applying competency school theory to event management", we present fifteen leadership dimensions according to LDQ model, identified by Dulewicz and Higgs (2005) in order to understand better the corelations between theory and practice.

Table 1: Descriptive Details of the Research Participants according to Abson, Emma (2017) in " How Event Managers Lead: applying competency school theory to event management. Event Management, 21 (4), 403-419"

Managerial dimension	Intellectual dimension.	Emotional intelligence dimension.
Engaging communication (involves other participants and gains support through personalized communication with each audience)	Strategic perspective (recognizes favorable and unfavorable situations)	Emotional resilience (Keep your interest in the process or need for results in order to defy personal challenges or criticism of others)
Resource management (set explicit objectives. transform longterm goals into action plans)	Critical analysis and judgement (taking responsibility for the impact resulting from the consequences of the decisions taken)	Interpersonal sensitivity (awareness of the needs and perceptions of others about proposing solutions to problems and challenges)
Developing (Support others to take on increasingly demanding responsibilities)	Influence (ability to convince others to change their opinions based on the understanding of their position)	Self-awareness capable of recognize and controlling one's feelings
Achieving (determination in achieving the objectives and implementing the decisions)	Vision and imagination (clear vision of the future)	Intuitiveness (implementing decisions beyond incomplete information through reason and emotions)
Empowering (encouraging others to spread their autonomy, assuming responsibilities and decisions in the face of challenges)		Motivation (accumulation of clear results and impact through driving energy)
		Conscientiousness (The ability to mentain a clear commitment to a course of action in the face of different challenges and encouraging others to support the chosen direction)

In a democratic society, the idea that the public should be able to understand the basics of science to make an informed decision is widely recognized (Hodson, 2008Holliman & Jensen, 2009; Irwin, 2006; Jensen, 2011, 2014a,b).

Science communication involve science practitioners, mediators, and other members of the general public, by peer-to-peer or between groups (Burns et al. 2003).

Through science festivals, science is manifested to the general public in an accessible and interesting way.

Burns et al. (2003), and Jensen (2014a,b) examined why people visit a science festival. According to Jensen (2014a,b), visitors valued the opportunities to attend a science festival, to interact with scientists, and to encounter scientific phenomena. He also reported that their interests and curiosity about new areas of science have increased after their attendance. According to Hyeran Park, Youngmin Kim and Seongoh Jeong, Burns (2019) et al. (2003) categorized the reasons using the analogy of the letters that are associated with vowel sounds, A, E, I, O, U:

- People are Aware of science and scientific research;
- People Enjoy science and appreciate it as an entertainment or arts;
- The public have Interests in science communication as evidenced by voluntary involvement;
- The public have Opinions on science either positive or negative attitudes and;
- The public have some Understanding of its content, processes and social factors.

RESEARCH METODOLOGY

The research methodology was based on a study case "Scikids Science Festival" held by the Fascination Association in Romania since 2013. Its slogan is "Together in science"

The uniqueness of SSF was the active participation of sixty student volunteers in every edition

Table 2 Scikids Science Festival during the years

year	days	name	theme	visitors number	parteners number	science hours	ambassadors artists	volunteers	Budget euro
2013	2	The power of lemons	electrical phenomena	600	13	120	3	15	5000
2014	2	The power of oranges	electrical phenomena	6000	15	256	5	30	10.000
2015	2	The Coolest Meeting with Science	Newton's second law	8000	23	384	7	40	15.000
2016	2	Old Science vs New Science	mechanical phenomena	8000	25	416	15	50	15.000

2017	2	FIVE in Science	physics and chemistry	7000	31	388	20	60	15.000
2018	2	100 years of science in Romania	the Coanda effect	10000	35	432	25	60	20.000
2019	2	A Fun Reaction-150 years of Mendeleev Table	The Periodic Table of Elements	12000	35	435	25	60	20.000

TOTAL	visitors number	parteners number	science hours	ambassadors artists	volunteers	editions	days	Budget euro
	51600	177	2428	100	315	7	14	100.000

RESULTS AND DISCUSSION

The results of the discussions with the science event are now presented through the discussion of key themes . Each of the 15 dimensions identified by Dulewicz and Higgs (2005) in their LDQ were expressed by the manager of the science event.

According to Abson, Emma (2017) in " How Event Managers Lead: applying competency school theory to event management. Event Management, 21 (4), 403-419" there were six key leader-ship practices of business event manager. These six key leadership practices were ranked by the questioned managers as most important and identified as frequently occurring or emphasized as important during the thematic exploration. In the following we'll try to understand the correlation of this items with the Scikids Science Festival.

Table 3 Correlation of the High-Ranking Leadership Practices with Scikids Science Festival

	Managerial dimension	Intellectual dimension	Emotional dimension
Ranked #1	*Engaging Communication* Communicating a clear vision to all the participants. Interconnecting organizers partners, artists, volunteers with the public *Credibility*		
Ranked #2		*Strategic Perspectives* In order to ensure an sustainable event it's important to develop a commercially minded even if the thematic of this event isn't a commercial one.	
Ranked #3		*Critical Analysis and Judgement* The skill of problem solving in a fastchanging environment to be able to produce a workable solution for all the stakeholders involved in the festival	
Ranked #4	*Resource Management* planning what it need to be done, when needs to be done and delegating who will do it during the annual edition it's an important leadership skill in order to complete the tasks of the festival		
Ranked #5			*Emotional Resilience* From the first edition to the seventh, the emotional resilience could be actually the most important skill that influence the event to last during the years. Threats and uncertainties follow the leader throughout the editions of events, and the emotional resilience is the only response for continuity
Ranked #6			*Interpersonal Sensitivity* The communication process is a complex one and involving a huge number of people working together during the festival(several hundred) for tens of thousands of visitors. Empathy and a properly reaction accordingly to their needs for getting the best results represent also a must leadership skill

LIMITATION

The key limitation of this study is that we have only one event with 7 edition that we analyzed it.

CONCLUSION

To join the elite club of good leaders in events area, you must have all these qualities but if you lack some of these qualities, then you might struggle to make the mark in

the world of leadership. You will have to set a good example for others to follow. That is where your commitment, passion, empathy, honesty and integrity come into play. Good communication skills, decision-making capabilities and emotional resilience also play a vital role in success and failure of a leader. Lastly, innovation and creative thinking, as well as the futuristic vision, are a couple of leadership qualities that make up good leaders.

The meaning of this study was to understand leadership practices within the unique context of a science event management.

To become successful leaders, they must evolve into teams, motivate and empower others, share, care, and delivery the event until the end.

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Leadership in a Romanian Franchise Organization

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Abstract: *The paper describes the concept of leadership and its influence on franchise organisations perfomance.*

In the speciality literature, a number of studies have been written and are still written today, which show the necessity of redefining the notion of manager regarding the elements that define the leader within the organization.

Over time, a series of analyzes have been put in place to determine whether a person has a leadership role following a development process or whether leadership skills are skills with which a person is born with.

The concept of an efficient manager should not be confused with the concept of leader because in the case of the first concept, the attribute used to achieve the results remains the authority with which the manager is established, an attribute that the leader does not have.

Leaders builds morale and improves satisfaction, by building and developing in employee's confidence and by creating a warm and positive environment.

We can observe without a doubt that successful organizations need leaders at all levels.

Fun Science Romania, an international entertainment and education franchise initiated in Romania since 2005, understood the significant role of leadership especially during the financial crises of 2008.

Finding the best leaders according the specific of the activity and the specific of the organization is a real challenge.

Keywords:leadership, manager, organization, leader,communicate, franchise, financial crises.

INTRODUCTION

Leadership is a process by which an executive can direct, guide and influence the behavior and work of others towards accomplishment of specific goals in a given situation. Leadership is the ability of a manager to induce the subordinates to work with confidence and zeal.Leadership is the potential to influence behavior of others. It is also defined as the capacity to influence a group towards the realization of a goal. Leaders are required to develop future visions, and to motivate the organizational members to want to achieve the visions.

According to Keith Davis, "Leadership is the ability to persuade others to seek defined objectives enthusiastically. It is the human factor which binds a group together and motivates it towards goals."

Organizations are structures in which a certain number of people with precisely defined functions perform activities in order to achieve concrete objectives. At franchise organizations level here are some people who provide the function or functions of coordinating their activities or managing them. The need for effective administration is a reality within any organization, regardless of its type or size. People who hold coordinating positions within organizations do not always fit into what we understand through the leader. To be able to discuss this, we need to refer to leadership.

Leadership can be defined as the process by which a particular group of individuals can be determined by a particular person to meet certain specific objectives determined and within a specified period without being constrained. From this definition we can draw the definition of the leader who is the person who possesses the necessary skills to determine a certain group of individuals to meet certain specific objectives determined and within a certain set period without resorting to means of constraint.The concept of leadership is important because it needs to be analyzed along with the development needs of organizations that must also take into account the means of performance of individuals working within organizations and how they respond to various stimuli, to various types of motivation.

Organizations need strong leadership for optimum effectiveness.

Leadership, as we know, is a trait which is both inbuilt and can be acquired also.

Organizational leadership at a franchise level deals with both human psychology as well as expert tactics. Organizational leadership emphasizes on developing leadership skills and abilities that are relevant across the organizations. It means the potential of the individuals to face the hard times in the industry and still grow during those times. It clearly identifies and distinguishes the leaders from the managers.

The leader should have potential to control the group of individuals.

An ideal organizational leader should not dominate over others. He should guide the individuals under him, give them a sense of direction to achieve organizational goals successfully and should act responsibly. He should be optimistic for sure.

Also, he should be empathetic and should understand the need of the group members. An organizational leader should not only lead others individually but also manage the actions of the group.

Individuals who are highly ambitious, have high energy level, an urge to lead, self-confidence, intelligence, have thorough

knowledge of job, are honest and flexible are more likely to succeed as organizational leaders. Individuals who learn the organizational leadership develop abilities and skills of teamwork, effective communication, conflict resolution, and group problem solving techniques.

Organizational leaders clearly communicate organizational mission, vision and policies; build employees morale, ensure efficient business operations; help employees grow professionally and contribute positively towards organizations mission.

Leadership means managing a power of convincing others and influencing them to achieve the common goal. Leadership is an important function of management which helps to maximize efficiency and to achieve organizational goals. The following points justify the importance of the leadership in a concern.

1. Initiates action- Leader is a person who starts the work by communicating the policies and plans to the subordinates from where the work actually starts.

2. Motivation- A leader proves to be playing an incentive role in the concern's working. He motivates the employees with economic and non-economic rewards and thereby gets the work from the subordinates.

3. Providing guidance- A leader has to not only supervise but also play a guiding role for the subordinates. Guidance here means instructing the subordinates the way they have to perform their work effectively and efficiently.

4. Creating confidence- Confidence is an important factor which can be achieved through expressing the work efforts to the subordinates, explaining them clearly their role and giving them guidelines to achieve the goals effectively. It is also important to hear the employees with regards to their complaints and problems.

5. Building morale- Morale denotes willing co-operation of the employees towards their work and getting them into confidence and winning their trust. A leader can be a morale booster by achieving full co-operation so that they perform with best of their abilities as they work to achieve goals.

6. Builds work environment- Management is getting things done from people. An efficient work environment helps in sound and stable growth. Therefore, human relations should be kept into mind by a leader. He should have personal contacts with employees and should listen to their problems and solve them. He should treat employees on humanitarian terms.

7. Co-ordination- Co-ordination can be achieved through reconciling personal interests with organizational goals. This synchronization can be achieved through proper and effective co-ordination which should be primary motive of a leader.

METHODOLOGY: THE CASE OF FUN SCIENCE ROMANIA

Fun Science Romania is a franchise system in the field of educational entertainment established in 1996 in Spain and present in Romania since 2005, in which children discover science in a fun and very attractive way. The central element is the character of Nutty Professor who performs scientific experiments in front of children. The team of Nutty Teachers is an important key in the success of the activities of this franchise and a performance indicator. Therefore, the leadership practiced in this organization can be decisive

in its existence. An additional challenge in the leadership component is the fact that all Nutty Teachers are collaborators of the Fun Science franchise and are not employed.

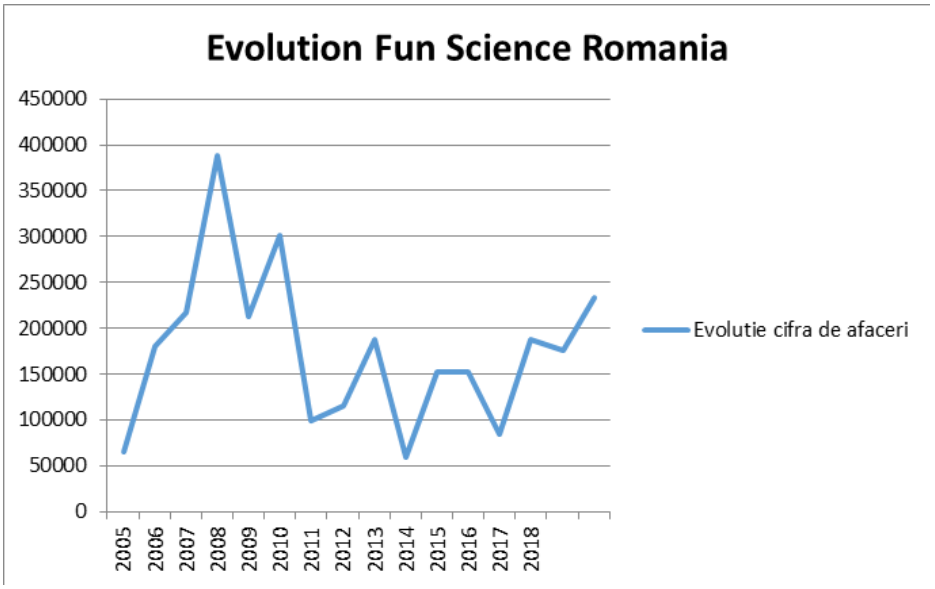
From 2005 until this article was written, Fun Science went through three stages.

Stage I 2005-2008 Effervescence of the beginning

Phase II 2009-2013 Economic crisis and organizational crisis

Stage III 2014-2019 Growing up

Stages	Year	Turnover
Stage I	2005	64595
	2006	181023
	2007	217813
	2008	387550
Stage II	2009	300581
	2010	99627
	2011	114734
	2012	188060
	2013	59858
Stage III	2014	152687
	2015	84880
	2016	187847
	2017	176097
	2018	233148



Each stage was successfully passed only due to the leadership practiced within the organization. Without a strong leadership, Fun Science Romania would have thickened the list of failed initiatives during the burning of these stages.

Stage I 2005-2008 Effervescence of the beginning

In 2005, Fun Science-Ciencia Divertida became one of the 170 franchises present on the Romanian market, being known to the Romanian public as Fun Science Romania. As the figures show, we are in the explosive stage, where Fun Science Romania is experiencing a rapid evolution reaching a maximum of the turnover in its entire history. This stage is characterized by 2 years of preaccession to the European Union and the first two years of the history of Romania's accession to the European Union. The initiator of the integration of the Fun Science-Ciencia Divertida franchise in Romania is also its general manager, with 15 years of business experience in post-revolutionary Romania. He demonstrates real leadership skills by managing to build a high performing team of collaborators with whom he records the records above.

In the sector of small and medium enterprises, the problems encountered at the time, in general, managers are: lack of training, lack of financial resources, poor marketing activities, difficulties in recruiting and retaining staff. In this incipient context both in the internal environment of the organization and in its external environment we can establish a correlation between the performance recorded by the turnover of Fun Science Romania from this stage and the application of the leadership points expressed above. At this stage, the entire team, both contributors and employees, is in a state of initiation, starting together on the road under the guidance of the know-how offered by the franchise but also of its good knowledge by the general manager. Together under his careful coordination, they build the foundation of what was to become Fun Science Romania. During the four representative years of this stage the created team builds an effervescent working environment that offers confidence and consequently, the motivation and the joy of growth and continuity.

In 2008, Romania officially enters the recession, however the effects of this situation are felt by Fun Science Romania only in 2009 when it begins to feel the economic decline of the external environment. Due to the lack of demands on the market, the services offered by the franchise, the team built by collaborators constantly reduces their number. Fun Science Romania is in danger of closing the activity in 2010, registering its first minimum turnover. In 2011 the activity seems to begin to recover gradually, reaching a slight increase in 2012.

In 2012, according to the CNIPMMR survey in a top of the major difficulties demanded by SMEs, we find the decrease of domestic demand, bureaucracy, excessive taxation and inflation.

A personal tragedy turns into a new crisis, this time organizational. Fun Science Romania loses its general manager because of his death. 2012-2013 is the year in which there is again the danger of ending the activity, marking an intense crisis of leadership and reaching its minimum in terms of turnover. Again, we can see a close connection between the concept of leadership and the performance achieved by the company this time on their descending slope.

Fun Science Romania is changing its general manager, with the role of continuing the leadership strategy initiated in the first stage.

Stage III 2014-2019 Growing up

Following the graph above we can see how Fun Science Romania knows at this stage a period of search and maturity, located on a predominantly ascending slope. Although experience is not the strength of the general manager, he is proving to be a leader capable of building from 0 a new team of collaborators with whom to reposition the Fun Science Romania franchise in the Romanian market. According to the statement of Florin Jianu, president of CNIPMMR, in 2019 most of the Romanian entrepreneurs see the hiring, training and retention of the personnel as being at the top of the major difficulties faced by SMEs, in the second place bureaucracy, being followed inflation.

Already at the age of 14, Fun Science Romania has shown that it has stood the test of time, managing to rebuild after each crisis, with leadership being the basic component of this longevity. The team of collaborators with whom Fun Science Romania records organizational performance can be both a weak point and a strong point depending on the existence of its leadership.

Leadership	Implementation	Turnover in lei (average)	Implementation	Turnover in lei (average)	Implementation	Turnover in lei(average)
1. Initiates action	Intense, with enthusiasm		low		Intense, with enthusiasm	
2.Motivation	strong passion		demobilization caused by the environment		strong, passion	166931
3.Providing guidance	vision clear mission	212745,25	vision and clear mission	152572	vision, clear mission	
4.Creating confidence	experience that offers safety		loss of safety		courage	
5.Building morale	stability		team demoralization		friendship	
6.Builds work environment	the fulfil of objectives		Free fall		the fulfil of objectives	
7.Co-ordination	know how solid		Lack of coordination		know how solid	

CONCLUSIONS

We can say without a doubt that successful organizations need leaders at all levels. Finding the best leaders according the specific of the activity and the specific of the organization is a real challenge.

Leaders builds morale and improves satisfaction, by building and developing in employee's confidence and by creating a warm and positive environment. The positive working environment without stress or with minimum stress level makes the jobs more attractive and stimulates the employee.

However, we can conclude that leadership is the ability to direct a group of people in realizing a common goal. This is done by people applying their leadership attributes. Leaders create commitment and enthusiasm amongst followers to achieve goals. Leadership is achieved through interaction between leader, follower and environment.

By placing strategic leaders throughout the organization, monitoring external trends and events can be done at the departmental level. With this knowledge, the executive team members and leaders can formulate a relevant, adaptive, innovative strategy that will guide the organization into a successful future.

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Current Characteristics and Future Trends in the Field of the Green Transport from the Perspective of the Sustainable Management in the Sustainable Development

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Abstract: *The sustainable management in the field of the transport is particularly important because this sector is one of the main producers of the greenhouse gases, together with the sector of buildings and the industry. The purpose of this research is to illustrate the evolution and the positive and negative impact that sustainable transports have on the national economies in Romania, in the European Union and worldwide. Given the importance they have in different regions of the world the purpose of the research is determined by the fact that national policies, both at European Union level and at global level, must include aspects related to the green economy, both by encouraging private economic entities, as well as by a stronger state involvement, by a more efficient management. The quantitative and especially the qualitative methods aim to highlight the importance of sustainable transport for a green economy. The sustainable management it is very important, especially nowadays, when progress allow to change the vision and the economic behavior in order to increase the economic efficiency.*

Keywords: sustainable management, green transport, transport demand, combined transport, avoiding transportation, green infrastructure.

JEL Classification: A13, D18, D62, E61, F69, G18, H53, I15, L62, L71, L91, L92, O18, R41, R42

1. Introduction

Transport is a very important branch of the national economy because they are the ones that make the connection between the demand representatives and the supply representatives in all the markets, they are needed in all branches and in all economic activities.

The demand for the transport activities has a very high level at present, and in the near future it is expected to increase continuously, together with the development of all the economic activities and of the society, in general.

In terms of improving the way of carrying out the activity in the field of transport, it is not just about improvements regarding the vehicles. It is also about ensuring the access to the transport for all the social classes, as well as practicing new transport models that affect as little as possible the natural environment.

Currently, the development of transport is taking place at an accelerated rythm, but in an unsustainable way because most vehicles are using fossil fuels and the number of vehicles is growing steadily worldwide, and especially in non-OECD countries. On the other hand, the technical and technological progress in this field, is not made at the rate at which the demand for transport increases.

It is known that, nowadays, the branch of transport is one of the three economic branches that contribute the most to the increase of greenhouse gas emissions, together with the industry and the building sector. Of all the forms of transport, the one that contributes the most to these emissions is road transport, with over 70% of the total greenhouse gas emissions from transport.

In addition to the effects that are strictly related to the economic field, on the costs and benefits related to this activity, on the number of jobs that it contributes in the total job offer, there are also other social and even psychological problems, related to the separation of the communities, the effects of congestion and its consequences on labor productivity, as well as issues related to the health of the population or the access to certain services for certain social classes.

The improvement of the activities from this field is carried out in order to make it more sustainable. This improvement is required in all the countries worldwide, but especially in the developing ones, since, in these countries, there is a shortage of supply and transports can be created directly as green, sustainable transports.

In order to make transport more sustainable and greener, it is necessary to improve all the elements which are directly or indirectly related to this field, such as - the necessary infrastructure, the vehicles, the transport models which will be applied, the telecommunications technologies, the creation of smart transport systems, the type of fuels, the type of all other materials.

Among the positive effects that result from the transition of the field of transport to a sustainable transport are both direct economic effects and non-economic effects. Among the economic effects, the most important are: the increase of the profit for the companies in the field, the creation of new jobs, both in transport and in the related activities, the increase of the value of the regional economies, the transition to the green cities - the sustainable transport being one of the essential elements of a green city.

In order to achieve these goals, it is necessary that the State develop appropriate

regulations in this area, to plan the activities and to inform the economic subjects about the benefits that, in the long term, the sustainable transport offers, about its importance. Regulations may also include setting standards or restricting certain types of vehicles, and one of the most important measures is the provision by the State of economic incentives, in the long term to private economic subjects, as well as the collaboration of the public sector with the private sector, respectively. with the informal one. The reforms in the field of financing must take into account all transport sectors at all levels, both locally, nationally and internationally. The State must orient resources from unsustainable to sustainable transport.

At the European Union level, transport policy has been addressed since the Treaty of Rome, which aimed to open the markets, in order to ensure a fair competition, as well as to ensure sustainable mobility, which means to a more efficient mobility in terms of cost, but also a traffic control. Subsequently, in 1985, the White Paper on Transport was elaborated, followed by other similar documents issued later.

In 2008, the European Commission developed a package of measures for greening the transport, and in 2013, there was published a report named "Together for competitive urban mobilization", by which it was desired to implement the sustainable urban mobility.

Until now, in the European Union, in the XXI century, more progress has been made in the field of the sustainable transport. The safety of air, maritime and road transport has been increased, a more comfortable working program has been developed for those who are working in this field, many possibilities for transport for all types of passengers and freight have been created, technological progress has been introduced, aiming to have a greener transport, more environmentally friendly, the level of pollution has been reduced.

Regarding the development of the transport branch in Romania, in the different national strategies targeting the different sub-sectors of transport, it is envisaged to adopt difdferent types of measures in order to reorganize the activity according to the directives of the European Union, to establish a strategy of optimizing costs and increasing efficiency, to promote a most appropriate types of transport for both goods and passengers, to reduce the risks and to optimize the transport models.

2. Literature Review

According to Wikipedia, the sustainable transport is defined in several ways, the most representative being:

"● Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystems health, and promotes equity within and between successive generations.

●Is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy, as well as balanced regional development.

●Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise." [4]

The current state of transport is significantly different from the characteristics of sustainable transport. A clear element is that, at present, this sector consumes a very large amount of fossil fuels and it is responsible for a large part of the greenhouse gas emissions. „Statistics learn that over 90% of all road transportation relies on oil. This figure almost goes hand-in-hand with the total global oil consumption, which stands at 60%. All these scenarios have caught the eyes of most governments and policies are being formulated to reverse this worrying trend of air pollution" [5]

The transition to the green, sustainable transport is the one that determines the reduction of the negative effects which it has on the environment and on the individuals. An important contribution is changing the management, at all levels, both in terms of private companies and the State. „Green transportation revolves around efficient and effective use of resources, modification of the transport structure and making healthier travel choices. For this to bear any fruit, it requires dedicated public awareness and participation, management of privately owned vehicles and innovation and production of vehicles that utilize renewable sources of energy such as wind, solar, biofuels and hydroelectricity. " [5]

The transition to the sustainable transport has a great number of benefits. "Linked together, these strategically planned networks of green elements are able to provide multiple benefits in the form of supporting a green economy, improving quality of life, protecting biodiversity and enhancing the ability of ecosystems to deliver services such as disaster risk reduction, water purification, air quality, space for recreation and climate change mitigation and adaption." [6]

„Rethinking the transport system is an integral part of raising the energy efficiency, and improving energy conservation and environmentally sustainable production. It is no longer enough to have the ambition of reducing emissions or increasing energy efficiency and better fuel consumption of vehicles. The use of biofuels it is not sustainable in the long term: even the aim of electrification does not go far enough. Much more can be done by changing the way people move: more efficient public transport systems, turning city streets biker friendly, faster trains, and hibryd or electric cars are the key areas." [2]

Measures that can be taken locally or globally are particularly important, and the strategies used by managers need to consider these goals. "Sustainable mobility can only be achieved through a fundamental paradigm shift at both local and global levels. We need to develop our thinking around integrated systems. We need to approach mobility as a service. Sustainable mobility it is not separate from logistics. It is about the transfer of people but also about the transfer of goods." [2]

The European Union has been noted for its achievements in recent years in this area. "The EU is investing over €117 million in 39 key transport projects that will help build missing connections across the continent, while focusing on sustainable transport modes. The projects will reduce the noise generated by freight trains, develop and improve cross-border railway links and upgrade crucial infrastructure in ports. They will be supported through the Connecting Europe Facility (CEF), the EU's financial mechanism supporting transport infrastructure." [7]

In order to encourage the member States to continue the transition to the sustainable transport, the European Union has refined its financing methods, allocating larger amounts for this purpose. "In June 2018, the European Commission, as part of proposals for the next long-term budget (2021-2027), proposed adapting the CEF programme to support investment in Europe's transport, energy and digital infrastructure networks. A provisional agreement was reached by co-legislators in March 2019. Certain provisions, such as budget, remain open pending decisions on the EU's overall long-term budget.

The Council text and Euroepan Parliament text both list the following priorities for the transport sector:

- Advance work on the European transport network, while helping the EU transition towards connected, sustainable, inclusive, safe and secure mobility.
- Decarbonise transport, e.g. by creating a European network of charging infrastructure for alternative fuels and by prioritising environmentally friendly transport modes.
- Invest in transport projects offering high added-value in cohesion countries, through a dedicated budget.
- In the context of the Action Plan on Military Mobility: adapt sections of the transport network for civilian-military dual-use (for instance technical requirements on dimensions and capacity), using a dedicated budget." [7]

The regulations which were developed in the field of the transport in the European Union, sustain the transition to the green transport. "To support the states member of the European Union in developing the trans-European transport network (TEN-T network), the European Union adopted a regulation in 2013, which provided Union-level guidelines for investments in the field of transport (TEN-T guidelines). The regulation imposes a binding legal obligation on European Union member States to develop the so-called "central" and "global" TEN-T networks. In addition, the Regulation identifies projects of common interest and specifies the requirements to be met when implementing these projects. The Regulation on the Europe Interconnection Mechanism (MIE)8, adopted in 2013, allocated a budget of EUR 30.4 billion over a seven-year period (2014-2020), of which the amount of EUR 24 billion is foreseen for the transport sector." [8]

In Romania, a series of measures for transforming transport into sustainable transport have been adopted, which include specific sets of measures for each sub-sector and which seek to align with the provisions of the European Union. "The Master Plan for Transport in Romania 2030 mentions the need to respect conservation measures in future projects including integrating non-structural and Green Infrastructure measures, and avoiding negative impacts on protected areas, forested areas and non-protected areas where species of community interest are identified, by reconsidering planning of routes. The Territorial Development Strategy of Romania 2035 clearly refers to Green Infrastructure as an efficient way to adapt to climate change and to diminish natural risks compared to physical or grey infrastructure. Specific measures include protecting natural habitats (by ensuring diversity of and interconnectivity between natural areas, particularly in the context of Natural 2000 management) and developing green spaces in urban areas and green belts around major cities." [11]

3. Characteristics of the existing transport sector

At the level of the European Union, the importance of the policies in the field of transport was emphasized since the beginning, in the Treaty of Rome, with the aim of creating a common market for the transport and of ensuring the freedom of the movement of services.

In the process of opening the markets and in order to achieve the sustainable mobility, the main objective was to ensure fairness in terms of competition, for each type of transport separately and between different types of transport. The process of opening and liberalizing the markets had a number of beneficial effects - changing the production and the storage methods, increasing the volume of transported goods, increasing the number of passengers, and lowering the transport prices.

At the level of the European Union, since 1985, several documents called the "White Paper" have been elaborated, in which a series of provisions regarding the field of transport have been determinated. In 1985, among the most important provisions from the point of view of greening the transport sector are: the simplification of the controls and of the formalities, which streamlines the traffic, the development of the structure of community interest, in order to increase the degree of connectivity between different countries, regions and areas and the increase of the security of transport activities. In the White Paper of 1992, the provisions are similar, but, in addition, it is added, as objective, the social harmonization.

As important provisions of the documents from the end of the XXth century, are also included: to achieve fair tariffs for the use of the infrastructure at European level and the extension of transport to the eastern part of Europe, because significant increases in traffic were expected.

In the first decade of the XXIst century, the GALILEO satellite radio navigation system, the management system of the railway traffic ERTMS (European Railway Traffic Management System) and the program for the modernization of the structure for the air traffic management, SESAR (Single European Sky ATM Research) were launched in the European Union.

GALILEO is a European satellite navigation and positioning system, consisting of 30 satellites, similar to the American GPS system, which is intended for civilian use in the countries of the European Union.

ERTMS is a European system of traffic management and speed control that aims to increase the degree of connection and interoperability in the railway transport system, under maximum safety conditions. It is efficient only for trains running at over 120 km / h.

SESAR aims to improve the traffic management so that air transport becomes more environmentally friendly and to reduce the pollution caused by airplanes and airports activities.

In the White Paper from 2011, entitled "Roadmap for a single European transport space - Towards a competitive and resource efficient transport system", it is underlined the importance of reducing the greenhouse gas emissions, together with the development of the transport sector and with the increase of the mobility's degree. There were provided: reducing the energy consumption, using a cleaner energy, a better exploitation

of the modern infrastructures, reducing the impact of the transport on the environment. The concrete objectives are:

- diverting the freight from road transport to the railway transport and to the maritime transport by 30% until 2030 and by 50% until 2050
- tripling the length of the current high-speed network by 2030 and transferring the majority of passengers on medium distances to the railway transport until 2050
- implementing the TEN-T multimodal basic network until 2030
- reducing greenhouse gas emissions by 20% until 2030 and by 60% until 2050, compared to 1990
- usin in a proportion of 40% the low carbon fuels in aviation and urban transport
- innovation.

In December 2013, the executive communication - "Together for a competitive urban mobility" was published.

In December 2015, the European Parliament adopted a resolution on sustainable urban mobility, according to which city development plans should include objectives regarding the implementation of low emission transport modes, the use of alternative fuel vehicles, the creation of the intelligent transport systems, paying more attention to people with reduced mobility, the adoption of some economic policy measures in the field of parking and the reduction of the traffic noise.

The significant growth that has been achieved worldwide in the last years in this sector is explained by the close relationship between the transport sector and the economic growth. The supply of goods and services, the production are strictly related to the transport of goods, and the demand for products, the consumption are related to the transport of passengers. The continuous increase in transport demand, both for passenger and for freight transport, is a factor that has determined the development of this sector at an high rate, even if this development is, currently, mainly unsustainable. It is estimated that, by the middle of the XXIst century, the demand for transport will double compared to the level it had at the beginning of this century. In order to satisfy this growing demand, most countries of the world continue to expand the transport based on traditional, motorized, fossil fuel-powered vehicles, because they are easier to achieve and, for them, there exist already high-performance technologies.

The increase in the transport demand, related to the development of the economic activities in general, will determine, by the middle of this century, the increase of the number of vehicles by three - four times compared to the present number. These increases will occur in all the countries of the world and, most notably, in the developing countries.

Through the total consumption of the transport sector, some resources are almost exhausted, the lands on which this activity is carried out are degraded, reaching, in many situations, losses in biodiversity, through the negative effects on the vegetation and on the animals. The resource consumption is made both for the production of the means of transport itself and for the necessary infrastructure, the most important resources used for these activities being the metals and the cement. Another category of consumption is that which involves the use and the maintenance of the vehicles in operation, among the most important resources used for these

activities being the fossil fuels (transport consumes more than a half of the total liquid fuels and represents the most important sector which increases oil consumption) and rubber. Plastic is also a widely consumed resource in most transport activities.

The way in which the transport sector is currently developing produces many costs, both economic and extra-economic, such as social and environmental costs. An element that determines high extra-economic costs is the emission of the greenhouse gases, which, besides being harmful to the environment and individuals, also results from a high energy consumption activity. In addition to the danger that transports pose by the harmful substances emitted into the atmosphere, the dangers for individuals also include the safety of the population regarding accidents. In this regard, the state must pay a greater attention to the verification of the vehicles and of the infrastructure if we look at the issue from a strictly technical point of view, and, regarding the population, the drivers, a special role is played by the education regarding the control of speed and the alcohol consumption.

One of the consequences of the spectacular growth of the number of vehicles is the congestion, which has, as important economic effect, the reduction of the productivity, especially in the urban environment because the time used for the transport is very high, which can cause negative effects on the individuals work capacity. As an extra-economic effect, the congestion reduces the degree of accessibility in some urban areas and can, in the long term, reach the separation of the communities. Apart from the negative social and psychological effects, the congestion leads to increase of the transport time, which implies a greater fuel consumption and thus contributes to the increase of the pollution degree. Air pollution, noise and vibration affect the health of the population.

In order to avoid the congestion and to improve the traffic flow, it is important to improve the way that the infrastructure is used, so to create special lanes for buses and bicycles. They have to be introduced the intelligent transport systems, the green logistics, which correlate the need for transport with the demand. The logistics is the one that translates the demand for goods and services into the transport demand, so it makes the connection between the production system and the transport system.

At the European and the global level, it is necessary to improve the elements of planning and of logistics management. For example, at the level of the European Union, until 2050, the volume of road freight is expected to increase by about 80%. As ways to improve the logistics we can list: to make sure that the vehicles which are transporting goods are full and to use some vehicles that based on the renewable energy sources, such as solar energy.

Regarding the effect of the development of this sector on the number of jobs, in the European Union about 11 million people worked in the field of transport in 2015, but the employed population structure was very unequally distributed by sex, because only 20% were women. The low share of women was explained by:

"●the lack of an adequate balance between professional and personal life in shift work

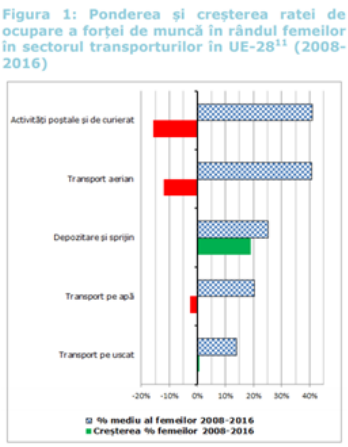
●failure to adapt the workplace and equipment (for example, lack of sanitary facilities for women, unavailability of protective clothing for women);

●insufficient specific recruitment of women in a sector that has the reputation of being dominated by men

●lack of training and lifelong learning opportunities.

The European transport sector offers" [8]

Chart 1: Weight and growth of the employment rate for women in the transport sector in UE-28 (2008-2016)



Source:
https://ec.europa.eu/info/sites/info/files/file_import/european-semester_thematic-factsheet_transport_ro.pdf

If the transport will continue to develop as it did until now, the number of vehicles will increase three – four times until 2050, producing an increase of the number of passengers and of the volume of freight. The transport of passengers is expected to significantly grow in all it's forms, except the road transport by bus, and the volume of the goods will be reoriented, from the transport on the railways to the road transport. The consumption of energy will increase, the most of it being caused by the road transport followed by air transport. The number of jobs will also increase.

At present, within the financing of the transport sector, there are some generally valid trends worldwide - the predominance of the public sector in the financing of the infrastructure, the fact that governments and international financiers prefer to invest more in the road transport, the financing of green transport is relatively limited and, in addition, many of the services are provided by the private and informal sectors.

4. Perspectives, modalities and consequences of greening the transport sector

The transition to the green, sustainable transport, produce a number of positive outcomes for both for those who provide this servicies and for those who benefit from this services, both for private businesses, and for the State. The transition to the green, transport is relatively slow, and the biggest possibilities are in the developing countries because they do not have to change some existing forms and models, but they have to provide the transport directly in a green, sustainable way.

Source: http://www.urban-hub.com/urbanization/reinventing-the-wheel-or-the-future-of-urban-biking/

As in any other type of activity, the technical progress is an essential element for making the transition to the sustainable transport, aiming to keep in operation only the efficient technologies and to withdraw the inefficient ones.

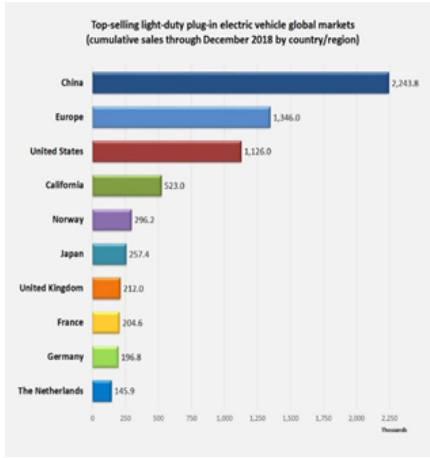
In addition to this measure, there are other measures that have a special role and that are specific to this sector. This category includes the promotion of public transport, cycling and walking, so that the least polluting means of transport are used.

Walking, on relatively short distances, reduces the greenhouse gas emissions to zero and, moreover, contributes to maintaining the population's health.

A relatively easy measure to put into practice is to use simple bicycles, which are particularly advantageous and can afford a much larger number of citizens or to use the electric bicycles. Regarding the electric bicycles, in some states it is necessary for people who want to buy and use such a bicycle to obtain a permit attesting their ability to use them.

Because the use of electric means of transport is an important step for the transition to the sustainable transport, the local authorities, due to their administrative autonomy and to their ability to sign partnerships with private economic entities, can play a very important role in deciding to increase the number of charging points on the route and to adapt the offer to the requirements of consumers of these services. For electric scooters and bicycles, the lack of public recharging infrastructures is not a very serious problem because they have portable batteries that can be recharged into the internal electricity grid. In order to increase the number of these means of transport, the state could increase the financing in this field. One of the most successful countries in the field of electric mobility is the Netherlands, which already has a mature market.

Chart 3: Top-selling light-duty electric vehicle global markets (cumulative sales through December 2018 by country/region)



Source:
https://en.wikipedia.org/wiki/Electric_car_use_by_country

The use of the electric motorcycles or automobiles, as well as hybrid vehicles, including hybrid buses (the best-known example being the Mercedes-Benz Ciatro G BlueTec Hybrid Bus) also means reducing the greenhouse gas emissions during transportation, but it involves emissions in battery charging processes. The accessibility to these means of transport is lower because, at the moment, they have quite high prices. The use of ther hybrid vehicles reduces by 90% the greenhouse gas emissions that harm the health. An effective alternative in this regard would be the widespread introduction of vehicles that operate on fossil fuels.

Another measure is to increase the occupancy's degree of the vehicles, so that a

vehicle transports more people, even up to 5 in a car, thereby reducing the number of vehicles in circulation.

Improving the way the vehicles are driven is a sustainable measure both from the perspective of a green driving way from a technical point of view and of reducing the consumption, but also from the perspective of avoiding negative events.

The transition to new forms of sustainable, green transport refers to similar elements in the field of rail transport, namely the use of green trains, which means hybrid locomotives and innovative technologies. The electric trains, although they involve certain emissions related to the electricity, can be considered green because they can reach a much higher transport speed and are considered to be safer.

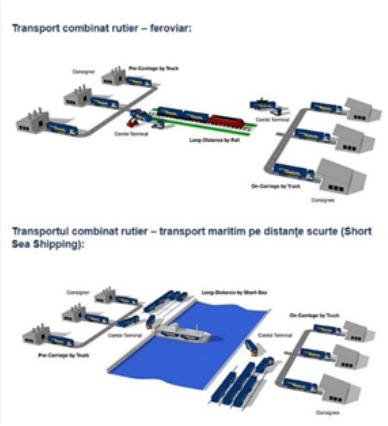
Avoiding transport, which means reducing the demand for transport, the number of passengers and the quantity of goods transported, implies, first of all, the existence of green cities, which have a more compact structure, so that the population is closer to the jobs, but also to the places where they purchase their consumer goods and to the places where they carry out different cultural or relaxation activities. Thus, the total transport demand is reduced.

Avoiding the transportation can also mean replacing the need for transportation to workplaces by holding teleconferences or finding ways to perform work from home or from an office that is placed in a nearby area of the neighborhood, without having to travel to a center.

One of the methods of greening the transport branch is to practice the combined transport, that means to combine the forms of road transport with the rail and naval ones, so that the costs are minimized and the efficiency of the transport is maximized. It is preferable that road transport is used as far as possible only for short distances, for the delivery or collection of goods. The combined transport methods are efficient because, with their help, the congestion can be avoided, as far as possible, the optimal vehicle loading capacities are used, the most modern means of transport available for each type of transport can be used. Thus, a greater transport flexibility results and environmental and social conditions improve.

In order to achieve these combinations optimally, it is necessary to have a network of advantageous and fast connections. The use of the most modern means of transport and the practice of the optimum loading, specific to each means of transport, is a measure that also favors the increase of the safety in the traffic.

Chart 4: Combined transport: road transport and rail transport; road transport and naval transport



Source:
http://www.lkw-walter.ro/ro/client/trafic-combinat/transportul-combinat-functioneaza-in-felul-urmator

The development of the sustainable transport activity is an important factor that

determines the increase of the number of jobs. The new jobs are created both directly, within the provision of the transport services themselves and indirectly, in the related activities, such as the activities related to the production of the used vehicles, to the maintenance of the infrastructure, to the refining of the fuels, to the recycling of the materials.

The development of the transport is a condition of the economic development of all regions and areas of the countries. Thus, the social-economic disparities are minimized, the health of the population is improved, a healthier lifestyle can be practiced and, finally, the quality of life increases.

The fact that the development of transport determines the development of all regions of a country can be illustrated by the effects that it has on the rural environment. The effects are multiple and determine the improvement of the social and economic conditions. Transports are the ones that allow to increase the quantity of agricultural products sold in more distant markets, without affect these products by the impossibility of a longer term storage. Due to the increase of sales of agricultural products, the incomes of the rural population increase, the poverty level is reduced and the expansion of the banking sector is boosted, both by increasing deposits and by contracting more loans, in larger amounts, requested by the rural community. Transport also facilitates the movement of the rural pollution to the jobs in other localities and of the children to the schools.

Apart from the stimulating effect of the local economy, the development of transport determines, by increasing the transported volume of goods and number of passengers, the reduction of unit costs of the transport and also the reduction of the time used for transport. These elements represent prerequisites for lowering the sales prices of the products, making them more tempting for buyers. Thus, as an indirect consequence, it results the increase in the demand and in the external exchanges.

Regarding the investments that will be made for the transition to the green, sustainable transport, the aim is to to increase the efficiency of road vehicles, to expand the infrastructure of public transport, to increase the energy efficiency and to reduce by a quarter the transport through avoidance strategies, based on changing of the behavior of the economic entities regarding the transport activity through changes related primarily to doing more e-work, to the cities planning, to the adoption of some new regulations. Attention will also be paid to the type of materials used in the construction of the infrastructure and of the vehicles by choosing some more qualitative and easier materials, to the construction of trains that will slip more slowly on the rails, to increase the efficiency of the means of transport by improving their design. Non-motorized transport will be encouraged, reducing oil consumption and energy consumption. The number of jobs will increase more than until now, mainly due to the increase in the number of jobs in public transport. The regulations should consider reducing and controlling the level of the greenhouse gas emissions, saving fuel and their quality, doing the technical inspection of vehicles, increasing their occupancy or discouraging their use, especially for the motorized ones.

In order to improve the way the transport process unfolds, it is essential to use the digital skills and computing so that transport can be carried out faster and in a manner

more suited to the requirements, to improve both the transport activity itself and the relationship with other economic entities who benefit from these services. Drivers are better informed, they can practice the green driving, which is more secure, the flexibility of transport increases, the necessary connections can be made better and easier, and the transport can be more personalized according to the specific needs of the clients. In addition, digital monitoring provides more complete and complex information about the way of carrying out the transport activity, creating the premises for its analysis, evaluation and improvement.

It is also important to inform and to aware the population about the new modes of transport, about the new behavioral model that they must adopt in relation to the transport, which will cause important changes in the transport demand. This includes both awareness campaigns and the education of the children at schools.

The awareness of the population can also be achieved by organizing public events, such as, for example, in Romania, "I Velo Relax da startul la pedalat!" (I Velo Relax start to pedal!), organized by the Green Revolution Association for 10 years in the cities of Bucharest, Constanta, Brasov , Sibiu, Alba Iulia, Oradea and Iași, in order to promote and raise awareness about cycling. In 2018, Scania organized, in Sweden, the "Sustainable Transport" forum, which defines the target for the year 2050 - that there should be no transport based on fossil fuels. In Italy, there are many projects that have the aim to ensure a better answer at the increasing of the conectivity's degree which was discussed within TEN-T. Another example was the BMW group which, over the last 20 years, has managed to reduce the greenhous gases emissions of the fleet of cars by about 40%.

An interesting element is the combination of the transport infrastructure with the green infrastructure, which involves the creation of a network of spaces that incorporate some green elements in the territory, which will help to conserve biodiversity, to reduce the carbon dioxide in the atmosphere, to increase the quality of the air and of the water, to reduce pollution in general and to better use of the land, to reduce the environmental risks. The green infrastructure may include the blue infrastructure, when it is possible to use also aquatic resources in the respective territory. Due to the economic, social and ecological benefits it brings in the European Union countries, it is desired to create a green infrastructure at all levels - national, regional and local, both in urban and rural areas. In order to achieve this goal, it is necessary to adapt the national economic policies to the new objectives or even to find innovative policies in this field, which should also include the field of transport. The funding systems for the green infrastructure are the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Maritime and Fisheries Fund (EMFF), the European Agricultural Fund for Rural Development (EAFRD), LIFE+ and Horizon 2020 project funds and the Natural Capital Financing Facility (NCFF) of the European Investment Bank (EIB)."

The transports could be helped by the green infrastructure by improving its design, by building green viaducts and bridges, by building eco-tunnels, which would allow the reduction of the time for transport, tigether with a better use of the land and with the

possibility of not diverting water courses. Thus, the tourist activities will be affected to a minimum and, possibly, the demand for tourism in those areas will increase aa well as the amounts paid as rents. The vegetation will also contribute to the reduction of the noise.

It has been observed that the permeable sidewalks, as elements of green infrastructure, are more efficient and much cheaper than traditional ones. They retain rainwater and are expected to have a lifespan of about 25 years.

A good example of green infrastructure is the Alpine Carpathian Corridor in Austria and Slovakia, which has sought to preserve the habitat of some wild animals. To ease the traffic, bridges and highways were built in the areas of interest.

The changes in the field of transport's financing are also essential in order to orient them towards a green, sustainable transport. The financing modalities must be efficient and stable in the long term, adapted so that all transport sectors benefit equally, to ensure horizontal and vertical equity, and a greater part of the resources allocated to unsustainable transport must be reoriented to the green ones, together with finding new sources and financing methods for the latter. The sources of public funding used locally, nationally and even internationally must be combined with the provision of incentives to the private sector, including through public-private partnerships. The transport sector must be easily measured by appropriate indicators, developed by managers, in order to be properly evaluated and improved.

The state plays an important role in the management of this transition process. It must seek to improve administrative capacity, in order to more easily and effectively implement the economic policies regarding the green transport and the corresponding financing mechanisms. The state needs to find new ways to make the population aware of the importance of changing the transport models so that they are more environmentally friendly. The state must monitor the transport process and must analyze the data relating to it, so that it can plan it in accordance with the requirements of the green economy.

In connection with the international regulations in the field, Incoterms (International Commercial Terms) is of particular importance, which represents certain standardized international commercial terms, designed and published by the International Chamber of Commerce. The parties of a commercial transaction may express their grievances regarding a clause in these Incoterms and agree, with one consent, upon them. These regulations refer to the essential obligations of the seller and the buyer and, in connection with the transport of goods, the transfer of risks and the costs of delivery.

Some of the concrete initiatives that have been undertaken worldwide are:

"●In March 2016, the Netherlands' parliament voted to support a motion stating it wants only sustainable, zero-emission vehicles to be sold on the Dutch market from 2025. If the parliamentarians have their way, no new diesel or petrol cars will enter the Dutch market from that point forward.

●In May 2016, The California Air Resources Board announced it will fund the deployment of the largest number of zero-emission trucks servicing ports in the history of the nation. These zero emission big rigs that transport shipping containers will be

used in and around California's seaports.

●The 2015 annual technical report published by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) defines the state of fuel cell electric bus technology to be ready for commercial deployment.

●Tangshan Railway Vehicle Company (TRC), the first locomotive and rolling stock manufacturer in China, is investing in the development of a new fuel cell module, designed to meet the requirements of tram or ground transport vehicle applications.

●In Europe, funding has been made available to support for the simultaneous deployment and demonstration of a set of fuel cell bus fleets with at least 100 FC buses consisting of at least 3 locations with minimum 20 buses per depot.

●In March 2016, South Korea announced plans to deploy thousands of hydrogen fuel cell buses at a rate of about 2,000 vehicles per year. These zero-emission buses will replace the compressed natural gas buses currently in use across South Korea." [9]

It can be considered that the most important progresses of the European Union in the transport sector over the last 20 years are:

"- safer air, sea and road transport

- a reasonable work schedule for those working in the transport sector

- more transport possibilities for passengers and businesses

- less pollution

- technological advances towards greener transport." [10]

One of the most serious problems in the transport sector remains the traffic congestion, especially for the road and air traffic. For this reason, the European Union loses about 1% of GDP annually and generates very high carbon and other undesirable substances.

"Transport needs to be streamlined. In this sense, in addition to improving logistics and promoting "smarter" behavior by travelers, it is also necessary to optimize the use of modern information and communications technologies and those based on satellites. Instead of being limited to a single mean of transport, the European traveler must learn to combine all modes and networks. Thus, their use and capacity will improve significantly." [10]

Other important objectives that can be mentioned are

„●Develop common European standards on transport safety and security; strengthening Europe's role and influence in international transport.

●Continue the works in order to finalize the project "The Single European Sky" and to conclude the negotiations regarding the fourth railway package.

●Collaborate with the main companies in this sector within public-private partnerships such as SESAR and "Shift 2 Rail" in order to introduce, on the aviation and railway markets, the innovations for both citizens and enterprises." [10]

Regarding the development of the railway transport in Romania, in the national strategy for the railway transport, it is foreseen to adopt measures in order to reorganize the activity of the railway companies according to the European Union directives, to establish a strategy of optimizing the costs and increasing the efficiency, to promote the rail transport for both goods and passengers, to eliminate the dangerous points and the speed restrictions on the public infrastructure, to create partnerships to manage the auxiliary assets, to introduce the telecommunications

on optic fiber support, to mechanize the railways and to provide the various necessary IT services.

In the field of the road transport, the measures are foreseen for the intercorrelation and interoperability of the road network in our country with the network in the European Union, the correlation of the development of the public network with the priorities of the economic development of the country and the improvement of the quality.

In naval transport, the aim is to give a greater importance to the competitive advantage offered by the Danube River, to develop the operating and storage capacities in the ports on the Danube, to increase the freight traffic in transit through the ports, to develop the cruise tourism on the Danube, to modernize and develop the fleet and to stimulate the private initiative.

In the field of the air transport, the aim is to achieve a greater safety and security of the transport, to consider more the interest of the users, to adopt new regulations that correspond to the new wishes and to develop policies that involve the consultation of all the interested user categories.

As examples of good practices in Romania, they can be mentioned:

●"Corridors for wildlife and sustainable resources in Maramures County"; "The benefits from the project include: • Identification of critical habitats and movement corridors for bears; • Identification and implementation of tools to effectively manage natural resources that contribute to the conservation of the critical habitats and corridors for bears; • Identification of management measures for conserving bears and their habitats and for sustainable development of the communities; • Implementation of 22 joint planning activities involving key stakeholders; • Enhanced capacity of protected areas staff: seven training sessions organised for local authorities / decision makers and forest management units' representatives; • Development of information materials for disseminating toolkits among the local stakeholders; and • Editing and distribution of information materials to the different target groups of the project. The overall budget was EUR 937,834 with EU funding amounting to EUR 844,050." [11]

●"Ecological restoration of Comana Wetland in Giurgiu County"; "The benefits from the project include: • Improved quality of habitats and species richness; • Avoided habitat fragmentation and disruption of the migration route of some fish species; • Avoided biodiversity loss, in particular of important bird species; • Temporary job creation related to implementation of Green Infrastructure measures; • Local development opportunities for establishing recreational and / or scientific research activities for users from the nearby capital Bucharest and other cities; • Increased climate change mitigation potential of the area; and • Raised awareness of local people about the benefits of Green Infrastructure. The Giurgiu County Council in partnership with the Comana Nature Park and Comana Local Council implemented the project; its overall cost was EUR 1.8 million." [11]

5. Research methodology

The quantitative data were mainly collected from the publication issued by the European Union in the field of the transport and also issued by the competent authorities in Romania. The results of the quantitative

research methods were taken especially from the documents issued by the European Union regarding the greenhouse gas emissions, the weight of the electric cars in the total existing cars, the rate of the employment in the transport sector. The qualitative methods from this paper aim to highlight the importance of sustainable transport for a green economy, presenting the way of work and the importance of the European networks in the fields of the green transport and the main international economic policies that may transform the unsustainable transport to a sustainable transport.

6. Results and discussion

The results of the research carried out in this paper are highlighting that the transport sector is one of the most important issue of the transition to a sustainable economy. This sector has both an economic impact, through the costs and the benefits involved, but also an impact on other related fields, such as social, psychological and environmental. The main social and psychological problems which characterizes the transport sector at present are related to the separation of the communities, the effects of congestion and its consequences on labor productivity, as well as issues related to the health of the population or the access to certain services for certain social classes. The environment is affected by the fact that, at present, the transport sector is one of the three economic branches that contribute the most to the increase of greenhouse gas emissions, together with the industry and the building sector.

„Statistics learn that over 90% of all road transportation relies on oil. This figure almost goes hand-in-hand with the total global oil consumption, which stands at 60%. All these scenarios have caught the eyes of most governments and policies are being formulated to reverse this worrying trend of air pollution" [5]

The growth of this sector in the last years worldwide is explained by the strong relationship between the transport sector and the economic growth. The transport demand for passenger and for freight is steadily growing, which determines the development of the transport sector at an high rate, which is, currently, mainly unsustainable.

In order to make the transition to the sustainable transport, all the elements related to this sector must be improved - the infrastructure, the vehicles, the transport models, the telecommunications technologies, the transport systems, the type of fuels and of all other materials.

From this research, it turned out that a very important role for the future sustainability of this sector have the States that have to get involved through their economic policies both directly and also indirectly by incouraging the private subjects to invest in this field. The State also plays a very important role in raising the awareness of all the other economic subjects about the importance of making the transport sustainable.

At the European Union level, transport policy has been addressed since the Treaty of Rome, which aimed to ensure a fair competitionand a sustainable mobility. Another important document issued in 1985, the White Paper on Transport, as well as the package of measures for greening the transport, published in 2008. The report "Together for competitive urban mobilization", published in 2013, was desired to implement the sustainable urban mobility.

The number of jobs in the transport sector will change. At the moment, it is dominated by men, who reach in the European Union about 80% of the total number of employees. The changes suppose reorienting the labour force in function of the new types of jobs. The nwe jobs will be related to the activities for the production of the biofuels, of the sustainable materials, of the electrical vehicle, of the infrastructure.

The transition to the green, transport is relatively slow, and the biggest possibilities are in the developing countries because they do not have to change some existing forms and models, but they have to provide the transport directly in a green, sustainable way.

An essential element is also the financing reform, which must cover all the transport sectors and at all levels. The state must orient the resources from unsustainable to sustainable transport. The States should grant more subsidies or tax exemptions to those who bring improvements in the field of green transport and should find effective ways to encourage the financial institutions to give easier and higher amounts as credits for this purpose.

7. Conclusions

This article support the most of the previous researches.

Nowadays, it must be a priority for all managers, including the State, the transition to a type of economy that has fewer negative effects on the environment, as well as fewer negative effects at the social and economic level. The sustainable management is very important, especially nowadays, made progresses which allow changing the vision and the economic behavior in order to increase the economic efficiency.

The sustainable management in the field of transport is an essential condition for the current economic development because transports are the ones that connect the representatives of demand and the representatives of the supply on all the markets, they are necessary in all branches and all economic activities. Their present evolution is made with the price of increasing the greenhouse gas emissions, since transport is one of the three branches that contribute most to the increase of emissions together with the industry and the buildings sector, the most polluting of its sub-sectors being the road transport, which produces over 70% of total emissions. This branch also implies the excessive consumption of some material resources, one of the reasons being the fact that the technical progress is relatively slow compared to the growth rate of this branch.

In addition to the negative effects on the environment, the present development of transports also has negative social and psychological effects, as it increases the number of vehicles in traffic, it creates the congestion and the separation of the communities, as well as problems related to population health or access to certain services, for certain social classes. The social and economic effects include the reduction of labor productivity, as a result of the increase of the transport time.

In order to make transport more sustainable and greener, it is necessary to improve the elements related to everything that belongs to this field, such as - the necessary infrastructure, the vehicles, the transport models, the telecommunications technologies, the creation of smart transport systems, the type of fuels, the creation of the green

cities.

In order to make the transition to the green transport, the State has an important role, because it can adopt and promote different measures in order to avoid the transport, to change the behavior of the economic entities towards this activity, by modifying the transport models, by elaborating the different regulations and by monitoring and control.

The State must develop the public transport so that individuals are less forced to use the private and personal means of transport, and must encourage the partnerships between the public and the private sectors, so that the private sector becomes much more involved in this activity.

At the European Union lebvel, the transport policies have been addressed since the Treaty of Rome, with the aim of opening the markets, to ensure a fair field of competition, as well as ensuring sustainable mobility, which means more efficient mobility in terms of cost, but also of traffic control. Subsequently, a series of documents called "White Paper on Transport" were elaborated, through which, gradually, a series of objectives were decided for the greening of the transport, for achieving the sustainable urban mobility, for a better connection of the European countries through the development of transport networks, for the modernization of the infrastructure.

In the European Union, as a result of the specific measures taken in each of the transport sub-sectors, more progress has been made in recent years - the safety of air, maritime and road transport has been increased, a more comfortable working program has been developed for those who are working in this area, there were created more transport possibilities for all types of passengers and goods, the technological progress was introduced, pursuing a more ecological and a more environmentally friendly transport, the pollution level was reduced. The three European projects - GALILEO, ERTMS and SESAR deserv to be mentioned.

In Romania, a series of measures for transforming the transport into a sustainable transport have been adopted, which include specific sets of measures for each sub-sector and which seek to align with the provisions of the European Union. In the different national strategies regarding the transport subsectors, it is foreseen to adopt measures in order to reorganize the activity according to the European Union directives, to establish a strategy of optimizing costs and increasing efficiency, to promote the most appropriate types of transport for both goods and as and for travelers, to reduce risks and to optimize the transport models.

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Innovation Process with Some Evidences for Romania and EU-13 Countries

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Abstract: *The aim of this article is to study the innovation process as being generated by the evolutionary process and knowledge management within the company. Innovation and knowledge systems are an important source of competitiveness. Innovative companies gather more data, process them better and identify better the technological opportunities that they discover within a shorter time, being thus confronted with a lower level of uncertainty. At the same time, they will be able to accumulate a greater stock of knowledge about the respective technologies. Companies experiment with technologies, while managing to better understand their internal configuration. The firms will be able to adapt their organisational structure and will be able to gain competitive advantages at the expense of other non-innovative companies from the market. Companies learn dynamically about new technologies and those who learn better are rewarded by the market by some rents and for those who don't learn, the market penalizes them by rising costs or even bankruptcy. From this innovation behavior, some companies are able to adapt, improve their products, have better technologies than their competitors and introduce new knowledge management systems. The research methodology is based on a quantitative method.*

Keywords*:* innovation behavior, organisational innovation, product innovation, EU-13 firms, Romanian firms.

JEL Classification: D22, L21, O14

Introduction

The innovation is a source of competitiveness and performance for the company. Although innovation is associated in many situations with technological changes there are several types of innovations. Most studies are focused on product innovations and process innovations. Another classification was made for incremental innovations and radical innovations in order to improve the company's performance. By its nature, technology raises questions regarding the ways in which it will be adopted by companies while the adoption of new technologies involves certain adjustments in the structure of the company. Firms are facing uncertainty about the future costs and results, there are many elements that can't be known ex-ante, there are severe gaps regarding the implementation alternatives of the new technologies. Therefore, arguments can be made that the economic problem is precisely the identification and ordering of the technological options and the company has to dynamically adapt the technologies to the local conditions. Firms are facing contextual problems and they aim to minimize this uncertainty through various approaches. Adopting a new technology and attracting specialists, maintaining the old technology but increasing the production scale are common problems for which companies have to make decisions. Experts estimate that globalization and technological changes will intensify in the next years. That is why the industry must face the challenges posed by technological changes and take advantage of the opportunities offered by the new technological processes with low energy consumption. Globalization, integration within the European Union, changes in demand and scientific progress, technological changes and innovation will have a major impact on long-term industries.

Literature review

Changes generate opportunities but raises competition which is why a turbulent environment will force the company to permanently make organisational changes within the company in order to maintain its competitiveness. These changes represent innovations for a company that manifests itself through the accumulation of tacit knowledge and which leads to the improvement of the production process and product. In this approach the organisational changes are influenced by organisational learning and the market selection mechanism will eliminate firms that did not know how to reorganize effectively (Wang and Chen, 2020).

Schumpeter (1934) distinguished five types of innovation:

1. Product innovation consisting of the introduction of a new product or a product of different quality;
2. Process innovation which consists in introducing a new production method;
3. Creating new markets;
4. Discovery of new primary or intermediate resources;
5. Creating new organizational forms.

Giovanni Dosi (1982) studied the role played by "technological paradigms" from an evolutionary economic perspective. A "technological paradigm" is defined as a "perspective", a set of procedures, a set of "relevant" problems and a set of "specific knowledge" related to the solutions of some problems considered relevant. Each "technological paradigm" has a heterogenous

concept of "progress" based on its own specific economic and technological market selection.

The "technological path" is a direction of technological advancement within a technological paradigm. The innovative process was theorized in terms of practical, theoretical understanding and knowhow. Thus, knowledge appears implicitly through the process of innovation and this implies an experimentation process by trial and error, generating accumulated improvements in the understanding of the object studied. These improvements are specific to each technology and create structural differences significant at the rates at which certain components of the technological frontier can be developed. Innovation patterns follow certain directions in which accumulations of knowledge take place. Through this approach, it correlates the evolution of knowledge with the evolution of technology (Tunzelmann et. al., 2008). Companies are constantly learning about new technologies. Some companies intend to be competitive in the long-term market and for this they choose to always own in the company the latest technologies, thus being in a continuous process of adaptation and structural reorganization.

Wang and Chen (2020) explored the impacts of organisational innovation on imitation and innovation and identified some patterns related to organisational innovation which suggest that a superior level of organisational innovation is needed for product innovation and a change between product imitation to product innovation requires an enhancement in organisational structure.

Several studies have attempted to highlight the relationship between the ability to learn (innovate) for heterogeneous companies, the ability to make a profit in a certain industry and the rate of survival. Some economists have proposed a "noisy" selection of companies through the market, that is, some firms are able to learn in conditions of uncertainty. In the traditional approach, adoption technological changes affect the performance of the company for a short period of time because competing companies are starting to imitate the respective technology. In an alternative approach, there are two classes of companies, respectively some companies with intrinsically innovative behavior and non-innovative firms. In the second vision, innovative companies are considered to adopt the new technologies and then follows a dynamic process of idiosyncratic adaptation of technologies to the economic context of the company in efficient conditions.

In the traditional economic approach, the companies want to adopt the technical progress due to the rent offered and has a temporary character because it begins to be imitated by the competitors.

The output obtained in the innovative technological process consists of:

1. Technological product innovation and consists of:

- changes in the performance of the characteristics taken as a whole of a new product;

- changes in certain parts of the product that allows it to improve efficiently, including the provision of high quality services. Incremental improvements additions to a product can be considered minor accumulations to a product innovation which can lead in time to significant changes;

- patenting activity or obtaining research grants is an innovative activity but it does not necessarily lead to product or process innovation;

2. Technological process innovation:

- implies a significant improvement of the production process as a result of implementation of a new technology.

Nizar et. al. (2006) finds that process innovations are an indicator for firms competing through cost and thus they aim to achieve economies of scale. In Eastern European countries cheaper labor force allows a competitive advantage for the companies operating in this region, relative to the same industries that operate in the more expensive regions of Western Europe.

Tether and Tajar (2008) studied 2500 companies in Europe and identified three types of innovations:

- Based on product research;
- Oriented towards technological processes;
- Based on organisational inovations.

Adoption of a new technology can contribute to the innovation of some products and services if the respective company successfully manages to market its product. Manufacturing sector innovations are defined as "hard innovations" because they involve R&D and / or the production equipment is significantly modified and in the services sector for the "soft" innovations because some organisational adjustments are made within the company as an effect of introducing some sales techniques. For the manufacturing sector, technological innovations are also called "hard" because the innovation is oriented towards the production equipment or the commercialized product. In the services sector, the innovations are oriented towards the organisation form of the company, in particular towards innovations within the distribution chain.

Research methodology

A quantitative method was used in this paper in order to attain the aims of this paper. Several bibliographic sources were consulted from the Central University Library from databases such as Emerald Publishing, Springer and ScienceDirect to cover the topic of the paper. For the quantitative analysis were used the data provided by the European Bank for Reconstruction and Development through the Business Environment and Enterprise Performance Survey (BEEPS), from the fifth round of the data, for the year 2013.

Results and discussion

The study compared the results obtained for the indicators studied in Romania with the same indicators for the EU-13 group of countries within the European Union.

Table 1 includes data for both innovators and non-innovators for the countries chosen according to the European Comission point of view with regarding to a similar innovation structure (Ukrainski et. al., 2018). In the study "Overcoming innovation gaps in the EU-13 Member States" the European Commission appreciates there are structural similarities for EU-13: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia. For EU-13, descriptive statistics can be seen within Table 1. Similarities can be observed for two indicators "Own technology has no competitors" and "Own technology which is more advanced than the main competitor" which are very close to. Romanian Managers appreciate their company to be a better product/ service innovator than the average of EU-13. However, an apparently innovative paradox

behavior can be seen for two indicators: "Own technology which is about the same or less advanced than the main competitor" and "New knowledge management systems". Although Romanian Manager appreciate their technology is the same or lower, they believe that they have introduced improved "knowledge management systems" and some interpretrations are:

- A higher degree of tacit knowledge can provide some competitive advantages;

- A higher level of competition in the segment in which it operates, which may imply a higher level of organisational transformation to achieve a product innovation;

- A higher degree of knowledge which can be measured by an improved level of "New Knowledge Management Systems";

- A higher degree of utilization for "New Knowledge Management Systems" may suggest that the rate of departure from the company by the employees is high and the Romanian companies invest more in computer systems to keep the knowledge after the employees leave or for a better conversion of the tacit knowledge into explicit knowledge.

Prange and Schlegelmilch (2016) argue that exploration leads to completely new innovations and exploitation maintains existing innovations. The exploitation of a certain innovation has a lower risk and has a certain stability in use. Exploration is at high risk because there is uncertainty about changes. For example, in times of economic stability the innovative behavior is incremental, the firms being oriented towards stability and balance. Long periods of economic stability will be followed by short periods of technological revolutions. The changes in the economic environment and the entry into turbulent times will generate certain technological revolutions that represent some jumps. The success of a company lies in its ability to know how to capitalize on both periods, both stability and instability, both through incremental and revolutionary innovations. If we observe that a company is profitable through incremental innovations it means that it is either in a period of economic stability or its competitors maintain their level of innovation. If a company adopts a greater number of innovations it means that it is either in a difficult economic period or it is active in a sector where the competitors have introduced a significant number of innovations. It is expected that companies that successfully exceed a period of technological revolution will have to gain from the period of incremental innovation that follows. Therefore, it is expected that the allocation of resources within the enterprise will be different depending on the two stages.

A phase of technological revolution would imply a higher degree of flexibility of the product design and a relaxation of the company's organisation. A period of stability in which the innovation rate is maintained at a lower level would require a more rigid control of the production process. The period of technological revolution has higher risks and higher potential benefits and the period of incremental innovation has lower risks and benefits proportional to market share. Prange and Schlegelmilch (2016) refers to the notion of "strategic inflection points" (SIPs) as being the point at which a company decides to leave the state of equilibrium to change different types of innovations. To have sufficient resources to engage in innovative exploration behavior, a company might be constrained by a period of exploitation of a sufficiently large

innovation to allow it to finance its exploration activity but also to have the knowledge. required. (Prange and Schlegelmilch, 2016)

Arranz et al. (2019) is orientated to the line of thinking in which organisational innovations (OI) reflect the introduction of those processes changes that have the purpose to enhance the structure of the organisation which improves the firm's performance with respect to productivity, quality, flexibility and other competitive advantages.

Table 1 - Indicators for Measuring Innovation Process

Innovation indicator	New/significantly improved product/service introduced and developed from own ideas	Own technology has no competitors	Own technology which is more advanced than the main competitor	Own technology which is about the same or less advanced than the main competitor	New knowledge management systems
EU-13* innovators	467 (13.45%)	9 (0.26%)	79 (2.28%)	178 (5.13%)	487 (14.03%)
EU-13* total observations	3471	3471	3471	3471	3471
Romanian innovators	100 (18.76%)	-	13 (2.44%)	61 (11.44%)	131 (24.58%)
Romanian total observations	533	533	533	533	533

Source: Author's calculations with data from https://ebrd-beeps.com/ for the year 2013
EU-13 includes observations for Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Sloveni and does not include observations for Cyprus and Malta due to lack of data.*

Innovation capabilities are related to the innovation processes of the company which is measured by the firm's ability to efficiently use new products, processes and knowledge. Sattayaraksa and Boon-itt (2016) found that transformational leadership improves the innovation culture, organisational learning and new product development. Arranz et al. (2019) argues that organisational innovation seen as innovation capability is a mediator between resources and the performance of the company. In this vision, a company achieves a greater level of performance if it transforms resources in organisational changes, innovation in products and processes and OI is generated from resources. OI can be interpreted as a necessity to create a new organisational change.

Sattayaraksa and Boon-itt (2016) argues that organisational learning and innovation culture fully mediated the effect of transformational leadership to the new product development process. Torres and Augusto (2019) found that a path to achieving

improved performance is influenced both by the complementarity of product innovation and organisational innovation and the mix of manufacturing flexibility with either organisational innovation or process innovation can generate a higher product innovation.

Carneiro Alberto (2000) defines the Knowledge Management as consisting of:

- the ability to motivate;
- knowledge as a strategic instrument;
- intellectual capital;
- the measurement of knowledge development.

Iskandar et. al. (2017) reffers to the knowledge creation preocess as it involves the creation of new tacit and explicit knowledge and which is a continual interaction of the flow of knowledge between indiviuals, groups and organisational structures.

Carneiro Alberto (2000) defines Knowledge Development Strategic Decisions as:

- Investments in the development of knowledge;
- Modern Information Technology;
- Knowledge implication of employees;
- Motivation of innovative ideas;
- Motivation of competitive efforts.

The purpose of the Knowledge Management Systems (KMS) is a tool to assist the company in capturing certain knowledge from employees when they leave the organisation and KMS tools converts tacit knowledge to explicit knowledge (Iskandar et al., 2017). KMS represents information systems that helps to collect data, process it, better internal organisation of the company and creates competitive advantages. Companies using KMS have better knowledge control, they can reuse knowledge, they can make faster and more efficient decisions, they can better organise their internal learning processes, they can better transfer knowledge between internal departments or to other structures of other companies. Iskandar et al. (2017) shows that there is a close connection between KMS and the adoption of new technologies. The introduction of new technologies in a company implies a high volume of knowledge that requires the use of tools for knowledge management.

Conclusions

The paper shows that the combination of manufacturing flexibility with process innovation and organisational innovation will generate an improvement to product innovation.

The importance of the paper resides in underlining the strong relationship between product innovation, the level of the technology and new knowledge management systems. Future research might consider other sources for new or improved product developed from own ideas or which influences the development of new technologies.

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Entrepreneurship and intrapreneurship. Entrepreneurs and intrapreneurs

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Abstract: *The paper approaches in a correlative vision the issues of entrepreneurship and intrapreneurship, as vectors of the development of organizations in the contemporary economy. Relevant aspects regarding the entrepreneurial phenomenon and respectively the intrapreneurial phenomenon are presented, highlighting similarities, major differences, as well as areas of interference between them. The scientific approach continues with the exposition of important elements regarding the entrepreneur and the intrapreneur, as main actors of the entrepreneurial and intrapreneurial phenomena. Through the approached themes, the paper highlights aspects found in all types of organizations operating in the current business environment, considering that entrepreneurship is mainly linked to micro-enterprises and small companies, while intrapreneurship is manifested mostly in medium- and large-sized organizations.*

Keywords: organization, entrepreneurship, intrapreneurship, entrepreneur, intrapreneur

JEL Classification: L26, M10, M21, O10.

1. Introduction

Entrepreneurship and intrapreneurship are important vectors of sustainable development of organizations in an increasingly dynamic business environment.

Entrepreneurs and intrapreneurs, as protagonists of the entrepreneurial and intrapreneurial phenomena, constantly initiate and develop business projects, embodied in new processes, new products and new services that compete to increase the competitiveness of the organizations in which they operate.

Larry C. Farrell, internationally recognized as an authority in the field of implementing entrepreneurship practices, believes that entrepreneurship is the most certain way to thrive in an uncertain, constantly changing world. The reduction in the number of jobs is one of the worst consequences of economic crises, and often people who had never planned to become entrepreneurs choose this solution to overcome the crisis (Farrell, 2011).

Becoming an entrepreneur is the best way to thrive in the future world economy. Preparing for survival through your own intelligence is no longer an alternative lifestyle, but an absolute necessity in this uncertain world, dominated by downsizing (Farrell, 2013).

Intrapreneurship, as a specific form of manifestation of entrepreneurship, marks a thematic area of great importance in the theory and practice of organizations, less researched and known, but with a significant impact on the development potential of large and medium-sized companies.

2. Literature review

Professor Howard Stevenson believes that entrepreneurship consists of pursuing an opportunity, making quick changes, adopting multiphase decisions, using the resources of other persons, conducting human relations and networks, and also rewarding the initiators for the newly-created value (Stevenson 1992), (Nicolescu, 2008).

Louis Jacques Fillion has structured the entrepreneurial process in ten activities, specifically (Fillion, 1997), (Nicolescu, 2008):

- identifying economic opportunities;
- conceiving the vision on the entrepreneurial action;
- adopting decisions on starting the entrepreneurial process;
- organizing the initiated business;
- purchasing the equipment necessary for the activities to be carried out;
- acquiring raw materials, in general all the elements representing "inputs" in the entrepreneurial process;
- operationalizing marketing methods and techniques;
- selling products and services on the market;
- ensuring the necessary workforce, both in terms of quantity, but especially in terms of quality, i.e. professional competence;
- subcontracting and attracting external collaborators for those activities for which the necessary competence and means are missing.

The aspects presented above refer to the entrepreneurial phenomenon for economic purposes, namely entrepreneurial processes

and activities in the economic field. It is worth noting that the entrepreneurial phenomenon also manifests itself in other fields, such as the educational, cultural, social, political field, etc. A person having an idea, crystallizing a vision, materializing that idea through coordinated actions and inducing quantitative and qualitative changes in a certain system or field of activity is, without doubt, an entrepreneur.

Returning to the economic dimension of the entrepreneurial phenomenon, we summarize the following key-elements: a business idea, a business opportunity, i.e. the detection thereof in a certain entrepreneurial environment, a set of resources (human, financial, material, technological, informational, etc.), spirit of initiative and creative-innovative potential (see Figure 1).

Figure 1. Key elements of the entrepreneurial process

Intrapreneurship has been shaped after World War II in several innovative companies and represents a specific form of entrepreneurship. If entrepreneurship resides in the creation and development of small companies as a result of detecting and capitalizing on business opportunities, intrapreneurship manifests itself in large and sometimes medium-sized companies, starting from market opportunities that have not been capitalized until that time by the respective organizations.

Professor Ovidiu Nicolescu finds that "entrepreneurship consists in the development of certain entrepreneurial activities within an existing company, usually of large or medium size, by some of its employees, using some of its technical-material resources, which are either not used or insufficiently used and capitalized" (Nicolescu, 2008). Intrapreneurship involves the creation and development of entrepreneurial cores in large and medium-sized companies which carry out activities with a pronounced innovational character, taking advantage of certain market opportunities.

The intrapreneurial phenomenon must benefit from a favorable manifestation

framework. The most important factors that can favor the initiation and development of intrapreneurial activities within the medium and large companies are:

- consistency between the objectives of the entrepreneurial core and the fundamental objectives of the company, which are found in its mission (for example, an objective of the entrepreneurial core could be the penetration, with an innovative product, in a market not accessed until then by the company);
- the support offered by the senior management of the company for the initiation and development of the intrapreneurial approach (the allocation of human, financial, technical, informational resources, etc, to support the activities of the entrepreneurial core);
- a functional, effective and flexible organizational structure that allows the delimitation and development of some entrepreneurial cores within the company (it is important that the constituted nucleus be integrated in the organizational structure and have a high degree of autonomy in the decisional and operational plan);
- the existence within the company of human resources with high entrepreneurial potential (the entrepreneurial core can be constituted only if there are human resources with multiple competences, receptive to new and showing flexibility and initiative in the activities they carry out);
- the company must have a complex of resources that support the initiation and development of the intrapreneurial approach (the resources have to be sufficient to ensure both the fulfillment of the objectives of the entrepreneurial core and the fundamental objectives set by the senior management and foreseen in the company's mission).

The intrapreneurial process involves going through several progressive stages, arranged in the following sequence (Hidden, 1991):

- convincing the management team regarding the feasibility, the opportunity and, often, the urgency of starting the intrapreneurial project and, implicitly, of establishing a core or several entrepreneurial cores in the company;
- informing the personnel of the company about the intrapreneurial approach, as well as organizing some intrapreneurial training programs dedicated to the human resources involved in the proposed project and which will constitute the entrepreneurial core;
- setting up the team that will ensure the initiation and development of the intrapreneurial project, respectively of the entrepreneurial core, made up of the human resources that have expressed their desire to participate and which have been prepared in the previous stage;
- substantiating and adopting the strategy of the entrepreneurial core, which will be integrated in the company's development strategy (objectives are set, strategic options are defined,

resources are allocated, deadlines are delimited, etc.);

- completing the overall configuration of the management system related to the entrepreneurial core, respectively the decisional, structural-organizational, informational and methodological components, as well as detailing the program for the implementation of the intrapreneurial project.

3. Research methodology

To achieve the objectives of this paper we used the quantitative research method. The review of the specialized literature was based on consulting representative titles, books and articles from the area of the approached issue, respectively from fields such as economy, management, entrepreneurship and intrapreneurship. The documentation was made within the "Carol I" Central University Library of Bucharest, by consulting studies and research from international databases such as Ebsco, ProQuest, Emerald Insight, Springer and Wiley Online Library.

4. Results and discussion

There are similarities, major differences, as well as areas of interference between the entrepreneurial and the intrapreneurial phenomena. In our opinion, there are five key elements that give substance and consistency to entrepreneurial and intrapreneurial endeavors. These are the business idea, the business opportunity, the resources, the initiative spirit and the creative-innovative potential.

Both an entrepreneurial and an intrapreneurial approach have as their starting point a business idea, which has to be put into practice by detecting and capitalizing on an opportunity existing on the market. The "business idea – business opportunity" coupling is achieved by manifesting the spirit of initiative, doubled by a significant creative-innovative potential, which determines the innovative character of the entrepreneurial and intrapreneurial projects. Resources are essential in realizing the business idea by taking advantage of the opportunity detected in the market. The five key elements represent true forces that, by their convergent action, decisively influence the success of the entrepreneurial and intrapreneurial endeavors.

An element of major differentiation between the entrepreneurial and the intrapreneurial phenomena is represented by their protagonists. The entrepreneur is the main character of the entrepreneurial phenomenon, while the intrapreneur is in the foreground of the intrapreneurial approach.

The American Professor Peter Drucker considers that since the 80s we have been witnessing an entrepreneurial revolution, reflected in the shift from managerial economy to entrepreneurial economy. In his view, the entrepreneur is the person who permanently looks for changes, his actions having a predominantly practical nature (Drucker, 1985).

An interesting approach is the one of the Canadian researcher Jean Marie Toulouse, focused on three axes of human activity: value system, degree of commitment and intensity of actions (Toulouse, 1997). According to this approach, the entrepreneur pays special attention to the autonomy and freedom of decision, assumes the risks involved by his activity and has a strong inclination towards action, showing creativity in solving the problems that he is faced with.

Professor Eugen Burduş finds that the entrepreneur is a person who creates new businesses, assuming risks in achieving the objectives, by identifying opportunities (Burduş, 2010).

Marius Ghenea, a successful Romanian entrepreneur and professor of "Entrepreneurship, Innovation and New Business Ventures" at Maastricht School of Management, proposes a simple but suggestive definition of the entrepreneur. According to this definition, the entrepreneur is the person who looks at a problem and sees it as an opportunity, and then acts on it. All people see problems in their daily lives, some of them identify solutions to these problems, but very few go further and act to implement solutions. This approach highlights the fact that an entrepreneur is a person who has ideas and acts based on his ideas to turn them into business projects (Ghenea, 2011).

In our opinion, the entrepreneur is one of the main actors of an economic system with competitive market as he creates new organizations and develops existing organizations. The starting point of the entrepreneurial action is the business idea, which the entrepreneur puts into practice by detecting and capitalizing an opportunity existing on the market, making use of a set of resources (Ionescu, 2004).

Unlike the entrepreneur, the intrapreneur is an employee of a company that, together with other employees, initiates and develops an entrepreneurial approach, having a certain degree of entrepreneurial and managerial autonomy, being rewarded according to the results obtained (Nicolescu, 2008).

The intrapreneur presents some defining features, among which we mention (Brenner and Brenner, 1988):

- assuming a lower risk, as the intrapreneurial project is carried out in a large or medium-sized company that, through the important resources available to it, supports the action initiated by the intrapreneur, thus creating the necessary premises for the latter's success;
- greater rigor in substantiating the decisions and in initiating the actions for their implementation, due to the experience accumulated within a company with a high degree of formalization (well established documents, regulations and working procedures) and with a consolidated organizational culture;
- obtaining lower incomes, as long as he use the company's resources and benefit from support throughout the intrapreneurial process.

According to those presented above, an intrapreneur represents a potential entrepreneur. There are several factors that can cause an intrapreneur to become an entrepreneur, such as the desire to acquire another status, to obtain higher incomes, to have a higher degree of autonomy in the decision-making and operational plan, as well as the possibility to make use of certain professional and entrepreneurial skills. Also, the lack of material and moral-spiritual motivation within the company in which it operates can cause an intrapreneur to become an entrepreneur.

An intrapreneur can set up a business together with his colleagues in the company with whom he worked within intrapreneurial projects, thus becoming an entrepreneur. However, there are also situations in which an intrapreneur enjoys a great appreciation in the company, is respected and motivated by the managerial team, has sufficient freedom in experimenting ideas and, therefore,

will not choose to join the entrepreneurs, being pleased with his position within the organization. An intrapreneur's decision to become an entrepreneur depends, as we have explained, on several personal and contextual variables that are dynamic.

5. Conclusions

Entrepreneurship consists of pursuing an opportunity, making quick changes, adopting multiphase decisions, using the resources of other persons, conducting human relations and networks, and also rewarding the initiators for the newly-created value.

Intrapreneurship involves the creation and development of entrepreneurial cores in large and medium-sized companies which carry out activities with a pronounced innovational character, taking advantage of certain market opportunities.

There are similarities, major differences, as well as areas of interference between the entrepreneurial and the intrapreneurial phenomena. In our opinion, there are five key elements that give substance and consistency to entrepreneurial and intrapreneurial endeavors, specifically: the business idea, the business opportunity, the resources, the initiative spirit and the creative-innovative potential.

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Organization Culture. Models and Approaches

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Abstract: *In a constantly changing and evolving market worldwide, each organization seeks to shape and develop appropriate leadership, so that it responds to all the demands arising in the organization's internal and external environment. Organizational culture imposes itself as the best way for operating in a successful manner. The members of the organization must develop a belief shared by the same values, attitudes, habits and written or unwritten rules that directly influence their activity. Culture needs to evolve in order for the organization to remain relevant in a changing environment. In this sense, changing the organizational culture is not an easy process, as the members of the organization are often reluctant to new things, having a behavior that implies weaker results. This paper aims to highlight a few models of organizational culture, approaches, features, characteristics and implementation strategies. At the same time, the paper offers a brief review of the empirical research of the terms published in the specialized literature, including various conceptual frameworks such as: "corporate culture", "workplace culture", "business culture", but also an analysis of the organizational culture that is permanently created and modified so as to ensure the continuity and efficiency of the organization.*

Keywords*:* organizational culture, corporate culture, workplace culture, business culture, models of organizational culture

JEL Classification: M10, M14, L21

1. Introduction

An organization is made up of people with different educational qualifications, specializations and different work experiences, working together to achieve a common goal. The culture is formed over a long period of time, it is implicit and it plays a role of selection factor of the level of integration of the members, governing, in the subconscious way, the everyday behavior of the employees. The study of organizational culture has been and is the object of study for several research fields: organizational sociology, organizational psychology, management economy. The boundaries of the approach and the analysis have not always been sufficiently clearly drawn, to the extent that overlaps and interferences appear in the way of research and the purpose pursued.

The organizational culture includes the experiences, the philosophy of an organization, as well as the values that guide the behavior of its members, and is expressed in its inner workings, its interactions with the outside world, but also in the self-image of the members. At the same time, the culture is based on written or unwritten habits and rules, attitudes, beliefs that directly influence the activity of the members of the organization.

The term "organizational culture" refers to the values and ideologies of an organization. The principles and policies followed by an organization shape its culture. An important place is occupied by the culture of the workplace, being the one that decides how individuals interact with each other inside and outside the organization. The employees must respect the culture of their organization, adapt as best they can, be motivated and enjoy the performance of their work.

It is important that organizations understand the meaning of change and tackle it as source for increase performance and competitiveness. (Ionescu and Bolcaş, 2015, p.89)

2. Literature review

In the specialized literature there are numerous approaches to the term "organizational culture".

Ever since 1957, Theodore Szelnic, a well-known American specialist, has identified and defined the organizational culture. Later, practical studies conducted by successful American companies, such as IBM, Hewlett-Packard, Delta Airlines, Kodak, etc., highlighted that there is a particular impact of organizational culture on the economic performance of these organizations. (Zorleţan et al., 1995, p.192)

In a number of Revue francaise de gestion dedicated to the concept of corporate culture, the French author Jean-Luc Vachette noted the emergence of the "corporate culture" concept in the United States of America at the end of the '70s, a concept equivalent to that of enterprise culture. The emergence of the organizational culture concept was perfectly in line with the need of the companies at that time to "mobilize the entire staff of the enterprise and make them adhere to the unique identity of the organization." (Vachette, 1984, p.74)

In the early '80s, the first books on organizational culture appeared, such as: In Search of Excellence, by Thomas J. Peters and Robert H. Waterman; Theory Z: How American Business Can Meet the Japanese Challenge, by William G. Ouchi; Corporate Culture, by Terrence E. Deal and Allen A. Kennedy. Extremely suggestive for the

spread of the concept is that, in 1981, the prestigious Harvard University introduced its first course on corporate culture.

Peters and Waterman, (1982) in In Search of Excellence, which became a very successful bestseller, defined organizational culture as "a dominant and coherent set of values shared by the members of the organization, induced by symbolic means". The two authors made an extremely important contribution to the dissemination of this concept, demonstrating through concrete cases that there is a close connection between the dimensions of the organizational culture and the performances obtained by renowned corporations.

The definition given to the organizational culture by the author Antonio Strati is also interesting: "Organizational culture represents a set of symbols, beliefs and patterns of behavior learned, produced and recreated by people who dedicate their energy and work to the life of an organization. It is expressed in the design of the organization and of the work, in the built manifestations of the culture and in the services that the organization produces." (Strati, 2010, p. 578)

The American researcher Edgar Schein defines group culture as "a model of basic hypotheses shared by the group in solving problems of external adaptation and internal integration, which have worked well enough to be considered valid and therefore to be passed on to other new members, as a correct way to perceive, understand and feel about those issues." (Schein, 1992, p. 15-18).

According to the author Geert Hofstede, the organizational culture can also be defined as "a collective mental programming, which distinguishes the members of an organization from the members of another organization."(Hofstede, 2008, p.208)

The French author Maurice Thévenet appreciates that there is an organizational culture specific to each enterprise, "consisting of the ways to respond to current situations in the professional life" and proposes a description of the organizational culture, analyzing it as an essential resource of the organizations, which has to be taken into account by the management. (Thévenet, 2010). The Romanian authors Nicolescu and Verboncu defined the organizational culture as a "set of values, beliefs, aspirations, expectations and behaviors outlined over time in each organization, prevailing within it and directly and indirectly conditioning its functionality and performances." (Nicolescu and Verboncu, 2008)

The authors Burduş and Căprărescu defined the organizational culture as "a set of artificial products, of the basic values and concepts, of the ways of thinking and behavior generally accepted in an organization as a common base for action." (Burduş and Căprărescu, 1999, p.183)

Beltran and Ruffat (1991) in their research paper define the enterprise culture as functioning as a metaphor on which the contemporary authors' various opinions on enterprise are explained. The analysis of its content highlights both convergent and contradictory points, being a useful tool to express the reality within an organization. (Beltran and Ruffat, 1991, p.25).

Organizational culture is a set of shared assumptions that guide what happens in organizations by defining appropriate behavior for various situations (Ravasi and Schultz, 2006)

According to some American authors, the organizational culture "involves rituals,

symbols and stories associated with a category of people, providing an image of people's beliefs and values, of things that are important to them, and of the reasons behind these choices." (Dygert and Jacobs, 2006, p.21)

Culture also includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits (Needle, 2010)

Culture is based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed over time and are considered valid.

Human Synergistics International, founded in 1971, which has earned an international reputation for innovation in organizational development, defines culture "in the organizational context as being the shared norms and expectations that govern the way people approach their work and interact with each other. Such norms and expectations shape how organizational members believe they are expected to behave in order to fit in, get things done, and at times simply survive."(HSI, 2019).

In the specialized literature the following terms can also be found: "corporate culture", "workplace culture" and "business culture".

The culture of the workplace controls the way employees behave amongst themselves as well as with people outside the organization. The culture decides the way employees interact at their workplace. (Schein, 2010).

Business leaders are essential to creating and communicating their culture in the workplace. However, the relationship between leadership and culture is not one-sided. While leaders are the main architects of culture, a dedicated culture influences what kind of leadership is possible. (Schein, 2010, p. 15-18).

As organizations acquire a defining structure and a distinct identity, after they begin to accumulate specific values, they become a subject which is more and more frequently studied by researchers, and their analysis is refined by moving to the processes and mechanisms that make their functioning possible. (Bran, 2019).

According to Jeffrey Sonnenfeld, Professor at Harvard Business School and president of the Chief Executive Leadership Institute, the main types of organizational cultures are: Normative Culture, Pragmatic Culture, Academy Culture, Fortress Culture, Baseball team Culture, Process Culture, Bet your Company culture. (Pfeffer et al. 2000).

3. Models of organizational culture

In this section of the paper we will present two representative models of organizational culture developed over time.

Schein's Model

Edgar Henry Schein, born in 1928, renowned professor at MIT Sloan School of Management, has studied extensively the field of organization management.

Schein believes that any organization does not adopt a culture in a day, but it is formed in a longer time, as the employees go through various changes while solving problems and adapting to the external environment. The employees gain from their past experiences and start practicing it daily, thus forming the workplace culture. In this respect, the new employees will endeavor to adapt to the new culture as best as possible. (Schein, 2010).

The culture, in Schein's opinion, must be examined at the level of basic hypotheses

kept by the members of a group that share the same historical structures, stored at the unconscious level of the members of the organization and that provide direction and meaning for man's relationship with nature and with reality.

Schein (MSG, 2010) proposes a model of organizational culture structured on several levels:

a) Artifacts

The first level is given by the characteristics of the organization that can be easily viewed, heard and felt by individuals, collectively known as artifacts. The dress code of the employees, the office furniture, the facilities, the behavior of the employees, the mission and the vision of the organization are part of the artifacts and go a long way in the decision of the workplace culture.

Artifacts are considered materialized expressions of the basic values and hypotheses.

b) Values

The next level, according to Schein, which constitutes the culture of the organization, is the value of the employees. The values of the individuals working in the organization play an important role in the decision of the organization culture. The thinking process and the attitude of the employees have a profound impact on the culture of any organization. Thus, the mentality of the individual associated with any organization influences the workplace culture.

c) Assumed Values

The third level represents the values assumed by the employees, which cannot be measured, but make a difference in the culture of the organization. There are certain beliefs and actions that remain hidden and that affect the culture of the organization. The inner aspects of human nature can be found at this level of the culture of the organization. An example, in this sense, would be that female employees do not want to have late hours meetings, while male employees would have no problems. Organizations follow certain practices that are not discussed, but are understood.

Organizational Culture Inventory (OCI) Model

Robert A. Cooke is CEO and Director Human Synergistics International, Associate Professor Emeritus of Management at the University of Illinois at Chicago and has served as Study Director on numerous research projects on management, organizational change, and human subject experimentation.

Cooke believes that every employee has a way of behaving in the workplace that he or she considers right and would help him or her survive in the organization for a long time. Individuals with different backgrounds and interests come together in an organization to achieve a common goal. Thus, according to Cooke and Lafferty, the culture of an organization is the way employees behave in the workplace to ensure a stable future and growth. (Cooke and Lafferty 2019).

The Organizational Culture Inventory (OCI) model proposed by Cooke and Lafferty is the result of more than 20 years of research and complex integration of questionnaires. The OCI model measures the attributes of the culture of the organization that most closely relate to the behavior and performance of the organization.

Cooke proposed three types of culture in the organization:

➤Constructive Culture

There are organizations that encourage interaction among their members. The employees have the freedom to share their ideas, exchange information and discuss things in order to reach a solution that is beneficial to all. Conflicts arise when the employees feel neglected and are not allowed to express their opinion. A constructive culture encourages discussion and exchange of ideas among the employees and motivates them to achieve the best results.

➤Passive Culture

In a passive culture, the main motive of the employee is to please the superiors, to consolidate his position safely within the organization. Thus, the employees respect the guidelines and the rules imposed only to save their work place.

➤Aggressive Culture

Organizations that follow an aggressive culture promote competition among the employees. The employees are encouraged to compete with one another, so that each one performs better than his or her colleagues. In such a culture, employees who seek the assistance of a colleague are often labeled as incompetent employees. Each employee aims to gain power, attention and strives to gain as much appreciation as possible.

4. Research methodology

In order to reach the aims of the paper the authors employed a quantitative research method. The information was acquired by desk research. The literature review was based on a comprehensive search into numerous sources of secondary data, such as articles and books from the domains of management, culture, history and economics. The research was carried on in the Central University Library and in the Academy of Economic Studies Bucharest Library where several electronic databases were located and consulted (e.g., JSTOR ProQuest, Emerald Insight)

5. Analysis and discussion

We will perform a correlative analysis of the models of organizational culture presented, highlighting the main advantages, but also their limitations.

The phenomenon that will form the object of Schein's model is the "culture" itself.

Regarding the first level, the artifacts, we will take the AB organization as an example and, according to the model, we will have the following characteristics:

- Nobody in AB organization is allowed to dress casually.
- The employees are very strict regarding the observance of the deadlines and ensure the fulfillment of the tasks within the set period of time.
- The employees respect their superiors and avoid unnecessary disputes.

In the case of the CD organization, we will have the following characteristics:

- The employees can wear whatever they want.
- The employees make use of observations at the workplace and easily engage in mutual controversies.
- The employees of the CD organization are least bothered by the work and spend most of their time discussing and gossiping.

In the example above, the employees of

AB organization wear a suit (costume) that emanates professionalism and strictly respects the organization's policies.

In the case of the CD organization, its employees have a relaxed attitude and do not take their work seriously. The AB organization follows a strict professional culture, while the CD organization follows a weak organization in which the employees do not accept things voluntarily.

Schein's model has as main strengths the careful approach given to the employees and their daily experiences, thus forming the culture of the workplace.

Cooke's OCI model is more complex and is used by Human Sysnergistics International. The model is presented on the Circumplex chart offering a visual perspective and a common language for all levels of the organization. (Cooke and Lafferty 2019).

According to the OCI model, the employees' answers to the questionnaires are summed up and analyzed electronically in order to generate a report that supports the cultural change initiatives of the organization.

The model measures the current culture of the organization in terms of behavioral norms of the members of the organization to meet its expectations. The employees' responses are cumulated and transposed on the Human Synergistics Circumplex to show the relative power of Constructive, Passive and Aggressive norms within the organization.

Thus, we capture the following aspects with regard to:

- Constructive Culture:

➤Achievement. A constructive culture helps the employees reach their goals within the set time frame.

➤Self-Actualizing. In this type of culture, an employee remains motivated and realizes their full potential.

➤Humanistic-Encouraging. The employees offer the highest level of services and strive to promote the image of the organization.

➤Affiliative styles. The employees avoid unnecessary conflicts and disputes, promoting a positive workplace environment.

- Passive Culture:

➤In such a culture, the employees cannot make decisions on their own. They must obtain the approval of the hierarchical superior before implementing any idea.

➤The employees are bound by the rules and regulations of the organization and act only in accordance with the prescribed standards.

➤The performance of the employees depends on the decisions of the superior and follows his orders.

➤The employees tend to avoid their own interests, satisfactions and act in accordance with the organization's policies.

- Aggressive Culture:

In the above culture, the employees are aggressive, compete with each other and try to become perfectionists. The employees identify their mistakes and manage to minimize them.

The characteristics of this type of culture are: power, opposition, improvement and competitiveness.

The OCI model has several advantages:

a) signaling and validating the need for cultural transformation

b) programs to increase the implementation of the strategy, quality and reliability of customer service

c) evaluating and improving the organization's openness to a cultural change

d) facilitating mergers, strategic alliances

e) assessment of the impact of change by using the periodic culture questionnaire to identify the progress made

Consequently, after completing this model, the organization acquires a vision of the ideal culture, in terms of behaviors that would allow them and the organization to achieve their mission and goals and successfully implement their strategic initiatives.

Thus the idea of continuous change is induced, a reality that all organizations are facing in the current period. The limitation of this OCI model could be related to its accreditation for one or more of the team members who will have the necessary skills to identify the right levers to change the culture in the long run. This limit could be lowered by adequate training of the management team and all human resources directly involved in the change process.

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6. Conclusions

In order to make an organization work properly, the organizational culture must be passed on to the new members with conviction and they must perceive it as valid. If every generation entering the organization brought new values and perceptions, culture would no longer be stabilizing for the organization. This process of transmitting the organizational culture to the new members allows its testing and validation. The sum of ideas, values, expectations, attitudes and norms is the binder of the organization. Organizational culture can, therefore, be regarded as the way in which the organization solves problems in order to achieve specific goals and survive in the long term.

Organizational culture improves the stability of the organization and gives its members that understanding they need to discover the meaning of events and activities that take place in the organization (within the everyday activities). Organizational culture is centered upon the concepts of external adaptation and internal integration.

Culture is an integral part of the organization, difficult to manipulate, a mixture of values, beliefs, norms, ways of thinking, professional traditions and a language shared by the members of the organization.

The models of organizational culture in the specialized literature emphasize the understanding of the functioning aspects of the organization and their members, the important role given to human resources in the organization, and the approach of culture as a variable with major impact on the organization's performance.

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Learning From A Smart Asian State: Singapore

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Abstract: *Rarely in the course of world history has the pace of socio-economic and political transformation been so fast as in the case of Singapore since the mid-1960s. In spite of its lack of natural resources, the tiny Asian state achieved an impressive economic development and a high living standard in a short period of time. The successful story of Singapore shows clearly why the Asian city-state needed to be smart in the sense of being strategically oriented towards building a welfare society with a pronounced technological footprint. Visionary and strong political leadership, economic pragmatism, developmental policies, technological sophistication, and exceptional living conditions are among the key features of Singapore. The aims of the paper are to present the concept of smart state and briefly analyse its implementation in Singapore. The methodological approach is based on a quantitative method and a case study. The paper shows that the appearance and development of smart state can be considered as the outcome of the spread of the knowledge society worldwide. Also, it briefly analyses the case of Singapore, a smart Asian state, and identifies some of his main features.*

Keywords*:* smart state, Singapore, knowledge, economic development, government.

JEL Classification: F00, O1, O53

1. Introduction

Located in Southeast Asia, the Republic of Singapore is a sovereign state-city, an island nation separated from Malaysia by the Johor Strait and from Indonesia by the Singapore Strait. Derived from the word "Singapura" ("Lion City"), the name Singapore is connected with Merlion, a mythical creature that symbolizes the mixture between an upper half lion and a lower half fish (Hayward, 2012).

Along with Taiwan, South Korea, and Hong Kong, Singapore became one of the so-called "Four Asian Tigers" and one of the most prosperous country in the world. These Asian nations heavily invested in industrialization and showed their economic performance in successfully competing with other countries in markets around the world (Lee and McNulty, 2003). Various approaches attributed their economic rise to a variety of elements such as the geographic position, the political-institutional factors, the socio-cultural pattern, the geopolitical context, the authoritarian capitalism, the capital accumulation or the economic policies (Young, 1995; Kim, 1998; Holzer, 2000; Park, 2002).

It is said that "the island's unique location at the southern end of the Straits of Malacca and midway between the Indian Ocean and South China Sea has made it a crucial site for contestations, negotiations and adaptations among a number of European and Asian powers" (Aljunied and Heng, 2011, p. 14). The history of modern Singapore began in 1819 when Sir Stamford Raffles established a trading post there (Hahn, 1946). The island remained under the British sphere of influence until 1942 when it was invaded by the Japanese army (Walton, 2018). At the end of the Second World War the British military administration took over. Under the political leadership of Lee Kuan Yew, a Cambridge-educated lawyer, Singapore experienced a long period of sustainable economic development after obtaining its independence from Britain in 1963 and from the Federation of Malaysia in 1965.

Rarely in the course of world history has the pace of socio-economic and political transformation been so fast as in the case of Singapore since the mid-1960s. In spite of its lack of natural resources, the tiny Asian state achieved an impressive economic development and a high living standard in a short period of time. Its political leaders understood the need to use the few resources Singapore has: "a strategic position at a global crossroads of trade and a hardworking citizenry" (Abshire, 2011, p. 11).

The successful story of Singapore shows clearly why the Asian city-state needed to be smart in the sense of being strategically oriented towards building a welfare society with a pronounced technological footprint. The smartness of the Singaporean state explains why the country is currently occupying high positions on most of the global rankings such as the Global Competitiveness Index 4.0, the Human Development Index, the Corruption Perceptions Index or the Waseda University International e-Government Ranking.

The aims of the paper are to present the concept of smart state and briefly analyse its implementation in Singapore. The article consists of four parts. The next section reviews the literature. The research methodology is presented in the third section. The fourth section deals with results and discussion. Paper ends with conclusions.

2. Literature review

Within the academic literature, the term "smart" has been mostly developed from a technological point of view. Technologists consider smart as the intersection of five domains: social, analytics, mobile, the Internet of Things (IoT), and cloud (FreeBalance, 2017). In fact, more and more things have become smart in the last decades such as smart devices, smart homes, smart factories, smart cities or smart states.

In spite of the fact that there is no consensus in the academic world about what smart means, the concept is related to the use of technology, especially of advanced information and communications technology (ICT), in all domains. In other words, smart characterizes products, services, systems, etc. in which ICT plays a key role.

Based on digital technology and a citizen-centric approach (e.g., citizen's control of his public services), a smart state is a "more flexible, responsive and agile state" (Dupont, 2018, p. 5) in which "citizenship is active and institutions are "open by default" " (Noveck, 2015, p. xvi) and is about "using knowledge, creativity and innovation to maintain prosperity and quality of life" (Queensland Government, 2012, p. 5). Becoming a smart state means not only implementing ICT on a large scale, but also "improved processes, governance, and above all, improved customer service" in order to enhance "liveability, workability and sustainability" (Smart Cities Council Australia New Zealand, 2017, p. 7) through investments in knowledge, education and smart industries (Queensland Government, 2012).

According to P. D. Beattie, the former premier of Queensland, the smart state vision is to make the state "a place where ideas and innovation flourish, education is of the highest quality, the economy thrives and jobs are rewarding" (Queensland Government, 2012, p. 2). There are several characteristics of a smart state as follows (Queensland Government, 2005):

- investments in research and development (R&D),
- technology diffusion,
- commercialisation and entrepreneurship,
- collaboration,
- connectivity,
- networks and alliances,
- expanding knowledge and skills,
- a diverse, dynamic and creative culture, etc.

Therefore, the smart state represents a multidimensional concept that encompasses a multitude of elements such as knowledge, ICT and citizenship. Also, it is a dynamic concept that adapts to the continuous technological changes.

3. Research methodology

In order to reach the objectives of the paper the author used a quantitative method and a study case. The quantitative method deals with measurable data and is based on gathering, processing and summarizing information from various secondary sources of data. In this respect, the author collected information from books, academic journals and reports. The literature review was carried on at the Central University Library Carol I of Bucharest and at the British Council Bucharest.

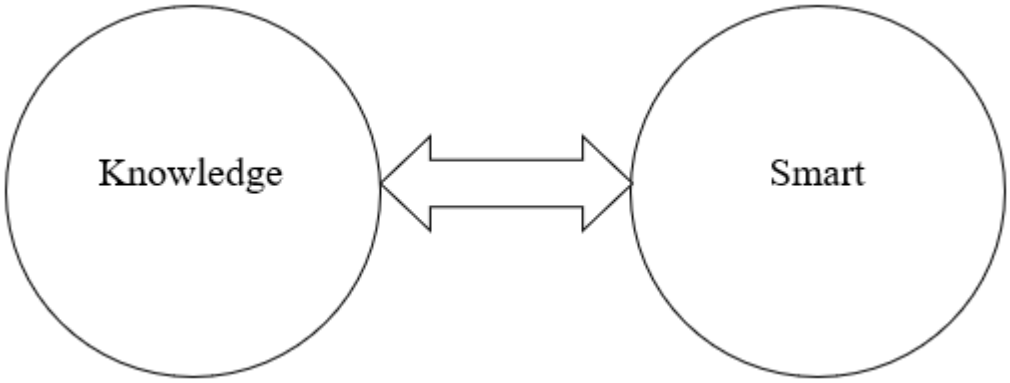
The case study method is defined as „an empirical inquiry that investigates a contemporary phenomenon within its real-life

context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 1984, p. 23). It allowed the examination of data related to a specific context, namely Singapore.

4. Results

Starting from the literature review the author asserts that there is a clear and strong relationship between two concepts: knowledge and smart. First, both concepts have evolved during the time as follows: the use of the knowledge concept in the literature has gradually expanded from knowledge worker and knowledge organization to knowledge economy and knowledge society. The same happened for the smart concept: from smart device and smart city to smart nation and smart state. Second, the knowledge concept leads to the emergence of the smart concept whereas the smart concept contributes to the development of the knowledge concept (Figure no. 1). Through the acquisition of new knowledge people become smarter. On the other hand, smarter people produce new knowledge.

Figure no. 1. The relationship between the concepts of knowledge and smart



Thus, the emergence and development of smart state can be seen as the result of the expansion of the knowledge society all over the world. Singapore constitutes a valuable example of a smart state. The smartness of the Singaporean state has been proved by several main elements such as:

• The state has succeeded in designing and implementing one of the most competitive education systems in the world. In 2015, Singapore held the first position and, in 2018, the second position at PISA (Program for International Student Assessment) test, an Organization for Economic Cooperation and Development (OECD)'s program that measures 15-year-olds' ability to use their reading, mathematics and science knowledge (OECD, 2015; OECD, 2018). The quality of vocational training placed Singapore on the 6th position in the world in 2019 (Schwab, 2019). As universities in Singapore gained growing recognition worldwide, the National University of Singapore was ranked 11th and the Nanyang Technological

University 12th in the QS World University Rankings in 2018 (Quacquarelli Symonds, 2018). Therefore, the Singaporean higher education system occupied the 28th place in the world in 2018 (Quacquarelli Symonds, 2018). According to the World University Rankings 2020, the National University of Singapore ranked 25th in the world (Bothwell, 2019).

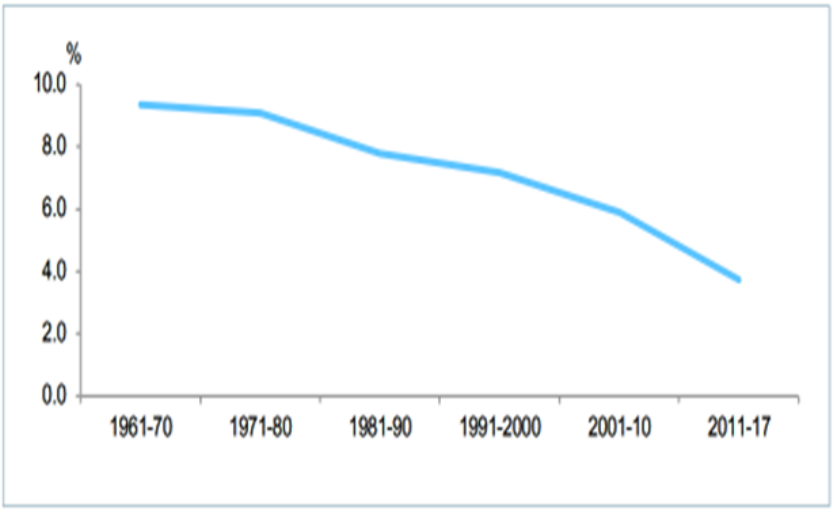
- The state created a proper environment for the flourishing of innovation. In this respect, Singapore was ranked 7th in the world in 2015, 6th in 2016, 7th in 2017, 5th in 2018, and 8th in 2019 (Cornell University et al., 2019). Also, the R&D expenditures as a percentage of GDP placed Singapore on the 14th position in the world in 2019 (Schwab, 2019).

- The state has successfully initiated and performed the Smart Nation Program in order to allow the country to become one of the world's best destination for digital capabilities and achievements. As a whole-of-nation huge effort, the program is based on three pillars: digital government, digital economy, and digital society (Khern, 2019). The strong digital foundations of Singapore are given by the digital infrastructure, the high mobile penetration rate and the digital literation of the most citizens (Balakrishnan, 2019). By transforming Singapore through technology, the Smart Nation Program aims to achieve digitization in five main domains: health, education, transport, urban solutions, and finance (Smart Nation and Digital Government Office, 2018). After being nine consecutive years in the first place in the world, Singapore held the second place in digital government activities in 2018 (Obi, 2018).

- The state has fully understood the need to create and develop a wealthy and prosperous society in Singapore. As a former British colony, Singapore aggressively promoted economic development and sustained extraordinary rates of economic growth after the 1960s. The capitalist developmental state succeeded in putting in practice successful developmental policies (Toma, 2019). For decades, the average of economic growth surpassed 6% yearly (Figure no. 2) through the achievement of a sustainable growth (Toma and Grădinaru, 2007). The gross domestic product (GDP) of Singapore was 338.406 US$ billion in 2017 and 364.157 US$ billion in 2018 (World Bank, 2019a). Also, the GDP per capita in current US$ was 60,297.794 in 2017 and 64,581.944 in 2018 (World Bank, 2019b). As the GDP per capita at the purchasing power parity attained US$ 101,352.577 in 2018 (World Bank, 2019c), Singapore was ranked among the top ten countries of the world (Central Intelligence Agency, 2019). The unemployment rate is rather low: only 3.8% in 2019 (Schwab, 2019). Cooperation in labour-employer relations and the close relationship between wages and productivity are other strengths of Singapore (Schwab, 2019).

- The governments of Singapore have built a highly competitive knowledge-based economy since the 1960s. According to the Global Competitiveness Index 4.0, Singapore held the first position in the world, one place higher than in 2018 (Schwab, 2019). The index measures the performance in four domains organized into 12 main pillars, as follows: enabling environment (institutions, infrastructure, ICT adoption, macroeconomic stability), human capital (health, skills), markets (product market, labour market, financial system, market size), and innovation ecosystem (business dynamism, innovation capability). Singapore ranked first in three pillars and second in other three pillars and should improve its innovation ecosystem (Table no. 1).

Figure no. 2. Singapore's long-term GDP growth



Source: Bhaskaran, 2018, p. 4

Table no. 1. Singapore' s performance according to the Global Competitiveness Index 4.0 in 2019

Domain	Pillar	Place in the world
Enabling environment	Institutions	2
	Infrastructure	1
	ICT adoption	5
	Macroeconomic stability	38
Human capital	Health	1
	Skills	19
Markets	Product market	2
	Labour market	1
	Financial system	2
	Market size	27
Innovation ecosystem	Business dynamism	14
	Innovation capability	13

Source: Schwab, 2019

As the most open economy in 2017, Singapore held the first position in the world from an economic globalisation point of view (KOF Swiss Economic Institute, 2019).

• The governments of Singapore designed and implemented policies that led to a high quality of life for their citizens, mainly in the domains of education, health, security, and housing. According to the Human Development Index, Singapore held the 9th place in the world in 2017 and 2018 (UNDP, 2019), being considered as a country with a very high human development level. In 2019, Singapore ranked first in health, homicide rate per 100.000 citizens, and terrorism incidence (Schwab, 2019). The Singapore's

public housing policy is characterized by quality and affordability. This is why the Housing and Development Board and the Central Provident Fund have highly contributed to the development of a unique housing system that provided a homeownership rate of 90% in Singapore, one of the highest in the world (Phang and Helble, 2016).

All of these high performances represent valuable lessons for any state of the world. They could not have been achieved without the existence of a solid democratic foundation of the Singaporean state. It is worth to mention that Singapore ranked third in the world in 2018 according to the Corruption Perceptions Index (Transparency International, 2019).

In essence, visionary and strong political leadership, economic pragmatism, developmental policies, technological sophistication, and exceptional living conditions are among the key features of Singapore, a smart Asian state.

Conclusions

Much attention has been paid to the term "smart" both in theory and practice in the last decades. On the one hand, the emergence and development of the concept as a topic of interest in the academic literature has led to the appearance of numerous studies and researches. The lack of consensus about the meaning of the concept has been overcome by the recognition of the crucial role the ICT plays in everything is smart. On the other hand, policymakers, entrepreneurs, and businessmen around the world have already implemented smart solutions in their lives and activities.

The paper shows that the appearance and development of smart state can be considered as the outcome of the spread of the knowledge society worldwide. Also, it briefly analyses the case of Singapore, a smart Asian state, and identifies some of his main features.

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Volunteering, A Key Factor to Increase the Employment Rate, in the European Context

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Abstract: *Volunteering is one of the ways to optimize social cohesion, sustainable integration into the labor market, through the creation of the necessary framework for acquiring specific skills and competencies. It will prepare the citizens to face and adapt smoothly to the dynamic changes from the socio-economic environment.*

The European Union sustain the volunteers by promoting cross-border volunteering and their mobility, in order to develop a European identity, intercultural learning and creativity, by using efficient and effective the limited resources.

The aim of the paper is to briefly analyze the ways in which volunteering, education and innovation contribute to achieve the European Union objective related to the employment rate. The authors achieved the objective of the paper by using a quantitative method.

In the last decades, in Europe, the demand for highly skilled jobs has increased, also directly proportional the employment rate for the people with a high degree of education, endowed with the necessary abilities and competencies for the knowledge society.

The paper highlights that volunteering represents an opportunity to gain new competencies and skills, by enabling the transformation of this knowledge into economic and social innovation which leads to productivity and creation of highly qualified jobs.

Keywords*:* volunteering, employment rate, innovation, education

JEL Classification: O35, A13, J21

Introduction

In the last decades, volunteering has become an important factor which contribute to education, social cohesion, dissemination of the European values and promotes solidarity, social responsibility, civic participation and engagement of civil society (Agermann & Sittermann , 2010).

Also, the involvement in volunteering activities in various fields, such as: art and culture, environmental conservation, political engagement, health, social welfare services, among many others (McAllum, 2017), offers the possibility of theoretical and practical training, through which the volunteers can develop new skills and competences, necessary for the insertion on the labor market, as well as gaining the respect of the community or certain social positions.

The most valuable advantage is represented by the European single market, which influences the economic growth, productivity and competitiveness of enterprises in the context of globalization, energy policies, environment, transport, circular economy, etc. and it allows European citizens to travel, learn, work.

In order to ensure a smart, sustainable and inclusive economy growth, the Europe 2020 Strategy defined five priorities related to different areas such as: education, research - development, poverty and social exclusion, climate change and energy, as well as increasing the employment rate (COM, 2010). The member countries have set their own goals in accordance with the local conditions and possibilities, which are integrated into the European strategy.

The transition from the First Industrial Revolution to the present one, respectively the Fourth Industrial Revolution, was made through a continuously qualitative technical, economic and social process (Marinescu, et al., 2018).

As Peter Drucker was saying: every organization needs one core competence: innovation (Drucker, 2011). Innovation was the key element which led to technological breakthroughs, global competitiveness and the reconfiguration of several industries by creating new jobs and increasing the employment rate continuously.

European regional development strategies rely on the innovative capacities of networks and projects (Ansell, 2000). The European Union monitors and coordinate the exchange of good practices, national policies, as well as the employment legislation or social policies, which positively influence the quality of life, standard of living and socio-economic development of society.

The aim of the paper is to briefly analyze the ways in which volunteering, education and innovation contribute to achieve the European Union objective related to the employment rate. The paper comprises, besides the introduction, three sections such as: literature review, followed by the research methodology, results and discussions and in the final part conclusions are presented.

Literature review

Volunteering

Volunteers represents a unique resource (distinctive from paid staff), which requires the organization to make strategic decisions by specifying how to relate to this resource, and how to develop it (Studer & von Schnurbein, 2013).

The public and private sectors promote voluntary activities, as an expression of

their social responsibility, which have the effect of improving their own images, as well as solving community problems.

Volunteering, generally speaking, is entirely based on interactions between people, whether we are talking about relationships volunteers-beneficiaries/clients, volunteers-employees or volunteers-volunteers (Rusu, 2016).

Table no. 1. Volunteering definitions

No.	Definition
1.	Volunteering is an action that is undertaken by free will or choice, provides a benefit to others, and involves lack of payment. (Cnaan, et al., 1996)
2.	Volunteering provides benefits to the individual, be it enjoyment, skills, or the sense of having given something back. (Institute for Volunteering Research, 2004)
3.	Volunteering constitutes all forms of voluntary activity in any location, whether formal or informal, full-time or part-time, occurring regularly or sporadically. (Volonteurope Impact Group, 2011)

From the above definitions (Table no.1) it can be said that volunteering is an activity that can be carried out periodically or occasionally, in a formal or informal environment, full-time or part-time.

On one hand, through volunteering it can be obtained individual benefits, such as: acquiring new skills and competences, increase the feeling of self-esteem and self-confidence (Andronic, 2014), enlarge the friends network, gain an honorary position (Agermann & Sittermann , 2010) and satisfaction for contributing to the welfare of the society.

On the other hand, the volunteers can offer benefits to the community by solving the problems of the ones in need and contribute to social cohesion (Zainea & Marinescu, 2018).

Volunteering represents a free choice taken by each citizen, time freely given (Paine, A. E., et al., 2010) it can take place anywhere and anytime, and does not imply a financial or material compensation.

Employment rate of workforce

Although due to the fluctuations in the labor market caused by demographic changes, financial and economic crises, the evolution of the knowledge-based economy, the emergence of new professions or the decline of others, the rapid development of technologies, global competition and the lack of experience, skills or qualifications required has led to an increase unemployment rate, at European level, among young people, starting with 2008, reaching a maximum level of 23% in 2013 (Eurostat, 2015).

The employment statistics play a central role in European Union policies. The Europe 2020 Strategy (COM, 2010) focuses on creating jobs, and sets 3 important goals:

- 75% of persons between the ages of 20 and 64 must work;
- the share of early school leavers should reduce below 10% and at least 40% of the younger generation should have a tertiary degree;
- reduce by 20 million the people which are at risk of poverty and social exclusion.

Figure 1: Employment rate age group 20 to 64, EU-28, 2002-2018

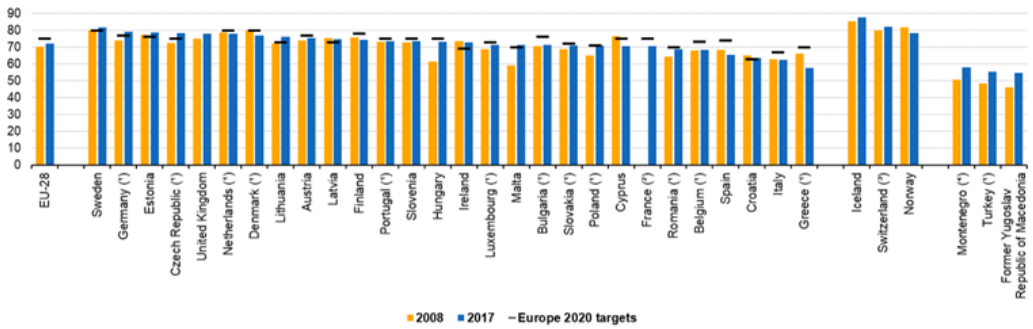
Source: Eurostat, 2019

In 2017, the European total employment rate reached 72.2%, while in 2018 it increased to 73.2% (Eurostat, 2019). If this growth rate is maintained, it can be accomplished the target of 75%, set for 2020.

The employment rate statistics of the European Union member states are different and reflect significant differences related to gender, age or level of educational studies.

The general E.U. objective of employment, respectively 75%, has been adapted to the socio-economic conditions of each state member, thus it become a national objective.

Figure 2: Employment rate age group 20 to 64, by country 2008 and 2017 (%)



(1) Break(s) in time series between 2008 and 2017.
(2) No data for 2008.
(3) 2010 data (instead of 2008).
(4) 2011 data (instead of 2008).

Source: Eurostat, 2018

As can be seen (Fig. 2), in 2017, the employment rates in the European area stood between 57.8% (Greece) and 81.8% (Sweden).

Romania, Belgium and the Mediterranean countries, had a percentage below 70% regarding the employment rate, which placed them at the lower limit, while Switzerland, Norway and Iceland were at the upper limit.

Also, it can be mentioned that in 2017, only nine European countries accomplish the national employment objective.

The employment rate can be seen as a structural indicator due to the fact that it provides a detailed image over the labor market and the economic systems, whose structure is influenced by the quality of the employment conditions and the ratio between the demand - supply of the workforce.

The employment statistics can represent the starting point for various macro - economic analyzes, competitiveness or productivity studies or behavioral analyzes.

Research methodology

The authors used a descriptive research method to accomplish the aim of the paper. The research was made based on the official statistics from National Institute of Statistics from Romania. Regarding the literature review, the needed information was gathered from numerous sources, such as: books, articles, working papers found in electronic databases (e.g. Sage Journals, Google Scholar) and in various Romanian libraries (e.g. Romanian National Library, The Central University Library from Bucharest „Carol I").

Results and discussions

Ways of increasing the employment rate

1.Volunteering

Volunteering increases the solidarity between generations, facilitates people's adaptation to the phenomenon of globalization and technological evolution, as well as increasing the degree of employability on the labor market.

At the individual level, volunteering is a way of connecting with the community. At the societal level it contributes by reducing racism, eliminating prejudices and increasing the degree of tolerance towards disadvantaged groups.

The coaching / mentoring training and personal development courses, conducted within the volunteer associations, reinforce the sense of responsibility towards the organization and the society, improve the entrepreneurial and managerial skills and prepare the citizens to be able to introduce innovative models of work within organizations.

Through volunteering the citizens can gain different skills, which can increase their adaptability to the labor market and there can apply the fundamental values of the European Union namely solidarity, social inclusion, honesty, active citizenship.

Being part of various volunteering activities, can be a launching pad for occupying important social positions within the local community, or it can develop various competencies, which are assimilated to a formal or informal experience, constituting a competitive advantage in CV's and in professional life.

The workforce competences must be constantly improving in order to meet the requirements of the employers, not to create an imbalance between the supply and the demand in the labor market.

The duration and magnitude of the economic crises, rapid technological changes as well as workforce migration, have major impacts over the organizations and society, volunteering mitigate these risks, by learning the citizens how to react autonomously to any change.

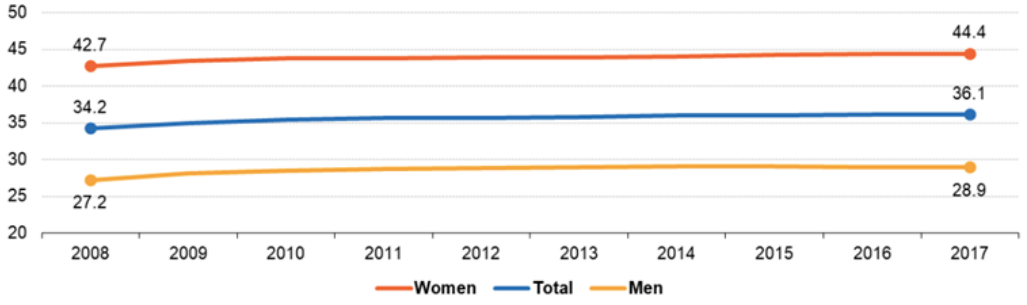
One of the conclusions that can be drawn is that volunteering represents an opportunity to learn, acquire new skills and competences, and the transformation of this knowledge into economic and social innovation leads to highly qualified jobs, productivity and contributes to increase the degree of adaptability to the challenges in the labor market which is constantly changing.

2.Innovation

Currently, there are structural and complex changes, which represents one of the most important challenges (Toma & Marinescu, 2015) within multiple areas of activity, where innovation plays an important role in the sustainable evolution of the society and implicitly within the organizations where are materialized into new strategies, concepts, ideas that addresses to the social needs - from the labor market and working conditions, to education, health and community development (Popescu, 2016).

Innovation represents the core of renewal processes in organizations and is regarded as the key driver in organizational success, as well as a solution to welfare problems (McCann & Ortega-Argiles, 2013).

Figure 3: Employment in knowledge-intensive activities, EU-28, 2008-2016 (% of total employment)



Source: Eurostat, 2018

According to Fig. no. 3, within the European space the percentage of women employed in intensive knowledge activities differs from men. Thus, in 2017, the percentage of women engaged in the mentioned activities was 44.4%, while the percentage of men was 28.9%.

The same graph reflects the upward trend of knowledge-intensive activities as a share of total employment from the European area, compared to 2008, where it can be noticed a share increase from 34.2% to 36.1%, in 2017.

On one hand, economic and social innovation can lead to the creation of highly qualified jobs and to productivity. On the other hand, the economic structure can be changed by establish a higher share of intensive-knowledge activities, which can positively influence the employment rate and ensure a highly qualified workforce.

Offering technical and scientific solutions through innovation, which will meet the new challenges of the global economy, namely security, active aging, climate change, clean energy, etc., as well as the structural transformations in enterprises, will have economic, social and environmental impact in European space.

The research and development objective set by the Europe 2020 strategy is strongly connected with the tertiary education and employment objectives.

It is a well-known fact that public investments in research and development create the knowledge base, stimulate the needed talent by higher education organizations and innovative companies which leads to an increased demand for scientists and researchers in the labor market and contributes to industrial competitiveness and job creation.

3.Education

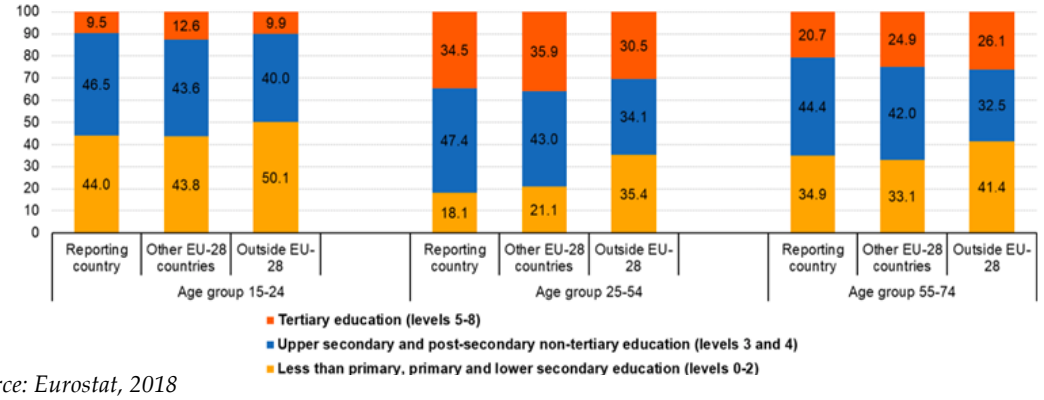
Through education people gain the skills and competences necessary to perform different voluntary activities in organizations (Musick M. & Wilson J., 2008).

The level of education is an important personal resource that enables volunteering. More educated people are more likely to have greater social networks, as well as valuable skills, and thus are more likely to be asked to give their time (Radovanović , 2019).

The level of education represents that level successfully completed which can be divided into three levels, as follows:

- low: ISCED 0-2 - under primary, primary and lower secondary education;
- medium: ISCED 3 and 4 - upper secondary education and non-tertiary post-secondary education;
- high: ISCED 5 - 8 - tertiary education

Figure 4: Population by educational attainment level, by age group and board group of country of birth, EU-28, 2017 (%)



Source: Eurostat, 2018

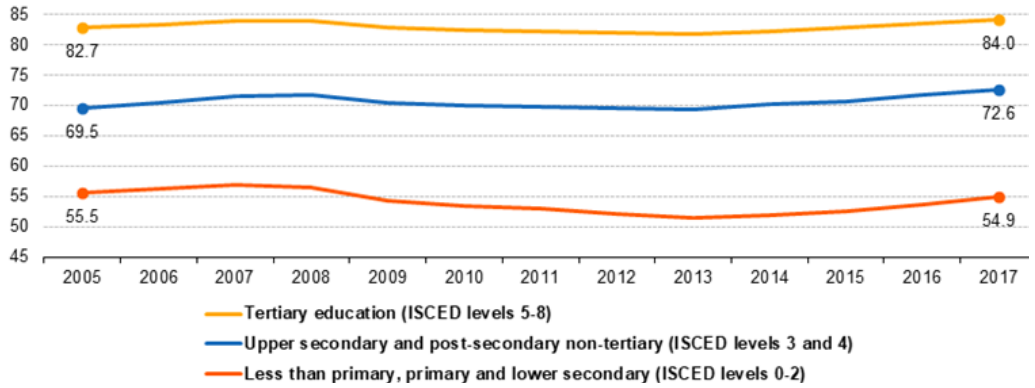
As can be seen in the chart above (Fig. no. 4), in Europe, the demand for highly qualified workforce is increasing, as evidenced by the high level of education for the 25-54 age group.

The low level of education, respectively ISCED 0-2, is more common between the migrants born outside the European Union, than people born in the European area.

In the case of medium level of education, respectively ISCED 3-4, it can be observed that this rate is lower for people outside the European area, for the age group 25-54 years.

The level of tertiary education, respectively ISCED 5-8, has a higher rate for migrants born outside the European Union space or in another country from the European area, than the rate related to the native population

Figure 5: Employment rate age group 20 to 64, by educational attainment level, 2005-2017



Source: Eurostat, 2018

In Fig. no.5, it can be seen that in 2017, the employment rate for people with low education level, respectively ISCED-02, was 54.9%.

In the case of medium level of education, respectively ISCED 3-4, the employment rate for persons with higher secondary education and non-tertiary post-secondary education was 72.6%.

The highest employment rate was found in the case of persons in the tertiary education level, respectively ISCED 5-8, of 84%.

In conclusion, it can be stated that educational achievement represents the effect of the education level achieved by each person and has an influence on each other's life and career. Older generations will be replaced by the younger one, which is more educated, thus the future workforce will be highly skilled. However, it is necessary to correlate the education systems with the current requirements of the labor market, in order to avoid an excessive qualification that can lead to high unemployment among young people.

Conclusions

In the recent decades, in Europe, the demand for highly qualified workforce has increased, and the employment rate is higher for the people with a high degree of education,

endowed with skills for the knowledge society, essential for enriching the scientific and technological knowledge, having the scope to create an economy capable of absorbing and using this knowledge.

The paper highlights that volunteering represents an opportunity to gain new competencies and skills, by enabling the transformation of this knowledge into economic and social innovation which leads to productivity and contributes to increase the degree of adaptability to the challenges from the labor market, which is constantly changing.

Also, the paper reflects how volunteering, together with formal education, can positively influence the employment rate and reduce the negative impact of financial economic crises, labor migration and demographic changes, by a thorough training for the young people in order to react autonomously to any change.

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The Leader of the Future Seen By Millennials

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Abstract: *Two university events took place in spring and autumn 2019, having the following themes: Sustainable Education & Development in EU28 and Entrepreneurial Student Societies in Romania of the Creative Students.*

The objectives of the two events were the formation of the student leadership and entrepreneurial skills.

Partner in the organization of these two events was a Romanian training & consultancy company which held two workshops whose themes were: transformational leadership and business simulation. In the former event, there was a team decision-making exercise which lay the stress on the leader's role. The participant students were also administered a career questionnaire. In the latter event, there was a strategy building case-study and company coordination for a whole year. A focus group was also achieved, dealing with how the digital organization and the leader of the future look like.

The main issues were certain concepts regarding the difference between a manager and a leader, the roles of the leader, the methods of the team decision-making, the leader's necessary skills for building of a digital organization.

The paper describes the results of the two workshops, each event involving about seventy students from more than ten university centers from Romania, as well as students from abroad - Europe and Africa. The research methodology was based on both quantitative and qualitative methods.

The romanian academic environment is ready to develop talents in the entrepreneurship and leader-

ship field. Millennials represent a major change in the employment market, and their vision about digital organization and the leader of the future helps companies to adapt their organizational culture to the new managerial profile.

***Keywords**:* university events, leadership skills, entrepreneurial skills, digital organization, leader of the future

JEL Classification: L22, M14, M53

1.Introduction

In January 2018, the European Commission said that education and training are the best investments in the future of Europe. Education helps young people acquire the necessary skills for modelling the future of Europe, characterized by democracy, solidarity and inclusion. Digital technologies improve the learning process and prepare millennials for the future. Some directions targeted by the European Commission in digital education are: digitally signed qualifications, higher education hub, cybersecurity, training in digital and entrepreneurial skills, studies on ICT, artificial intelligence and analytics. The predictions for the digital transformation in the following years say that some jobs will disappear, others will be replaced, many industries will transform and new jobs will be created. All these transformations involve entrepreneurship, vision and leadership, both in the business and in the academic environment.

In order to ensure that the curricular portfolios can provide high-quality results for students, and implicitly for employers, universities must address difficult questions: what mix of programs is the most adequate to generate durable growth, what skills are really critical for the future, what innovations are worth investing in[1]?

Romania has aligned to the aforementioned development directions. This was showcased by two university events organized in the spring and autumn of 2019, with the following themes: SUSTAINABLE EDUCATION AND DEVELOPMENT IN EU and STUDENTS' ENTREPRENEURIAL COMPANIES IN CREATIVE STUDENTS' ROMANIA. The objectives of the two events were to help the participants develop leadership and entrepreneurial skills, starting from the digital skills they already have. A Romanian training and consultancy company was a partner in the organization of the two events and organized two workshops on transformational leadership and business simulation. The paper presents the results of the two workshops on the millennials' vision about the leader of the future who responds to the digital transformations organizations are and will be subjected to. Approximately 70 students from over 10 university centers from Romania and other university centers in Europe attended each event.

2.Review of the scientific literature

The transition from analogue to digital technology has been ongoing since the 80's. The triumphant advance of the Internet started in the 90's, but in the 2000's there was the leap of mobile devices. Currently, digitization is seeping into our everyday lives, and the Internet allows communication not only between people, but also between things, namely data-transmitting objects,

[1] Ferrari T. B., Phan H. P, sept. 2018, Universities and the Conglomerate Challenge, McKinsey Quarterly, p.3

IOT, Internet of Things[2]. The technologies that cause structural digital changes continue to quickly develop, so self-driving vehicles, robots that provide sophisticated services, T-shirts that measure the heart rate and body temperature and sends data directly to a medical center have become reality. The processing power of computers will double every two years. The implication is that performance improvements will continue to grow and replace human activities with digital instruments. This affects any industry that has integrated computers into its operations - which practically cover the entire economy. And the progress in machine learning and cloud computing has consolidated this trend, the so-called DIGITAL DOMINO EFFECT.[3]

The expectations of society for the business environment are growing, and the expectations of the business environment for the university environment are changing. Generations change. Nine out of ten consumers from Generation Z believe that the responsibility of companies to approach environment and social matters is essential. For millennials, companies focused on the environment and social responsibility are better potential employers, and most of them say they would be more loyal to companies aligned to these values.[4]

As social responsibility increases, another leader profile is shaping up. The research performed by McKinsey shows the image of the new leadership style. It refers to stimulating transparency and more empathy, as shown by the new McKinsey research based on surveys and interviews with a group of people from the Ashoka community, one of the most important communities of social entrepreneurs in the world. People are starting to invest money in businesses that focus on ethics and social values, according to two CEOs who have recently described their activities within a panel discussion that marked the 50-year anniversary of the Graziadio business school within Pepperdine University. Transparency, empathy and social responsibility are starting to define a new reference point in the management of organizations. Approaching social goals and values is reflected by examples such as: our main account offers 2% interests and the promise that your deposits will not be invested in fossil fuels. At the same time, hub companies must be aware of the fact that their organizations are similar to the "key" species from biological ecosystems - they play an essential role in environment protection. Apple, Alibaba, Google, Amazon and other companies that disproportionally benefit from the ecosystems they dominate have rational and ethical reasons to support the economic vitality not only of their direct participants, but also of the largest industries they serve. Hub companies especially need to include value sharing in their business models, with value creation and value capturing.[5]

[2] Re-Imagining the Word, White-paper, Arbeiten Work 4.0, 2017, Federal Ministry of Labor and Social Affairs, Berlin, March, p.20

[3]Iansiti M. and Lakhani K. R., 2017,Strategy, Ethics, and Network Competition in the Age of Digital Superpowers, Harvard Business Review, pp. 88, 92

[4] Balchandani A., A., Baggio, Cherny A. at al., nov. 2019, Answering society's call: A new leadership imperative How do transparency, empathy, and meaning work in practice?, McKinsey Quarterly, pp.1-7

[5]Iansiti M. and Lakhani K. R., 2017,Strategy, Ethics, and Network Competition in the Age of Digital Superpowers, Harvard Business Review, pp. 88, 92

Currently there are initiatives and measures for consolidating the connections between educational systems and the labor market. These are concepts for improving the quality and relevance of the initial training provided to young people by schools and university classes, and development programs that provide young people the possibility to alternate training periods and work periods. Consequently, we expect these initiatives to approach the unemployment problem among young people, allowing millennials to make better career choices, to develop, the skills required to be successful on the labor market, to find high-quality jobs and improve their life chances. Thus, in 2015 Italy launched the "National plan for digital schools", involving 35 actions that promote the innovation and digitization of the Italian educational system, including the introduction of a dedicated "digital catalyst" and an innovation team made up of teachers responsible for implementing the plan in every school; the results of the plan include 70% of the schools that implement educational robotics, digital entrepreneurship and digital citizenship. The Japanese government encourages the development of partnerships between industry and the academic environment, and building systems for training teachers by using trainers with real practical experience. The Government of the United Kingdom has also announced financing of 170 million pounds in order to incorporate 12 technology institutes all over England, based on collaborations between higher education providers and employers. Last but not least: the Digital Skills and Jobs Coalition, which is one of the 10 actions of the Skills Agenda for Europe brings together Member States, companies, social partners, non-profit organizations and education providers, who take action to tackle the digital skills gap in Europe. [6]

The age of automation, with technologies such as artificial intelligence (AI) and Internet of Things, may trigger profound structural changes in the workforce from Great Britain - which will be amplified by other trends, such as population aging. Consequently, the demand for occupations such as managers, technology specialists and healthcare professionals could increase by almost 20% until 2030, while the demand for administrative and manual roles could decrease at a similar rate. The impact of the fourth industrial revolution on the future labor form will be profound. The modelling of the McKinsey Global Institute (MGI) on the effects of using new technologies on the workforce from Great Britain shows that until 2030 there may need to be a transition between professions or qualification levels that affect very differently employees with higher and lower qualifications. There is an increasing trend regarding highly qualified employees, for example, which makes physicians more efficient in treating patients, and increasing the demand for the services which these professionals provide. However, routine tasks may be slightly robotized. Short term, this tends to cause talent deficiencies among high-qualification professions, implicitly managers. In order to test the application of this trend on the job market from Great Britain, MGI and the McKinsey Office for Great Britain and Ireland analyzed the projected increase of the occupancy of 369

[6] G7 Social Background doc., 2019, G7 Responses to Tackle the Digital Skills Gap, G7 Biarritz, France, pp.3-4, 7.

different professions from 2017 to 2030. This modelling suggests that the demand for occupations that include management roles in several sectors such as professional roles in information and communication technology (ICT), engineering, health and education will increase by an average of approximately 19% from 2017 to 2030, namely 1.4% a year [7].

Introductive notions on using robotics in order to understand what transformation needs to focus on for maximum impact are increasingly included in management education programs. [8]

Our tireless unattended bots accelerate automation of high-volume, repetitive tasks, bridging system and data integration gaps at scale, according to Pega Robotic Process Automation. 69% of the senior managers who were questioned expect the workforce to comprise both human employees and robots. How can businesses prepare for these changes? More than 7 out of 10 believe that the use of AI will be common in the next 10 years in assessing employee performance and ascertaining rewards, and in recruiting[9]. The responsibilities that are almost always best managed by AI on central level are things such as data management, setting systems and standards, recruitment and training, redesigning workflows, choosing where to focus organizational change[10].

Digital transformation challenge leaders. They must have various skills in order to adapt to their environments. The metaphor of the legendary Uroborus, who eats his own tail in order to survive, in an eternal cycle of renewal, is representative. Continuity, completeness, repetition, autonomy, rebirth - all these can be seen in the Uroborus cycle. Whether we like it or not, it is important to escape our own mental prison in order to get where we want to be. The way in which people in an organization think about, assess, view and create the future for themselves and their associates, Toma (2016) says[11]. Leaders must get out of their comfort area, and continuously look for the way towards renewal and authenticity, De Vries says[12].(2017) In 2001 De Vries created a Model for the Leadership of the Digital Age, where he synthetically included its qualities, a model which is current in 2020. It is a model of a leader connected to the external environment and to the organization, in which the Architectural Role (System design, Control) is balanced with the Charismatic Role (Vision, Empowerment,

[7] Allas T., Dimson J., Foote E. and Jeffery B., nov. 2019, The future of work: Rethinking skills to tackle the UK's looming talent shortage, McKinsey Company, pp. 7-8

[8] Pega/Robotic Automatisation, available at: https://www.pega.com/products/pega-platform/robotic-automation? - accessed in nov.2019

[9] A report from Pega and Marketforce, 2017, The Future of the Work, Marketforce surveyed 845 senior executives working globally in Financial, Services, Insurance, Manufacturing, Telecoms & Media, Technology, Public Sector, Healthcare & Life Sciences, Energy & Utilities, Travel, Transport & Logistics and Retail, p.14

[10] Fountain T., Saleh T., and London S., Getting to Scale with Artificial Intelligence, McKinsey Digital, available at: mhttps://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/getting-to-scale-with-artificial-intelligence - accessed in oct. 2019

[11] Toma S. G., Marinescu P. and Grădinaru C., 2016, Strategic planning and strategic thinking, Revista Economică, Volume 68, Issue 5, ISSN 1582-6260, pp. 168-175, available at http://economice.ulbsibiu.ro/revista.economica/archive/68515toma&marinescu&gradinaru.pdf

[12] De Vries M.K., 2017, Mindfull Leadership Coaching- Călătorii către sine, Bucharest, pp.210-211

Trust management, People motivation), in which Impetuousness, Dynamism and Sociability are built on Emotional Stability. However, there are traits which today are decisive for the changes to which organizations are subjected in the present: Generativity, Cultural relativity, Cognitive complexity management, Self-management.[13]

3. Research methodology

The research methodology was based on both quantitative and qualitative methods.

With all these scenarios and possibilities, what should we consider? The world changes increasingly fast and we are assaulted by data, ideas, promises, threats. While in the past having power meant having access to data, today, having power means knowing what to ignore. What should we focus on, in this chaotic world? These are conclusions and questions Harari (2018) presents to us. A potential economic crisis, the unrest on the labor market, global warming are balanced out by the transformations technology is starting to create. What is more valuable - intelligence or conscience? What will happen to society, politics and everyday life when nonconscious but highly intelligent algorithms know us better than we know ourselves? [14]

Drafting a questionnaire with questions guided towards certain career directions, certain organizational characteristics and certain personal qualities of the future manager/ mentor was the instrument used for knowing millennials' perceptions. The context in which the questionnaire was applied was the event EUROPEAN UNIVERSITY DAYS, 6th Edition, SUSTAINABLE EDUCATION AND DEVELOPMENT IN EU 28, a project financed by the Ministry of National Education, Theme: DEVELOPING THE LEADERSHIP SKILLS OF THE EUROPEAN YOUTH. The event was organized by a university of economic sciences in partnership with a student league and a training and consultancy company[15], and the number of applicants was: 68 students and 10 high school students, grades 11 and 12. Students from other European university centers also participated.

The management career questionnaire comprises 4 questions, detailed below:

1. What is your vision regarding your career for the next 3-5 years?

1.1. Career in the field in which you studied in university

1.2. Management career

1.3. Entrepreneurial career

1.4. Other options:

[13] De Vries M.K., Leadership – Arta și măiestria de a conduce, De la paradigma clinică la pragmatismul schimbării, 2003, Bucharest, CODECS Publishing House, page 331

[14] Harari N.Y., 2018, Homo Deus – Scurtă istorie a viitorului, Iași, Polirom, pp.344-345

[15] EXELO Training&Development web, available at: https://exelo.ro/

2. Indicate three characteristics you want the organization for which you will work to have:

Empowerment	Innovation	Client focus	High-quality services/ products	High-performance technologies	Continuous learning
Holistic approach	Leadership	Information sharing	Performance management	Shared vision	Positive employee morale

3. Indicate three qualities you have and think will help you be successful in your career:

Vision	Honesty	Competence	Intelligence	Determination	Cooperation
Courage	Ambition	Creativity	Independence	Loyalty	Self-control

4. What are the three qualities you want your future manager/mentor to have?

Trustworthy	Open-minded	Vision	Motivates people	Creative	Result-oriented
Dynamic	Shares knowledge	Fair	Intelligent	Professionally competent	Capable to inspire

At the second event, which took place in Nov. 2019 STUDENTS' ENTREPRENEURIAL COMPANIES IN THE ROMANIA OF CREATIVE STUDENTS, organized by the same partners indicated for the first event, the training and consultancy company used Focus Group as a research instrument. 6 student groups were created, approximately 12 students in each group, who were challenged to answer the following questions:

1. What are three essential qualities for the leader of the future?

2. What are three characteristics of a successful organization in the future?

Students from over 10 university centers from Romania attended the event, as well as students from Africa, studying at the Romanian university center that organized the event. After a training exercise with the 6 teams, the groups presented their vision on the leader and organization of the future, resulted from 30-minute debates that took place in each team. After the presentations, the facilitating trainer extracted conclusions regarding the predominant qualities and characteristics, indicated in the following chapter. A Business Simulation followed, with an online platform, with a case study which asked them to develop the strategy of a company for 1 year. The students acted as project manager, financial manager, HR manager, sales manager and strategy manager. At the end of the exercise, they analyzed the strategic performance, and also their model for a leader profile. There is a probability for using a computer simulation in teaching, for example the simulation of an organization

and the simulation of management roles. With the current technology, we can create a virtual reality in which a student can work with case studies, and observe leader behaviors, styles, managerial team values and business strategies. The business simulation is beneficial in the academic environment, but it has a considerable cost.[16]

[16] Bider I., Henkel M., Kowalski S. and Perjons E., (2015, Simulating apprenticeship using multimedia in higher education: A case from the information systems field Interactive Technology and Smart Education, Interactive Technology and Smart Education, Vol. 12 Issue: 2, pp.137-154, doi: 10.1108/ITSE-04-2015-0004, p.140

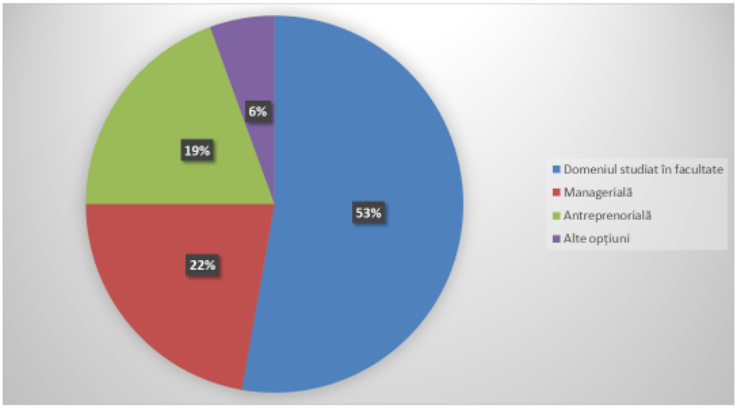
4.Results and discussion

The results processed for the Career Questionnaire within the SUSTAINABLE EDUCATION AND DEVELOPMENT IN EU 28 event, see Fig 4.1 Career objectives for millennials

show the following weights regarding the directions which the participating students will follow: the field studied in college (53%, 38 students), the managerial field (22%, 16 students), entrepreneurship (19%,14 students), other options (6%, 4 students). The 22% for the managerial field reflects the deficiency indicated for the talent in the managerial area, mentioned by the McKinsey study conducted in Great Britain and Ireland, indicated in chapter 2.

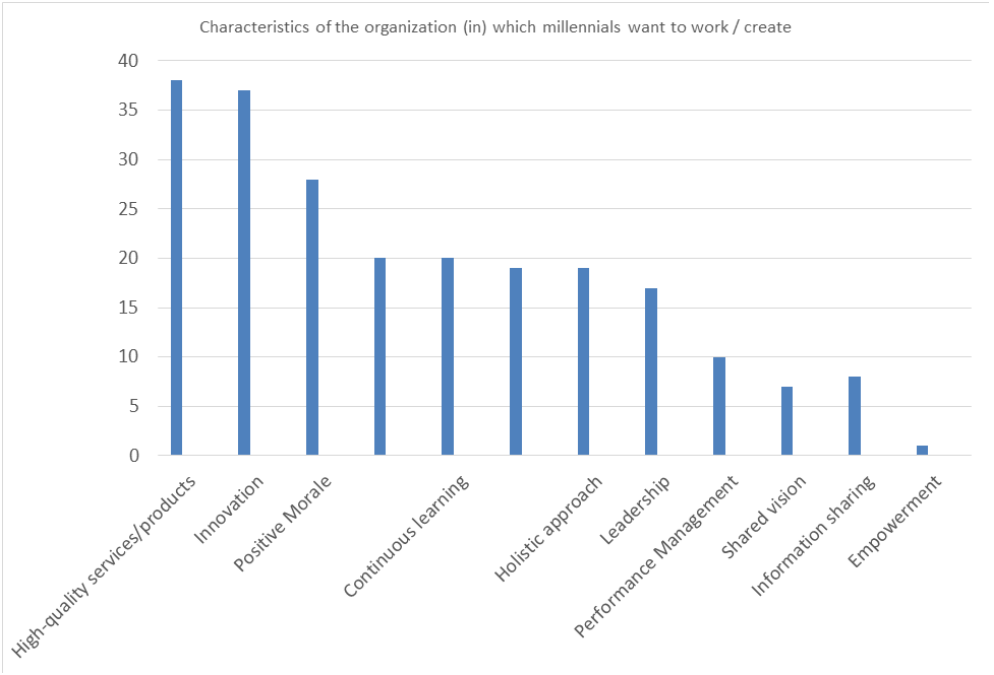
Fig 4.1 Career objectives for millennials

Mention by encirclement what is your vision regarding your career for the next 3-5 years



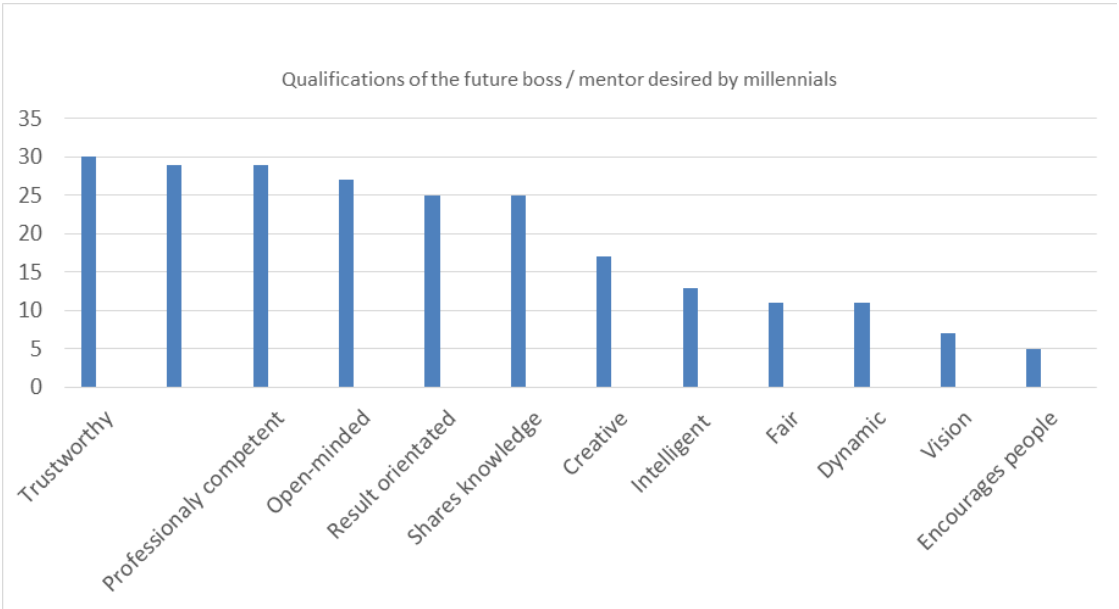
The fact that more than 50% of the responding students were in the 1st year of study explains the high weight of the field studied in university. Starting from the testing model used by Jenny Roper, we intend, for the next questionnaire application, to conduct student interviews, in order to better understand how they think about their future, by detailing the various stages they intend to follow.

Fig. 4.2 Characteristics of the organization (in) which millennials want to work / create



The organization of the future millennials aspire to is characterized by high-quality services and products, innovation, positive employee morale and high-performance technology. The students' orientation was surprising, mainly regarding high-quality products, with a difference of 18 points to high-performance technology. This shows the necessity of introducing in the curriculum introductory notions about using robotics, in order for them to understand the transformation of the business environment and the overall society which they will build. At the same time, innovation is very important to the participating students, with a difference of 20 points to leadership. Innovation is related more to technology than to managerial concepts and practices, as shown by the workshop free talks. The theme of the event helped the students in this regard, by defining the Leadership and Leader notions, by understanding several theoretical management models, and by learning concrete examples from the business environment.

Fig. 4.3 Qualities of the future manager/mentor desired by the millennials



The portrait of the future manager/mentor focuses on the following moral values and principles: Trustworthy (30 points) and Fair (11 points) and leader qualities: Capable of inspiring (29 points), Open-minded (27 points), Creative (17 points), managerial qualities: Result-oriented (25), and professional qualities: Professionally competent (29 points). The model of the Leader in the Digital Age formulated by Kets de Vries, presented in Chapter 2, indicates: Trust management, Intelligence, Vision and People motivation[17].

The results processed for the focus group within the STUDENTS' ENTREPRENEURIAL COMPANIES IN THE ROMANIA OF CREATIVE STUDENTS event are presented in Fig. 4.4 Leader of the future according to millennials, and in Fig. 4.5 Organization of the future according to millennials.

The leader of the future according to millennials is innovative, flexible, empathetic, human and emotionally intelligent. At the same time, he is a visionary and takes risks. We find the qualities indicated in the McKinsey study[18], previously mentioned in Chapter 2, which provides an image on the new leadership style, based on transparency stimulation and empathy. The key to the profitability and sustainability of future organizations is talent management, according to Marinescu (2016)[19]. Attracting and developing talent is critical to the agility of the or-

[17] De Vries M.K., 2003, Leadership – Arta și măiestria de a conduce, De la paradigma clinică la pragmatismul schimbării, Bucharest, CODECS Publishing House, p.331

[18] Allas T., Dimson J., Foote E. and Jeffery B., nov. 2019, The future of work: Rethinking skills to tackle the UK's looming talent shortage, McKinsey Company, pp. 7-8

[19] Marinescu P., Toma S.G., Constantin I., 2016, Talent management in the age of globalization, Manager, 24, 2016, ISSN-L 1453-0503, ISSN (e) 2286-170X, ISSN (p) 1453-0503, pp. 180-184, available at: http://manager.faa.ro/en/article/Talent-Management-in-the-Age-of-Globalization~902.html, p.182

ganization of the future.

The organization of the future described in the aforementioned focus group is digitalized, innovative, adaptable, but environment-friendly. Its organizational culture is people-oriented and transparent. In the results of the questionnaire 13% of the participants see the organization as people-oriented and transparent, and 8% see it as environment-friendly. Here we find the characteristics mentioned by Balchandani[20]: Transparency and environment-oriented, detailed in Chapter. 2. The impact AI will have on organizational processes and systems, such as: recruitment, performance assessment, organizational flow, indicated in the PEGA and Marketforce report[21], is reflected in the results of the focus group by the 22% for digitalized organization and very advanced technology, and 22% for innovative organization, creating new field, new brands.

[20] Balchandani A., Baggio A., Cherny A. et al., nov. 2019, Answering society's call: A new leadership imperative How do transparency, empathy, and meaning work in practice?, McKinsey Quarterly, pages 1-7

[21] The Future of the Work, A report from Pega and Marketforce, 2017, Marketforce surveyed 845 senior executives working globally in Financial, Services, Insurance, Manufacturing, Telecoms & Media, Technology, Public Sector, Healthcare & Life Sciences, Energy & Utilities, Travel, Transport & Logistics and Retail.

Fig. 4.4 Leader of the future according to millennials

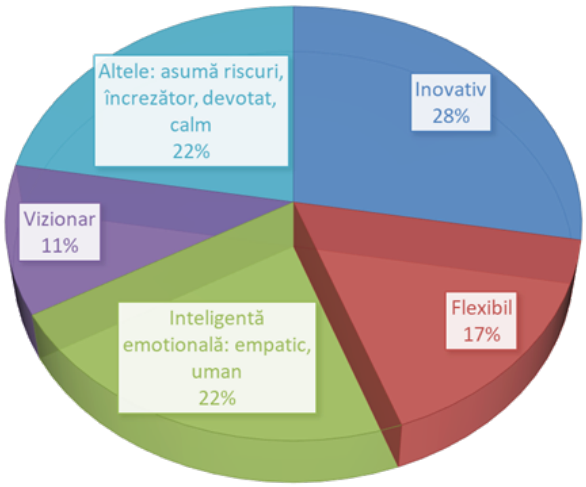
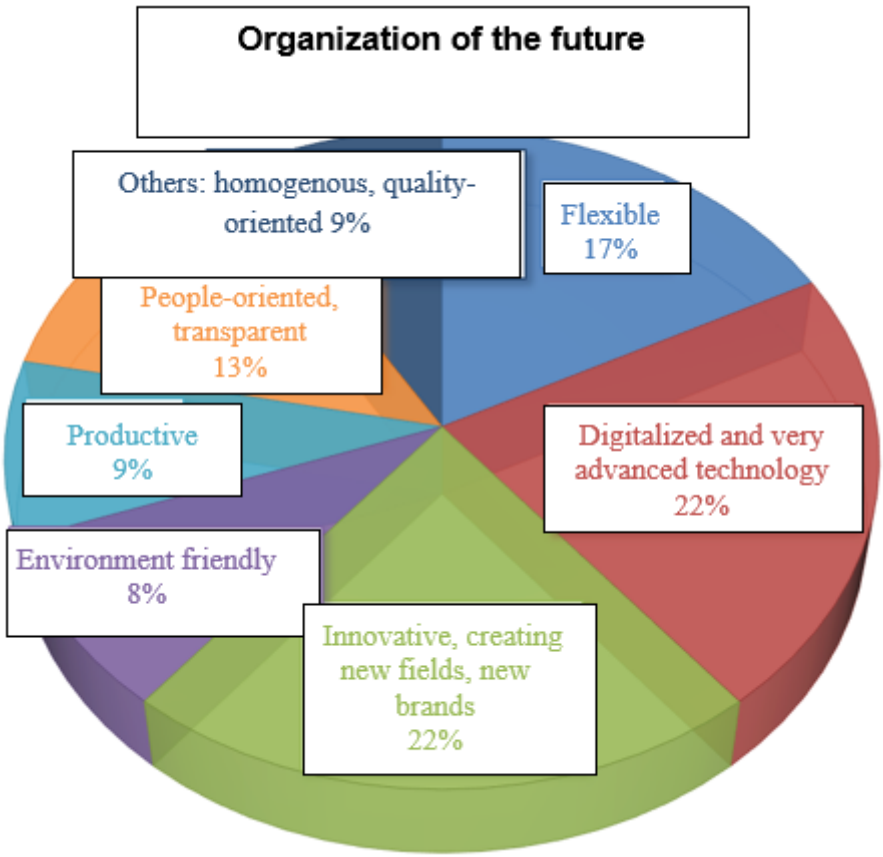


Fig. 4.5 Organization of the future according to millennials



5.Conclusions

The conclusions of the paper predominantly relate to the manner in which millennials see the leader of the future. From the results analyzed in the previous chapter, conscience is more important than intelligence for the leader of the future. The leader of the future is trustworthy, capable to inspire, open-minded, empathetic and human. Emotional intelligence helps him/her in building, developing the organization of tomorrow, a digitalized, flexible and creative organization, but with a people-oriented organizational culture, promoting transparency and caring for the environment.

We need models for the profile of the leader of tomorrow, models originated both from the literature and from the visions of the millennials, models underlying the curriculums developed by the Romanian academia, and also the development solutions provided by Romanian training and consultancy companies. Taking over the Italian model "National plan for digital schools"[22], representing a set of actions that promote the innovation and digitalization of the educational system, would represent a "digital

[22] G7 Social Background doc., 2019, G7 Responses to Tackle the Digital Skills Gap, G7 Biarritz, France, pp.3-4, 7.

catalyst" for development fields such as: educational robotics, digital entrepreneurship and digital citizenship.

The role of Romanian training and consultancy companies is to support the transformation of organizational cultures and the development of millennials' leadership skills that are suitable for thus type of changes. Organizing or attending events such as the aforementioned ones, focused in the business simulator, explaining leadership models and concepts, will help students build and develop management career plans.

Motivating millennials in choosing a successful management career must be supported by the formation of a national educational structure aligned to the directions indicated by the European Commission in digital education: digitally signed qualifications, higher education hub, cybersecurity, training in digital and entrepreneurial skills, studies on ICT, artificial intelligence and analytics[23], and by creating technology institutes, based on the British model[24], based on collaborations between higher education providers and employers.

[23] European Commission/Education and Training/ Digital Education Action Plan, ian. 2018, Bruxelles, pp. 1-10

[24] Allas T., Dimson J., Foote E. and Jeffery B., nov. 2019, The future of work: Rethinking skills to tackle the UK's looming talent shortage, McKinsey Company, pp. 7-8

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12. **Harari N.Y.**, 2018, *Homo Deus – Scurtă istorie a viitorului*, Iași, Polirom, pp.344-345
13. **Iansiti M. and Lakhani K. R.**, 2017,*Strategy, Ethics, and Network Competition in the Age of Digital Superpowers,* Harvard Business Review, pp. 88, 92
14. **Marinescu P., Toma S.G., Constantin I.**, 2016, *Talent management in the age of globalization*, Manager, 24, 2016, ISSN-L 1453-0503, ISSN (e) 2286-170X, ISSN (p) 1453-0503, pp. 180-184, available at: http://manager.faa.ro/en/article/Talent-Management-in-the-Age-of-Globalization~902.html, p.182
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18. **Fountain T., Saleh T., and London S**., *Getting to Scale with Artificial Intelligence*, McKinsey Digital, available at: mhttps://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/getting-to-scale-with-artificial-intelligence
19. *Pega/Robotic Automatisation,* available at: https://www.pega.com/products/pega-platform/robotic-automation? - accessed in nov.2019
20. EXELO Training&Development web, available at: https://exelo.ro/

A Regional Effects Of Population Aging

There are no geniuses in art,
but voices or pens led by human intelligence,
with various degrees of real creation ability.
The rest is nothing but work, work and work again.

Maurice Chevalier
(real name Maurice-Edouard Saint-Léon Chevalier)
(born September 12, 1888, Paris; died January 1, 1972, Marnes-la-Coquette, Paris)
was a French actor (teatre and film) and a cabaret singer.

~ *Ph. D. Student* **Florian G. Gurămultă** *(Advanced Studies, Romanian Academy, Calea Victoriei, Bucharest, Romania)*

E-mail: floring14@yahoo.com

Abstract: *TThis paper highlights the effects of population aging; it has a negative impact on economy in general but also on the regional economic development in particular. As it happened in most European countries, Romania has been experiencing economic and social effects expressing the multiple aspects and various elements of a population in a continuous downward aging trend. Aging was more visible starting with 2000, year in which the elder population has exceeded young population; it is a growing phenomenon, as, according to statistics, the share of the elder population (aged over 65) has exceeded the share of young population (between 0 and 14 years). The diminished fertility rate and mortality rate are the determining factors which have accentuated population aging. The most important elements which contribute to a diminished fertility rate in modern society are culture, religion, demographic policy as well as other elements, more specific. A significant effect of the diminished fertility rate is the progressive reduction of capable future generations fit to enter the labour market, in order to increase the contributions to social health and insurance budgets which are necessary for payments for pensioners. It is important to acknowledge that goods which will bring added value in the economy cannot be created without human effort so as to improve the quality of life; otherwise, the diminished number of young people able to work leads inevitably to a lowered long-term development capacity.*

Keywords*:* demographic, population aging, young population
JEL classification: H55, H61, J10, O15

Introduction

A diminished fertility rate entails multiple effects; however, progressively diminishing future generations may have significant effects on the quality of life of the elderly population, especially in developing countries struggling to provide adequate support to this category of population.

Some states propose measures to thwart the effects of aging population; these measures are likely to support young population, namely young families, in the sense of encouraging natality, by providing facilities for the purchase of a home, a car, providing support to young families with more than two children.

According to the national statistical data published by the National Institute of Statistics in Romania, the demographic aging index increased from 104.7 (as of July 1, 2015) to 107.7 elderly people per 100 young people (as of July 1, 2016).

According to the same source (The National Institute of Statistics of Romania), population by domicile on July 1, 2016 decreased by 0.2% compared to July 1, 2015. On July 1, 2016 the population by domicile was 22,215 thousand persons. The urban population and the female population represent the majority (56.3%, respectively 51.2%).

Demographic aging has increased, the population aged 65 and over exceeding the young population aged 0-14 with more than 250,000 people (3. 518 million compared to 3.265 million people), according to national statistics.

As of July 1, 2016, the population by domicile in the urban area was 12.514 million people, decreasing with 0.4% compared to July 1, 2015.

The female population was 11.371 million people on July 1, 2016, which is 0.2% less compared to the same date of the previous year. Demographic aging deepened compared to July 1, 2015; it represents a slight decrease in the share of young people (0-14 years) and an increase of 0.3 percentage points in the share of the elderly population (aged 65 and over).

The average population age was 41 years, 0.2 years higher than on July 1, 2015. The median age was 40.6 years, 0.4 years higher compared to July 1, 2015.

On July 1, 2016, the largest share in the total population was held by the age group 45-49 years (8.8%). The share of this age group was 9.1% for men, and 8.5% for women.

The share of the age group 0-4 years was 4.5%, lower than that of the age group 5-9 years (5.1%) and that of 10-14 years (5.1%).

The latest data are also worrying, especially those concerning births; in 2018, the number of Romanian new-borns was lower than 200,000; it was the year with the fewest births at least since 1960 (the beginning of the time series provided by the National Institute of Statistics in Romania); 188,755 children were born in 2018, compared to 2017, when 205,000 children were born.

The detailed analysis highlights some interesting aspects concerning the decreased number of new-borns such as:

- the mother`s average age at birth was 28.6 years, slightly increased. In the rural area, the mother`s average age at birth was lower, namely 27.0 years, compared to the urban area, where the average age at birth was 29.8 years.
- almost two thirds of the new-borns (119,131 children) had mothers aged between

20 and 34 years and fathers aged between 25 and 39 years.

• the share of live births with mothers aged 30 years and over was 41.1%, continuing the increasing trend of the previous years. This share is higher in the urban area: 49.5%, compared to the rural area, where it was 30.9%.

• out of the total number of live births, 69.5% were born to married parents, and out of these, 46.4% were born in the first two years of marriage

• more than half (55.0%) of the total number of live births registered in Romania have employed mothers and 37.0% have stay-at-home mothers.

• in the families with both parents employed, almost half of the children, respectively 94,093 children (49.85%) were born, and 33,186 children (17.58 %) were born in families with employed father and stay-at-home mother.

• female fertility was between 43.3 live births per 1000 fertile age women in Ilfov county and 26.9 live births per 1000 fertile age women in Brăila county. Low fertility rates (under 30 live births per 1000 fertile age women) were also recorded in Caraș-Severin, Galați, Gorj, Hunedoara, Mehedinți, Olt and Vâlcea counties. Fertility rate in the rural area is higher than in the urban area, with the exception of Ilfov County.

We believe that alteration of the structure by (large) age groups, especially by increasing the share of the population over 60 years and above in total, will generate peer pressure which will lead to political decisions that will have to be taken, in particular regarding the allocation of amounts, which can lead to increased tensions in society.

1. Determined demographic elements of population aging

Slowly but surely the population of Western European countries includes a new age group, over 80 years, with a significant, constantly increasing share.

Significant changes in the structure of population involve structural changes in the society, both at the economic level and at the infrastructure level, regarding care in terms of health and social assistance for the elderly, respectively the population older than 80 years. Globally it is acknowledged that there is little understanding of the consequences of these trends but also that society and economy are not fully prepared to cope with this pressure. In fact, the related infrastructure to provide social assistance for this new age group lacks.

The forecasts show that the age group of 80 years and over in Romania will increase rapidly by 2060. Starting with the second half of 2012, the share of people aged 80 years and over was only 3.4% of the total population, but there is an increasing trend of 4.6% in 2020, 5% in 2030 and 7.9% in 2060 (Table no. 1).

Table no. 1 Population aged 60 years and over, population aged 80 years and over, in total, in the 3 forecast versions, with external migration in 2020, 2030 and 2060

Version	60 years and over			80 years and over			Total		
	Constant	Optimistic	Pessimistic	Constant	Optimistic	Pessimistic	Constant	Optimistic	Pessimistic
					2020				
Total	4,915,804	4,937,273	4,890,518	890,591	897,020	883,041	19,330,610	19,387,052	19,263,824
%	25.4	25.5	25.4	4.6	4.6	4.6	100.0	100.0	100.0
					2030				
Total	4,954,513	5,041,054	4,851,092	894,913	921,412	864375	18,046,984	18,270,252	17,777,572
%	27.5	27.6	27.3	5.0	5.0	4.9	100.0	100.0	100.0
					2060				
Total	4,350,081	4,670,599	4,038,997	1,022,441	1,152,327	907,742	12,946,710	13,966,824	11,926,401
%	33.6	33.4	33.9	7.9	8.3	7.6	100.0	100.0	100.0

Data source: "Projection of the Romanian population at the horizon of 2060", National Institute of Statistics, 2013, pages 29-44

Among the determined demographic elements of population aging, we analyse the development of some statistical data regarding the conjunctural index of fertility, the mortality rate and the increase of life expectancy.

1.1 The conjunctural fertility index

The conjunctural fertility index is very important and shows the intensity of fertility; it is determined by the formula TFR (CFI) = Σfx / 1000

where:

TFR (CFI) - total fertility rate (conjunctural fertility index)

fx - specific fertility rates by age (15 years ..... 49 years).

This index experienced a downward trend in between 1990 and 2012 from 1.8 in 1990 to 1.3 in 2012. It decreased to 1.2 in 2014 and it returned to 1.3 in 2016; the same level was in 2018, as can be seen in Table no. 2. It indicates that it diminished from 1.8 children per woman, to 1.3 children per woman and that it is below the 2.1 generation replacement level over time.

1990 is the year when the value of the conjunctural fertility index was below the generation replacement level over time (2.1 children per woman) and starting from 1996 it ranged from 1.2 to 1.4.

More and more couples decide to have one or at most two children, as they have the opportunity to control the number of births by different methods; this highlights an increased share of rank one and two children. Considering the trend of the total fertility rate, of the share of different ages at its formation and also of the structure concerning children according to birth rank, it means that the couples practice a demographic behaviour of diminution and not one of distribution in time of the number desired children, in the economic and social conditions in Romania.

The effects of population aging caused by a diminished fertility rate can be found on several levels, including the financial elements as well:

- Increased cost of health services;
- Lack of proper infrastructure to support families with children (nurseries, kindergartens);
- Shortcomings in providing a decent living standard for retirees.

Table no. 2 Evolution of conjunctural fertility index between 1990 and 2018

1990	1992	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018
1.8	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3

Source: National Institute of Statistics, Romanian Statistical Yearbook, 2018

1.2 Mortality rate

Population mortality is a complex demographic phenomenon measuring all deaths within a population over a defined period of time. Mortality level includes all the factors that adversely affect the quality of life and which also relate to the changes of socio-economic factors. Due to the decrease of the standard of living and of the health of population, the overall mortality has increased in the last ten years, but values were even higher in the last years. The variation in mortality rates, largely determines the level of natural increase and life expectancy. In its turn, mortality is the most sensitive index influenced by socio-economic and biological factors (environment, lifestyle), as well as by health services.

In 2015, there were 260,997 deaths, corresponding to a gross mortality rate of 11.7 ‰ inhabitants, which represents the highest rate during the studied period.

Dynamics of mortality by sex. There is still male supramortality in 2015 (135,697 deaths - 12.5 ‰) compared to the female supramortality of 125,300 deaths (11.0 ‰), as can be seen in Table no. 3.

Table no. 3 Mortality by sex in Romania between 2006 and 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Male	12.3	12.1	12.3	12.5	12.6	12.1	12.2	12.0	12.2	12.5
Female	10.5	10.3	10.2	10.4	10.6	10.4	19.6	10.4	10.7	11.0
Total	11.4	11.2	11.2	11.4	11.5	11.2	11.4	11.2	11.4	11.7

Source: National Report on the Health Status of the Population of Romania 2016

Dynamics of mortality by environments. Higher mortality in the rural area (138,505 deaths - 14.3 ‰) than in the urban area (122,492 - 9.8 ‰) can be noticed in Table no. 4 below. It may be due to population aging especially in the rural area, the migration of the young population to the urban areas in search of jobs, but also the lower accessibility to medical services, the small number and the poor equipment of the sanitary units.

Table no. 4 Mortality by environments in Romania between 2006 and 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Urban	9.1	8.9	8.9	9.1	9.2	9.0	9.3	9.2	9.5	9.8
Rural	14.5	14.1	14.2	14.5	14.6	14.1	14.2	13.8	14.0	14.3
Total	11.4	11.2	11.2	11.4	11.5	11.2	11.4	11.2	11.4	11.7

Source: National Report on the Health Status of the Population of Romania 2016

1.3 Increased life expectancy

a. Life expectancy at birth shows the number of years a new-born would live provided that the current mortality pattern remains the same. Extended life expectancy is a goal for every developed country. Life expectancy at birth in Romania in 2007 was 73.1 years in total, namely 69.5 years for men and 76.8 years for women; it increased to 75.0 years in 2014, namely 71.4 years for men and 78.7 years for women according to data published by Eurostat at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_mlexpec&lang=en.

Although steadily increasing over the last 10 years, the level of life expectancy at birth for Romania was 7-8 years lower compared to the advanced European countries in 2014.

b. Life expectancy at age 65 is represented by the number of years of a person aged 65, if the current mortality pattern were maintained. Life expectancy at age 65 is a synthetic indicator which specifically reflects the influence of the living conditions on the number of years a person can still live.

Life expectancy at age 65 in 2007 in Romania was 15.5 years in total, out of which 13.9 years for men and 16.9 years for women; it increased to 16.6 years in 2014, out of which 14.7 years for men and 18.1 years for women according to data published by Eurostat, accessed at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_mlexpec&lang=en.

Improvement of the living conditions, and especially of the level of the specific medical services offered to this category of population, would implicitly lead to an increase in life expectancy at age 65.

2. Economic and demographic dependence ratio

The effects of aging both on economic and social life, as well as on demographic development, are also shown by the dependency ratio (economic, demographic). At the same time with the increase in the number of pensioners, there is a decrease in the number of the employed population. Within this framework, economic dependence increases. Thus, from 315.1 state social insurance retirees per 1000 employees in 1990, there were 1,125.0 retirees per 1000 employees in 2010, their number being reduced quite a bit to 1,073.1 retirees per 1000 employees in 2013. As for the demographic dependency ratio, in July 2012, there were 21.5 elderly persons per 100 adult persons (15-64 years), 5.7 persons more than in 1990, Table no. 5.

Table no. 5 Dependence ratio of young and elderly that per 100 adults, by design variants, in 2012, 2030, 2060, persons

Version	July 1, 2012	2030			2060		
		Constant	Optimistic	Pessimistic	Constant	Optimistic	Pessimistic
Young and elderly persons per 100 adults	42.9	49.1	50.03	47.9	63.4	67.6	59.8
Female	46.4	54.7	56.0	53.4	71.8	76.5	68.2
Male	39.4	43.7	44.6	42.4	55.3	59.1	51.6
Young persons per 100 adults	21.4	19.8	20.5	19.1	19.8	22.7	17.1
Female	20.8	19.4	20.1	18.7	19.6	22.6	16.9
Male	22.0	20.2	20.8	19.4	19.9	22.8	17.3
Elderly persons per 100 adults	21.5	29.3	29.8	28.8	43.6	44.9	42.7
Female	25.6	35.3	35.9	34.7	52.2	53.9	51.3
Male	17.3	23.5	23.8	23.0	35.4	36.3	34.3

Data source : National Institute of Statistics (2012) and "Projection of the Romanian population at the horizon of 2060 (2030, 2060)", pages 29-44

For all design variants, the number of young people per 100 adult persons will continue to decrease, reaching in the pessimistic version 19.1 persons in 2030 (17.1 persons in 2060), and in the optimistic version 20.5 persons (22.7 persons in the year 2060).

The changes expected to occur in the structure by population age groups will lead to an increase in the number of people considered "dependent", respectively under 15 years and over 65, per 100 adults, with the lowest values in the pessimistic version. In the medium and long term, the ratio between pensioners and employees will remain high, the structure of Romania's population being atypical, with very large generations aged between 23 and 48 (a result of pro-natalist policies in the period up to 1989) and very young, aged from 0 to 22 years (transition generations). Thus, less numerous generations have already begun to enter the labour market and the number of employees will not increase much. The number of the elderly per 100 adults will increase continuously; it is estimated that after 2030 it will start to grow steadily as a result of the massive entry of the many generations born after 1966 in the population aged 65 and over. So if in 2030 this ratio will be around 30.0%, it will reach 44.9% in the optimistic version, 43.6% in the constant version and 42.7% in the pessimistic version in 2060 (Table no. 5).

3. Effects of population aging

In Romania, as in the other countries affected by demographic aging, the direct effects that led to population aging were demographic: the decrease of birth rate and mortality rate together with the influence of flows arising from migration. The main element was the lowering birth rate, which considerably influenced the structure of population by age groups, contributing to the acceleration of demographic aging. Decreased mortality or, in other words, increased average life span played a secondary role. In Romania, the decrease of the birth rate was essentially influenced by the uprooting of the young population from the rural area, which massively relocated to the urban area; it gradually abandoned the traditional demographic peasant procreative behaviour and switched to a new demographic behaviour based on rigorous planning of births. Thus, an increase in demographic aging in rural areas and a gap between the two areas occurred.

3.1 Economic effects

The most important economic effects of the aging process in Romania refer to: economic dependence; demographic dependence; the consumption and adequate satisfaction by the society of the consumption needs for the elderly population; ensuring budgetary expenses related to pensions, aid and other forms of special support.

Consumption and the adequate satisfaction by the society of the consumption needs for the elderly population can be considered as other economic effects, since their achievement depends on the level of the elderly's income and implicitly on their standard of living, with direct implications on the quality of their life.

3.2 Social effects

The social effects entailed by the aging of groups of people represent a field of research because of the multiple situations

in which this category of population is, and which has various particularities. In this framework differential research on homogeneous sub-collectivities is necessary, because the group of the elderly or of the long living persons, for example, generates some implications, whereas the implications among the older males are different than the older females, or the married people, compared to widows/widowers, divorced, single.

Among the social effects of demographic aging, we emphasize: cessation of professional activity which entails social, family and individual effects, feelings of worthlessness and social isolation with social consequences generated by aging, aging of the family and members of the household which entails some social and other consequences.

Conclusions

Romania has undergone significant changes in the population structure in the last decades, mostly due to the economic and demographic transition. Political changes with different visions regarding the important aspects such as the public policies regarding family support, the health system, the pension system were other elements which had a strong influence on the development of demographic phenomena. The last twenty years have been characterized by continuous decrease in the number of population with about 1.9 million inhabitants (21.3 million inhabitants in July 2012, compared to 23.2 million inhabitants in 1990). Changing the couples' demographic behaviour towards reproduction increased mortality, as well as external migration were the factors contributing to the continuous decrease in the country's population. The decrease will continue, so that Romania's population will reach 18.0 million inhabitants by 2030 (3.3 million inhabitants less compared to July 2012), and by 2060, Romania's population will reach 12, 9 million inhabitants (8.4 million inhabitants less compared to July 2012). (the constant variant).

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